

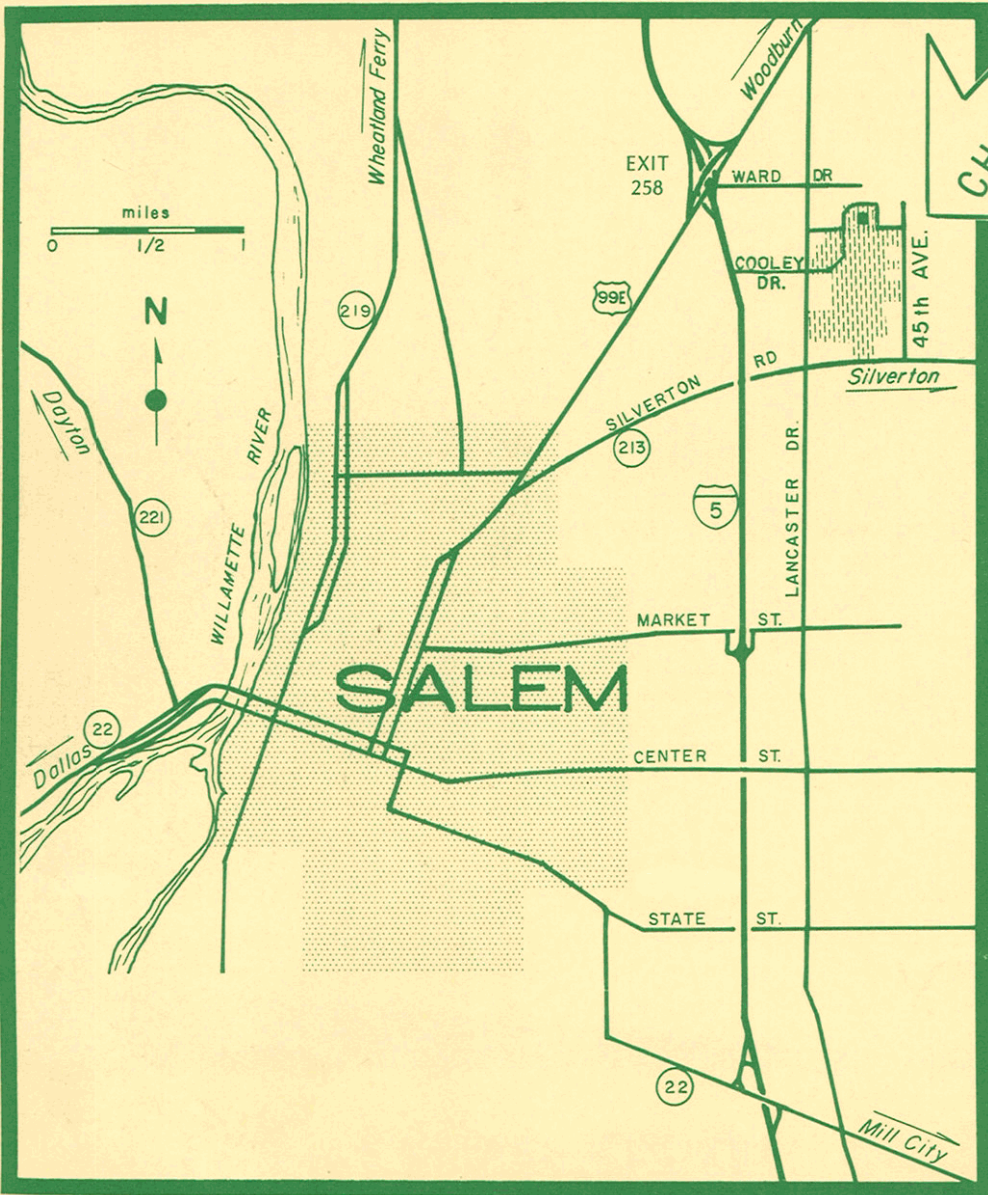


CHEMEKETA COMMUNITY COLLEGE



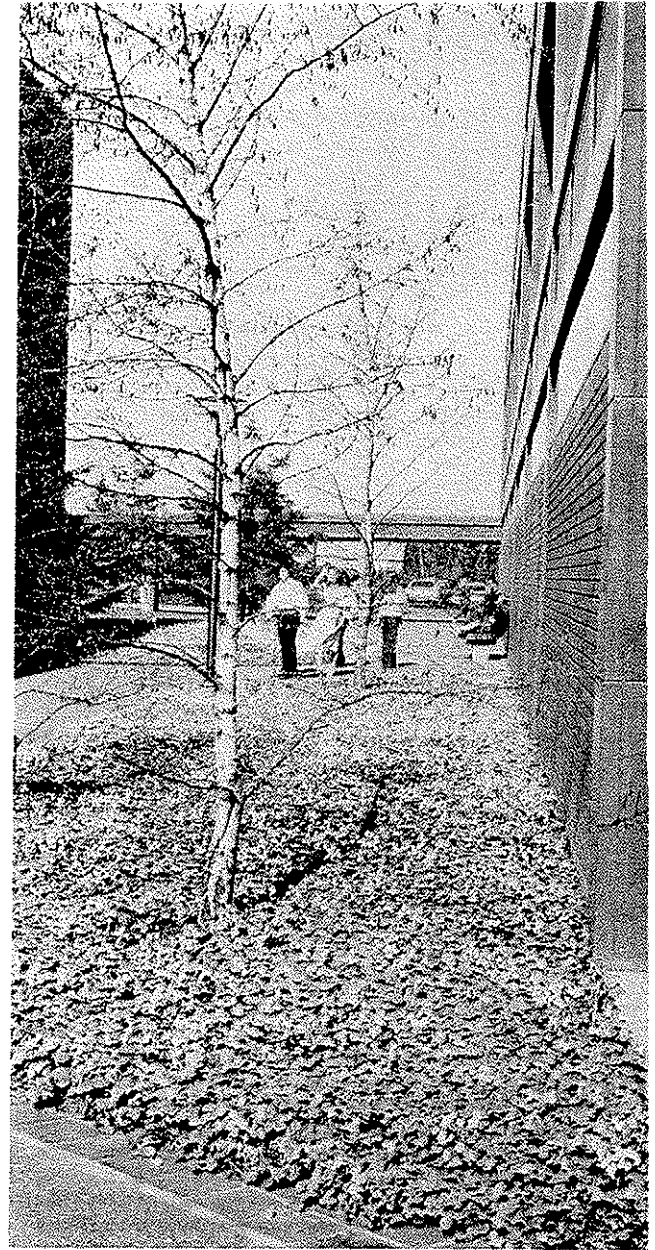
1979-81 Catalog

CHEMEKETA





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



AFFIRMATIVE ACTION POLICY

It is the policy of Chemeketa Community College that discrimination on the grounds of race, color, sex, marital status, national origin, age or handicap will not exist in any area, activity or operation of the college. This policy implements various federal and state laws and regulations such as Federal Executive Orders 11246-11375, sections 503-504 of the Vocational Rehabilitation Act of 1973, Title IX of the Educational Amendments of 1972 and others which require that the college not discriminate on any of the prohibited bases. Persons having questions about the college's educational or employment practices relative to equal opportunity, or who feel that they have been discriminated against, may direct inquiries to Raphael Rosa, affirmative action coordinator, building 18, 399-5212.

ABOUT THIS CATALOG

This catalog is published for information to the general public. Every effort is made to insure accuracy at the time of printing. However, the statements contained here are not to be regarded as an irrevocable contract between a student and the college. Chemeketa reserves the right to make any necessary changes in matters discussed herein, including procedures, policies, calendar, curriculum or course content or emphasis, and costs and to cancel any course if enrollment in it is below a minimum number.

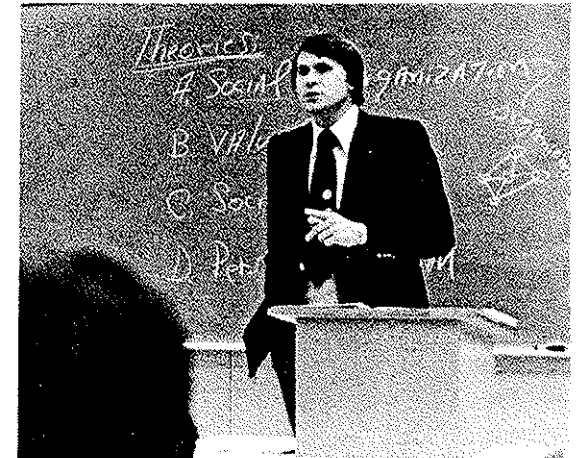
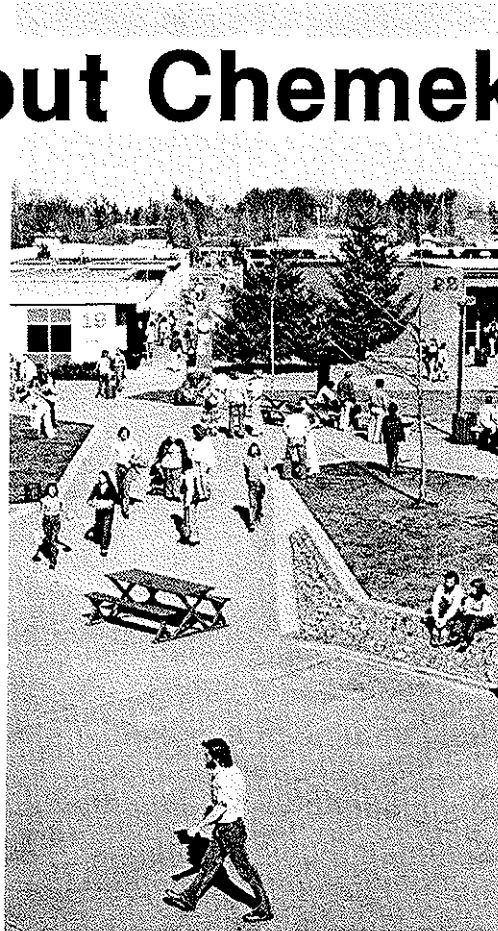
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Academic Calendar

	Summer 1979	Fall 1979	Winter 1980	Spring 1980	Summer 1980	Fall 1980	Winter 1981	Spring 1981
Registration	June 18	Sept. 17-21	Jan. 2	Mar. 24	June 16	Sept. 22-26	Jan. 5	Mar. 30
Classes in regular session	June 19	Sept. 24	Jan. 3	Mar. 25	June 17	Sept. 29	Jan. 6	Mar. 31
Last day to register without penalty	June 20	Sept. 25	Jan. 4	Mar. 26	June 18	Sept. 30	Jan. 7	April 1
Last day to register and to make class or program changes	June 22	Sept. 28	Jan. 8	Mar. 28	June 20	Oct. 3	Jan. 9	April 3
Holidays	July 4	Nov. 12 Nov. 22-23		May 26	July 4	Nov. 11 Nov. 20-21		May 25
Last day to withdraw from classes without responsibility for grades	8 weeks-Aug. 3 10 weeks-Aug. 17	Dec. 7	Mar. 7	May 31	8 weeks-Aug. 1 10 weeks-Aug. 15	Dec. 12	Mar. 13	June 5
Review and examination		Dec. 10-14	Mar. 10-14	June 2-6		Dec. 15-19	Mar. 16-20	June 8-12
End of term	8 weeks-Aug. 10 10 weeks-Aug. 24	Dec. 15	Mar. 15	June 7	8 weeks-Aug. 8 10 weeks-Aug. 22	Dec. 19	Mar. 20	June 12

About Chemeketa . . .



About Chemeketa . . .

Chemeketa Community College is for people, for all the different kinds of people within its community. The college aims to meet its students' needs by offering them many educational opportunities. These range from vocational and academic training to personal development and life enrichment.

In planning its programs, Chemeketa responds to the expressed needs and desires of the citizens within its district which includes Marion, Polk, most of Yamhill, and part of Linn counties. This area of over 6600 square kilometers (2600 square miles) has a population of more than 275,000 persons. The college aims to offer instructional programs and services which are community based, comprehensive, accessible, and flexible without duplicating programs and services offered by other community agencies.

Chemeketa traces its origins to the local school district's Salem Technical Vocational School which was established in 1955 with ten full-time students. The college district was formed in September, 1969. In 1978-79, about 32,000 individuals enrolled in Chemeketa's various programs, classes, and workshops.

The college's main campus is at 4000 Lancaster Drive N.E., Salem. There are college centers located in Dallas, McMinnville, Monmouth, Silverton, Stayton, and Woodburn. Classes are offered in almost 30 communities. They are scheduled days, evenings, and weekends.

As a public institution, Chemeketa's financial support comes primarily from local taxes, state allocations, and tuition.

Chemeketa received full accreditation by the Northwest Association of Schools and Colleges in December of 1972. In addition, all of Chemeketa's vocational-technical programs are accredited by the Oregon state Board of Education. Programs requiring accreditation by professional associations have received those approvals. The Oregon Board of Education has approved the college's vocational-technical and college transfer instructors and the college transfer courses.

Who are Chemeketa's students?

There is no typical Chemeketa student. Students are all ages with many different goals. These include training or re-training for careers, keeping up-to-date in their vocations, continuing their interrupted educations, expanding their knowledge, learning new skills, and getting to know more about themselves and others. As different as they are, Chemeketa's students have something in common — they come to the college to learn.

Some students attend Chemeketa full-time; others go part-time. Many combine work and school. *In general, anyone may enroll who is 16 years or more and who may benefit from the instruction at Chemeketa.* Most classes are tuition-free for students 62 years and older if they apply for Golden Age cards.

Of those persons taking daytime classes on the campus, about 75 percent take occupational training; the remaining 25 percent enroll in college transfer classes.

Who are the teachers?

Almost half of Chemeketa's 440 full-time staff members are instructors. In addition, the college employs about 800 part-time teachers each year. Many of them are evening instructors who teach classes directly related to their full-time jobs in the community.

What kind of education does Chemeketa offer?

Chemeketa has four areas of learning opportunities:

Vocational-technical education is for students who want to qualify as workers in specific fields. Chemeketa has more than 40 programs which are planned to meet the needs and demands for workers within the college district.

After successfully completing the one-year programs, graduates receive certificates of completion. Associate in Science degrees are awarded students who meet the requirements of two-year programs. These time spans are for students attending full-time. However, many students go to Chemeketa part-time, extending their courses of study over a longer period. Through the college Cooperative Work Experience program, many students work in fields related to their study.

College transfer courses. Chemeketa offers lower division credit courses which may be transferred to most four-year colleges and universities in Oregon. Students who successfully complete Chemeketa's two-year college transfer program may earn an Associate in Arts degree. Some of the college's vocational and technical programs include courses which may be transferred for college credit.

Community and continuing education is important at Chemeketa. The college offers credit and non-credit classes, workshops, and short courses to help students learn and improve technical, vocational, avocational, and academic knowledge and skills, to retrain for new positions, and to continue their personal development. There are also programs for completing high school, earning the equivalent of a high school diploma, and learning English as a second language. A special program helps deaf and blind students.

Community and continuing education classes are held in communities throughout the district as well as in Salem. They are scheduled during the day, evening, and on weekends. For more information, check the Community Services and Continuing Education section of this catalog.

Education of the whole person is one of Chemeketa's goals. In its programs and classes, the college tries to help students develop their abilities to analyze and synthesize. It creates opportunities for individuals to nurture and develop their minds.

The college offers its students general education courses to help them increase their self-awareness, to value good physical and mental health, and to become basically competent in spoken and written English, mathematics, American history, government, and economic systems while gaining in-depth knowledge of one subject area. General education is an integral part of most of Chemeketa's vocational and technical programs.

Cooperative Work Experience/ Cooperative Education

Cooperative Work Experience at Chemeketa is a personalized program which allows students to combine their classroom studies with related job experiences. CWE coordinators work with students in this program.

Students may find jobs on their own or a CWE coordinator may help them locate positions. The work training site must be approved by the college. Job supervisors and students work together on individual training plans which relate to classroom studies. The students may work either for pay or not.

This on-the-job training helps students establish references for future employment and gain firsthand looks at particular kinds of work while earning college credit. The number of hours on the job per week determines the number of credits earned.

Most of the college's vocational and technical programs include CWE either as an elective or as a graduation requirement. This is indicated in those program descriptions in this catalog.

More information is available at the Work Related Experience office on the Salem campus.

Learning Center

Chemeketa's learning center is located in building 3 on the Salem campus. It includes the library, audiovisual services, and the planetarium/multimedia theater.

The library contains about 45,000 books and over 1400 periodicals. The audiovisual department houses the college's non-print collection plus a wide variety of media resources. There is a television studio for producing instructional videotapes.

Free programs for the public are presented in the planetarium/multimedia theater which also serves as a special classroom.

The college library is part of the Chemeketa Cooperative Regional Library Service along with 17 public libraries in the college district and the Oregon State Library. This cooperative tax-supported effort provides public library service to district residents who would not have it otherwise and improves existing public library services. Among the benefits are a "universal" library card which may be used at any participating library, courier book service between libraries, reference service, a bookmobile, and books-by-mail for residents who do not have access to public libraries.

Admission, Registration, and Academic Information

Admission

Chemeketa has an open door policy. The college admits any person 16 years of age or older who may benefit from the instruction it offers.

There is an admission procedure for full-time and part-time students who want to enroll in programs leading to associate degrees or certificates of completion. The same procedure is used by a person who wishes to take credit courses to apply to a degree but who is not enrolled in a definite program.

1. Applicants request an application form from the admissions office and return the completed form to that office. Applicants are responsible for filing any required materials such as transcripts, test scores, and recommendations.
2. The admissions office acknowledges the receipt of an application and provides directions if applicants need to take further steps to be admitted. (Some programs require additional information from applicants.)
3. When applicants meet all the requirements, the admissions office mails them information about orientation and registration.

The college advises students to meet with a counselor, academic advisor or program staff member before registration. Together they can discuss academic and vocational plans and the requirements for the program in which the student is enrolled. Some programs require placement tests in English and mathematics which are given by members of the counseling staff.

Early application is suggested to allow time to complete all necessary steps before registration for classes begin.

Chemeketa has many students who take credit and non-credit classes through the college Community and Continuing Education Division. They do not have to apply for admission to the college and usually register at the first class meeting. There are some classes which require early registration. They are listed in the quarterly schedule of classes. More information is available from the division of Community and Continuing Education.

Enrollment Limitations

Although Chemeketa has an open door policy, there are limits on enrollment for certain classes and programs of study. The general admissions policy does not assure a student admittance to a particular program. Due to lack of staff, space or equipment, enrollment must be limited in some classes and programs. Most of these are filled on a first-come, first-served basis.

The number of students accepted in certain vocational-technical programs may depend upon the needs for workers in those occupations within the college district. Also, some programs have requirements their students must meet.

Restricted or limited programs which require additional information or have special requirements are:

Automotive Technology
Chemical Technology
Dental Assisting
Emergency Medical Technology
Fire Protection
Human Resource Technology
Machine Shop
Medical Office Assistant and Health Records
Nursing
RN, LPN and Refresher Courses
Visual Communications
Welding
Welding and Fabrication

Applicants who are not accepted in one of these programs may still be admitted to the college. They may apply for enrollment in other programs through the admissions office.

Transfer Credits From Other Colleges

Students may transfer course credits from other colleges through the admissions office. Students are responsible for contacting those colleges to initiate the transfer.

Accepted transfer credits become a part of a student's permanent record at Chemeketa. Grades earned are not indicated; only course grades earned at Chemeketa are used in computing grade point averages.

Readmission

Former Chemeketa students who wish to return to the college may apply for readmission by filing a completed application form with the admissions office.

International Students

Students who are citizens of other countries may be asked to meet certain federal immigration and college requirements before being admitted to Chemeketa. They may be expected to maintain certain levels of academic achievement acceptable to the United States Immigration Service and to the college. The admissions office has special application materials for international students.

Members of both Chemeketa's counseling staff and the Intercultural Center and bilingual program are available to help these students.

Registration

After a person has been admitted to Chemeketa he or she may register for classes at the beginning of a term. Registration dates are listed in the academic calendar on page iii. Detailed information is given in the schedule of classes published quarterly.

Tuition

Tuition and fees are due in full at the time of registration unless a student has made special arrangements with the business office.

Students who carry 12 or more credit hours per term are considered full-time students academically, but when paying tuition, those enrolling in 10 or more credit hours are classified as full-time students.

Tuition rates given below are for 1979-80; students should consult the quarterly schedules for tuition rates for 1980-81.

Full-time in-district students living within a radius of 14 miles	..... \$150 per term
Full-time in-district students living within a radius of 14 to 24 miles	..... \$140 per term
Full-time in-district students living beyond 24 miles	..... \$130 per term
Part-time in-district students	..... \$15 per credit hour
Full-time out-of-district students	..... \$225 per term
Part-time out-of-district students	..... \$22.50 per credit hour
Full-time out-of-state students	..... \$560 per term
Part-time out-of-state students	..... \$56.00 per credit hour

An in-district student is one who meets at least one of the four following conditions:

1. Married and a resident of the college district at least three months prior to first registration.
2. Age 18 or over and a resident of the college district at least three months prior to first registration.
3. A veteran who has established a permanent address inside the college district within three months of separation or discharge from the service.
4. A minor whose parents or legal guardians are bona fide residents of the college district.

Those who do not meet in-district criteria and whose homes or permanent addresses are in Oregon but outside the Chemeketa Community College district are out-of-district students. Any student whose permanent address is outside Oregon is classed as an out-of-state student.

Evening courses may require separate registration and tuition. Courses requiring specialized materials may have additional charges as part of tuition for the course. Tuition information for non-credit classes is in the Community and Continuing Education section of the catalog.

Students may not register until all financial obligations from prior terms are satisfied.

A course may be canceled if enrollment is below a minimum number. Tuition is refunded in full if the college cancels a course. No refund is granted to a student who has been suspended from the college.

The college board reserves the right to change tuition rates without prior notice.

Late Registration Fee

A \$3 fee is charged the third day after a scheduled registration date and \$1 per school day for each additional late date. However, the total late registration fee may not exceed \$10.

Registration is closed after the day listed in the academic calendar. This does not apply to part-time evening classes.

Other Fees

Locker fee — optional\$2.50
Laboratory fees for certain courses vary by the course.

Books and Supplies

Books and supplies may be purchased at the college store. The cost varies with each program. Normally, the cost ranges from \$180 to \$300 a year or about \$60 to \$100 a term.

Class Loads

Regular vocational-technical students may register only for the number of credit hours listed for their particular programs. College transfer students are limited to 22 credit hours per term. Any additional credit hours require special permission of the registrar. Students who are authorized to enroll for more than 22 hours pay additional fees at the designated rate per credit hour.

Curriculum Deviations

Under certain circumstances, a student is allowed to deviate from a prescribed curriculum and still meet graduation requirements. A student who wishes to substitute a course different than a required one, may petition the registrar.

Students are advised to discuss the proposed substitution with their department chairmen or academic advisors before filing the petition. If the department chairman approves the substitution and a student can show that it will benefit him or her without detracting from the quality of his or her preparation, the registrar may grant the substitution.

Class Changes

Students may make changes in their class schedules before the *deadline indicated in the academic calendar*. These changes should be approved by an academic advisor. Schedule change (add-drop) forms are available in the registrar's office, staff offices, and the counseling center.

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	Good	3
C	Average	2
D	Below Average	1
F	Failed	0
W	Withdrawal	0
I	Incomplete	0
X	Audit	0

The grade point average is computed by dividing the total credit hours (excluding W, I, and X) into the total points earned.

An instructor may give an "Incomplete" when in his or her judgment a student has failed to complete a minor portion of required class work although he or she has attended the class regularly. To remove an "Incomplete," a student must make up the required class work within three terms following the one in which he or she received it. The grade is then recorded by the registrar.

Students who do not make up an "Incomplete" within the three terms must repeat the entire course in order to remove the "Incomplete" from their records. It is a student's responsibility to clear his or her record of "Incompletes" in courses required for graduation.

Repeating a Course

Students may repeat courses in which they earned "D," "F," "W" or "I" grades.

If a student makes a higher grade when he or she repeats the course, it will be substituted when the grade point average is computed. The college suggests that a student confer with an academic advisor before repeating a course.

Academic Standing

Students are expected to maintain an overall grade point average of 2.00 in order to satisfy degree and certificate requirements. See Degree and Certificate Requirements.

Credit by Examination

An alternate way for students to earn credits for some courses is to prove their college level ability in them by passing an examination successfully. These challenge examinations are prepared by the college department directly responsible for the instruction of the course.

Written comprehensive tests cover all the basic information and skills required of a student who completes the course successfully. For some courses, a performance examination is also required.

For more information about earning college credits by challenge examinations, students may contact the counseling center.

Auditing Courses

Students who enroll in credit courses but do not wish to receive grades or credits may register as auditors. In order to audit a class students contact the registrar's office before the end of the third week of the term. Auditors pay full tuition fees.

Transcripts of College Credits

Graduates of Chemeketa are entitled to five free transcripts of credits from the registrar. Additional transcripts are available for a fee.

Transfer to Other Institutions

Information for transferring credits to other colleges and universities is given in the College Transfer section of this catalog.

Withdrawal from College

Students who decide to withdraw from Chemeketa may obtain forms from the registrar, staff offices or the counseling center. They return the completed form to the registrar's office by the date listed in the academic calendar.

Tuition refunds are pro-rated according to the date the completed form is received by the registrar's office. Refunds for students with no outstanding obligations to the business office, library or other college departments are based upon this schedule:

During the first week	
of each term	90%
During the second week	
of each term	70%
During the third week	
of each term	50%
During the fourth week	
of each term	40%

Lab fees are not refunded after the first week of classes. There are no refunds for student insurance purchased through the college.

If a student has any financial obligations to the college, those amounts are subtracted from the refund.

A student who leaves Chemeketa without filling out a withdrawal form is responsible for the final grades he or she receives. These will appear on the student's college transcript of credits.

Student Records

Permanent student records, grade reports, and requests for transcripts are processed and maintained by the registrar's office.

Degrees, Certificates, and Graduation Requirements

Graduates of Chemeketa's two-year programs are awarded Associate in Arts or Associate in Science degrees. These are both nationally recognized degrees. Certificates of Completion are awarded to students who meet the requirements of certain one-year programs.

Associate in Arts Degree

Students in the college transfer program may be eligible for the Associate in Arts degree. Requirements are given in the section on college transfer classes in this catalog.

Associate in Science Degree

Chemeketa awards Associate in Science degrees to students in two-year vocational-technical programs who successfully meet these requirements:

1. Completion of the required courses and credit hours listed for each program (a minimum of 90 credit hours).
2. Completion of a minimum of 30 credit hours at Chemeketa.
3. A cumulative grade point average of 2.00 or above for all course credits which apply toward the degree.

Certificate of Completion

General requirements for the Certificate of Completion are:

1. Satisfactory completion of all required courses in the program.
2. A cumulative grade point average of 2.00 or above for all course work to be applied to the certificate.

Application for Graduation

Candidates for graduation fill out applications for degrees or certificates and return the forms to the registrar's office by the fourth week of the academic term preceding the term when they will meet the program requirements.

Degrees and certificates are official when graduation information is recorded on a student's transcript. Diplomas are issued once a year in June.

Miscellaneous Information

Motor Vehicles on Campus

Chemeketa students and staff who own and/or drive motor vehicles on the Salem campus during the day are required to have college parking permits. These free permits are available at the security office in building 22 at the time of registration. Visitors may park in designated areas without permits.

Parking a motor vehicle on the campus without a proper permit may result in a fine. Students and staff are responsible for knowing the regulations for operating a motor vehicle on campus and are held responsible for any violations of those rules. This applies to any vehicle in their possession regardless of who is operating it.

Specific information on parking and traffic regulations is available at the security office.

Pets on Campus

Seeing-eye dogs are the only animals which may be brought on the college campus.

Child Care

Chemeketa has a short-term child care center for children of Chemeketa students.

Student Living Accommodations

Chemeketa does not provide living accommodations and assumes no responsibility for student living arrangements. However, there is a wide range of living accommodations available in the Salem area. Some listings are available in the student activities office.

Student Health Services

Chemeketa maintains a first aid office in building 22, room 113, behind the security information office. Because the college has no physician, students are expected to have general medical needs, including medications (prescriptive and non-prescriptive) met by their personal physicians, dentists or clinics.

Student Health and Accident Insurance

A low-cost health and accident insurance program is available through the college for students and their dependents.

Additional information about health and accident programs may be obtained at the counseling center or the business office.

About Student Services

Counseling

Chemeketa's counseling staff offer educational, vocational, and personal counseling. They also administer tests, and have admissions and veterans' information.

The department operates a career information service for all district residents. A computer terminal provides current information on hundreds of careers including job descriptions, pay ranges, job requirements, and the hiring outlook for specific areas throughout Oregon. This service is available at the counseling center and at announced times in various communities in the district. In addition, career exploration workshops are held at the counseling center and through local college centers. There is also a college credit career planning class.

The counseling center in building 3 on the Salem campus is open from 8 am to 4:30 pm Monday through Friday and 6 to 9 pm Monday through Thursday. Counselors are also available by appointment at local Chemeketa centers in Dallas, McMinnville, Monmouth, Silverton, Stayton, and Woodburn.

Academic Advising

During registration, each incoming day student is assigned an academic advisor from the Chemeketa professional staff. That person is available to help the student plan and carry out a program of study.

Students who attend classes only in the evening are encouraged to visit the counseling center periodically for academic advising.

Student-Instructor Conferences

Students may confer with instructors during scheduled office hours regarding class assignments and methods of study for particular courses. Office hours are posted in each faculty office area or on the office door. Faculty office directories are posted on main bulletin boards.

Center for Student Development

The Center for Student Development offers classes and tutoring to help students succeed in college classes and programs. This program stresses skill assessment and skill attainment. There are classes in reading, writing, mathematics, spelling, vocabulary development, study techniques, values clarification, and goal setting. Free tutoring is available. The center is located in building 3 on the Salem campus.

The Intercultural Center and Bilingual Program

Chemeketa's Intercultural Center and Bilingual Program is open to all students; it offers special services for bilingual students. Programs at the Center encourage students to appreciate the similarities and differences of their various heritages. The center sponsors public social events which highlight the traditions of different cultures. At weekly meetings, open to anyone, students are encouraged to exchange information and ideas.

The bilingual program is for students with limited English communication skills. At the center, students may receive help in improving their skills in both languages. The center also offers them individual academic tutoring, help in making career choices, and aid in their personal growth.

Aid for Deaf and Hearing or Visually Impaired Students

Deaf, hearing impaired, and visually impaired students have received special help at Chemeketa since 1973. Support services for these students include counseling, interpreting, note taking, tutoring, reading, and special equipment.

Special classes for deaf and hearing impaired students include language development, basic reading, basic writing, basic communication skills, process in living, introduction to psychology and studies in deafness. In addition, Chemeketa offers six levels of sign language classes.

Veterans Services

Information on Veterans Administration policies, procedures, and approved programs of instruction is available in the Veterans Services Office in building 22 on the Salem campus. A veteran's application for certification and any necessary supporting documents (DD214, etc.) are processed according to VA regulations, and certification information is forwarded to the VA regional office in Portland. Usually this completes the application process for VA educational benefits. This application is separate from application for admission to the college.

Policy of Satisfactory Progress: In accordance with a Veterans Administration directive, persons who receive veterans' educational benefits who are enrolled half-time (six credit hours) to full-time (12 credit hours) and are working for a two-year degree must comply with the following regulations.

1. Enrollment in deficiency courses is limited to 44 term units over a two-year period.
2. In order to graduate a veteran student must accumulate a minimum grade point average of 2.00 in his or her chosen program objective. The GPA is based on A=4, B=3, C=2, D=1, and F=0.
3. A veteran has until the end of the fourth week of a term to make any changes which affect his or her certification status. After the fourth week all courses a veteran takes are considered attempts; a veteran is responsible for satisfactory completion of these classes as follows:

Students certified as:

- full-time — must enroll for and complete a minimum of 12 credit hours within their programs per term.
- three-quarter — must enroll for and complete a minimum of nine credit hours within their programs per term.
- half-time — must enroll for and complete a minimum of six credit hours within their programs per term.

For all of the above options, a minimum GPA of 2.00 or better must be maintained each term. If the veteran student falls below a 2.00 GPA or does not satisfactorily complete the required hours as indicated above, the veteran is placed on probation and advised of such by the Veterans Services office. Failure to maintain the GPA and/or credit hours requirements for two consecutive terms results in notification of unsatisfactory progress being recorded and forwarded to the VA regional office in Portland.

Student Financial Aid

Information concerning scholarships, grants, loans, and part-time employment at the college is available at the financial aid office. The college's financial aid program provides assistance and advice to students who would be unable to pursue their education at Chemeketa without such help.

Upon request, the financial aid office will send a financial aid application and a pamphlet which describe financial aid opportunities at the college.

College Work Study

The federally-funded work study program is for full-time students who qualify for financial aid to continue their education. Eligible students may average 20 hours of work a week while classes are in session and up to 40 hours a week during vacations. There are a variety of on- and off-campus jobs. Students may apply at Chemeketa's financial aid office to determine their eligibility under federal guidelines.

Job Placement

Chemeketa has a job placement service for students and alumni. The placement office researches job markets to learn employment opportunities. The student may begin a job search by checking the job openings posted in the Work Related Experience office.

The office coordinates on-campus interviews with employers. Placement staff also help students prepare job resumes and understand the application process. A placement file is compiled for each student seeking employment.

Students seeking part-time jobs while in school and those looking for employment after graduation are encouraged to use the placement office.

About Student Life At Chemeketa

Chemeketa aims to meet the educational, recreational and social needs of students with an integrated program of student activities. This activities program is developed in response to expressed student interests and needs.

With the guidance of the student activities office and the assistance of faculty members, students assume most of the responsibilities for campus activities. They establish and administer most co-curricular activities, determine campus social programs, and help maintain the discipline essential to an academic community. Activities vary throughout the year, depending upon student interests.

Each student is encouraged to participate in activities which interest him or her. More information is available from officers of student organizations and from the student activities office in building 1.

Student Government

All Chemeketa students are members of the Associated Students of Chemeketa Community College (ASCCC), their own official organization. Aware that student activities are an integral part of a total education, ASCCC encourages all its members to participate in its programs as much as possible. The executive council of the ASCCC has its office in building 1. Each ASCCC officer has special areas of responsibilities:

The **president** works closely with the student senate and is the student representative to the college board of education.

The **vice-president** is chairperson of the student senate and oversees the activities of committees, campus clubs, and organizations.

The **activities coordinator** helps plan and implement ASCCC-sponsored activities and works closely with the vice-president on activities of campus clubs and organizations.

The **publicity coordinator** works with the activities coordinator in promoting and publicizing ASCCC-sponsored activities.

The **secretary** maintains all student records for the executive council and the student senate.

The **business manager** is responsible for maintaining, collecting, and disbursing records of all financial transactions concerning the ASCCC.

The **student senate**, composed of 24 elected representatives from various curriculums, meets weekly. All students are encouraged to attend their open meetings.

ASCCC Activities

ASCCC sponsors films, dances, concerts, excursions, lectures, and a variety of entertaining, educational, and recreational cultural activities. These are planned to appeal to a variety of age and interest groups, campus- and community-wide. ASCCC publishes a calendar of campus activities each term.

Student Clubs and Organizations

The following clubs have been chartered by ASCCC and are active on the Chemeketa campus:

Adult Learning Center Club - Goals are service, fellowship, and co-curricular interests. The club sponsors graduation exercises for the ABE program.

Agriculture Club - Open to all students interested in agriculture.

American Society of Certified Engineering Technicians (ASCET) - Open to persons seeking careers in engineering technology. Members may continue to affiliate with the national organization after graduation.

American Welding Society, Student Chapter - Aims to increase student awareness of the welding industry and enhance student learning through studies of results of welding research and the development of welding processes.

Arab Club - For students of Arab descent or interested in Arab culture.

Automotive Club - Sponsors special projects for students interested in the automotive field.

Baha'i Club - Organized for the fellowship of members of the Baha'i faith but open to anyone.

Bowling Club - Open to all students, staff members, and their spouses.

Brothers and Sisters Club - For students interested in learning to dance and sponsoring disco dances on campus.

Chemeketa Charismatic Fellowship - Meets regularly for prayer and fellowship.

Chemeketa Indian Club - Deals with problems peculiar to native American Indian students and organizes social activities which reflect and enhance Indian culture.

Chess Club - Promotes the game of chess and participation in chess tournaments. Open to all students, staff members, and their spouses.

Christian Fellowship Association - Non-denominational Christian fellowship featuring guest speakers and music.

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

Early Childhood Education Club - A service and social organization which publicizes the early childhood program through public service and holds social activities.

Emergency Medical Technology Club - Open to anyone in the Emergency Medical Technology program.

Fire Protection Club - Publicizes the fire protection program through public service and provides social activities for its members.

Foosball Club - Open to students and staff interested in learning and playing foosball. Promotes tournaments and other special activities.

Forestry Club - Promotes, publicizes, and tries to create public awareness of the forest technology program and industry. Represents and promotes the needs of Chemeketa's forest technology students.

Fotographics Club - Open to students who are interested in the visual communications industry.

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

Human Resources Technology Club - Advocates the recognition, acceptance, and utilization of para-professionals in the human service field, both public and private.

Intercultural Club - Provides social activities for students of different cultures and for those interested in learning about other cultures than their own.

Juntos Club - For students of Spanish-American descent and anyone interested in the Chicano culture.

Karate Club - Promotes the sport of karate and holds social activities for its members.

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

Medical Assistants Club - Promotes the medical assistant program, provides public service and employment opportunities, and promotes individual and group improvements.

Minorities Club - For students interested in the needs and interests of minority peoples.

Phi Beta Lambda - A national service organization for students in post-secondary schools, colleges or universities who are preparing for careers in business or business education.

Pool Club - For students and staff interested in learning and playing pocket billiards and promoting worthwhile competition.

Ski Club - Promotes interest and involvement in snow skiing. The club frequently organizes weekend ski trips.

Student Nurses of Oregon (SNO) - The Salem chapter of Student Nurses of Oregon, chartered in 1969. Open to students in the associate degree nursing program. Assists in preparing student nurses for assuming professional responsibilities.

Table Tennis Club - Promotes and encourages increasing participation in table tennis. Promotes tournaments within the community and with other community colleges.

Veterans Club - A service and social organization open to any man or woman who has served in the armed forces of the United States.

Writers Club - Publishes a journal, *Before the Sun*, each spring. Open to students and staff. Schedules frequent readings to allow members to share their work.

New Ideas Welcome

Students interested in organizing new clubs or organizations may contact the student activities office in building 1 for information about procedures for obtaining a charter.

Ideas for activities and excursions are also welcome. Planning is done with students' interests foremost.

Student Newspaper

Chemeketa's student newspaper, *Courier 4*, is published weekly during fall, winter, and spring quarters. Written and prepared by journalism students, the newspaper has established a consistently high rating in national competition (Associated Collegiate Press). *Courier 4* is an associate member of the Oregon Newspaper Publishers Association.

A curriculum of lower division journalism courses designed for pre-majors and non-majors has supported the growth of the publication.

Entirely produced on campus, the *Courier 4* is printed by students of the visual communications program.

Students interested in working on the student newspaper as reporters, editors or photographers may apply for staff positions through the newspaper advisor. The *Courier 4* office is located in building 1.

Athletics

Throughout the year, Chemeketa students participate in a variety of intramural activities including bowling, volleyball, softball, basketball, skiing, and golf.

Participation in intercollegiate sports is based on the requirements of the National Junior College Athletic Association. Chemeketa is a member of that association and of the Oregon Community College Athletic Association. Every member of the OCCAA has agreed to abide by the rules of the NJCAA as a minimum standard. Chemeketa students participating in sports must be taking 12 credit hours and maintain a GPA of at least 1.75.

Interscholastic sports require special insurance coverage and a physical examination. These are provided at no cost to the student by the college. Participating students may obtain information at the physical education department office.

The following Student Rights and Responsibilities document was approved by Chemeketa's Board of Education in 1977.

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. Students should exercise their 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 the 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 association 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 a 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 to respect the rights of others and not interfere with the exercise of those rights.

- 4.3 Each student is responsible for the effects of his/her decisions and behavior. Examples of decisions 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 environment of the College.

5.0 PROCEDURAL DUE PROCESS FOR VIOLATIONS OF RIGHTS AND RESPONSIBILITIES

5.1 Student Violations

- 5.1.1 The persons involved shall attempt to resolve the issue by personal contact, if possible.
- 5.1.2 If no agreement is reached, the persons involved shall then consult with the Dean of Student Personnel Services who will then attempt to resolve the issue.
- 5.1.3 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:
 - 5.1.3.1 The Committee chairperson must notify the charged person in writing within one week of the hearing time, place and date and must include the specific alleged violation.
 - 5.1.3.2 The person charged with violation then has 48 hours in which to reschedule the meeting time.
 - 5.1.3.3 The person may be represented by counsel and may present evidence and witnesses of his own choosing.
 - 5.1.3.4 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.
 - 5.1.3.5 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 stipulation regarding forfeiture of privileges.
 - E. Restitution: appropriate restoration or amends.
 - F. Suspension: dismissal from the College for a specified period of time.
 - G. Expulsion: permanent or conditional separation from the College. The conditions of readmission, if any, shall be stated in the order of expulsion.

- 5.1.3.6 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.

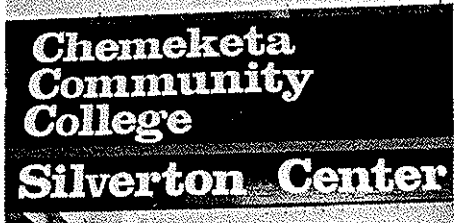
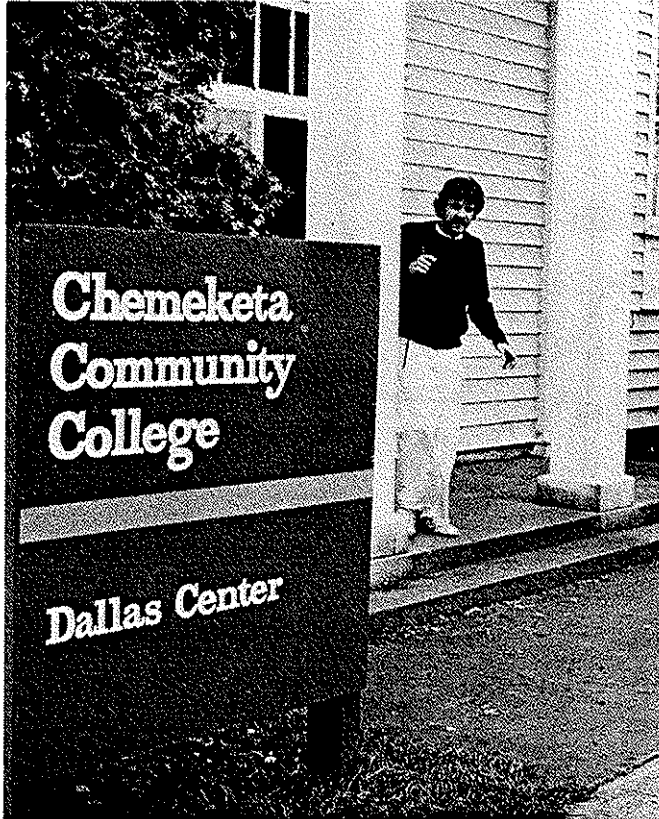
5.2 College Violation

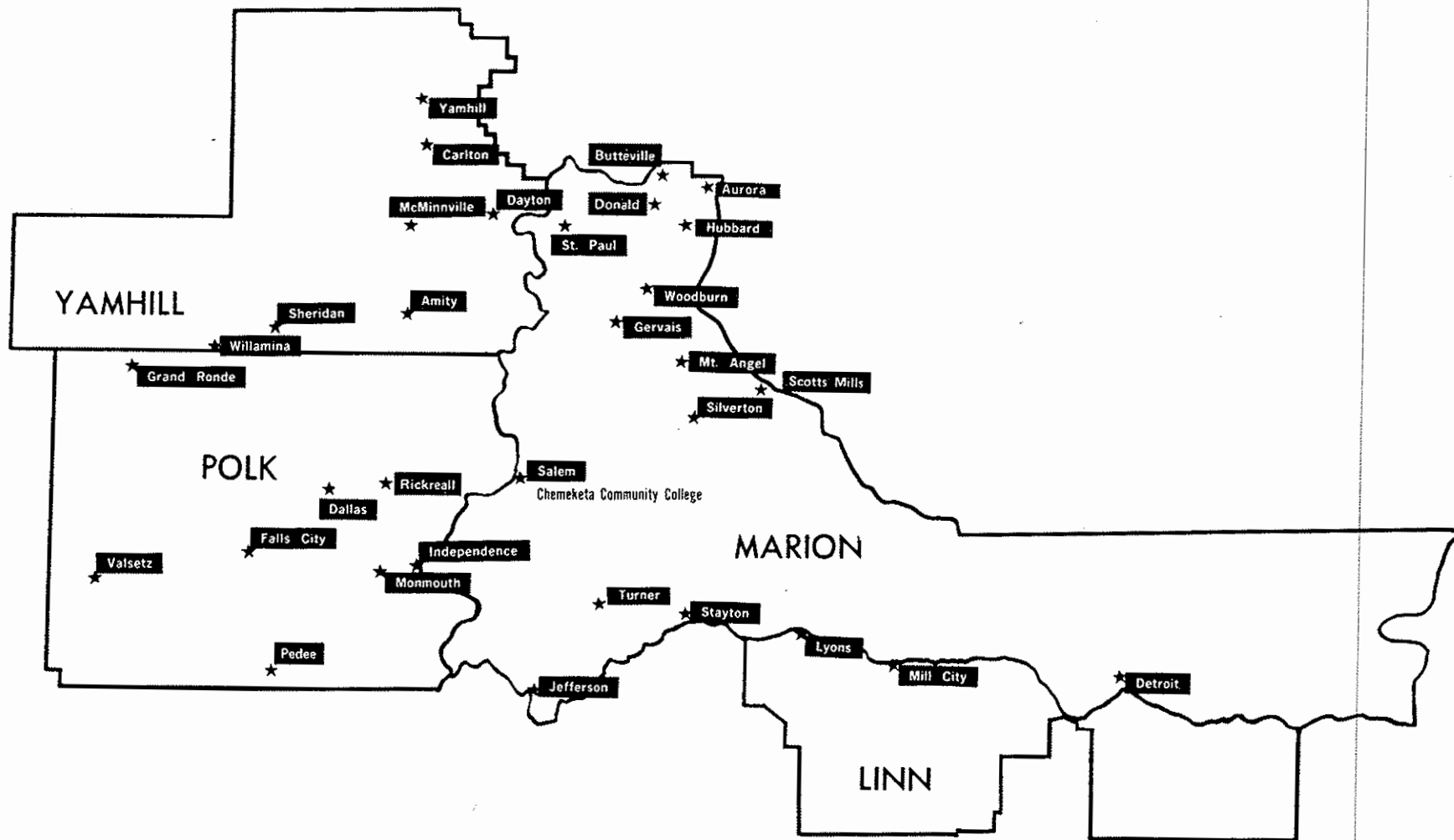
- 5.2.1 Students who feel they have been aggrieved by a policy, procedure, staff member, or College action, have the following procedural due process available to them:
 - 5.2.1.1 If a student believes to have been unfairly treated and has a grievance against a policy, procedure, staff member, or College action, the student should first discuss the matter with the person or persons involved.
 - 5.2.1.2 If the student feels that a satisfactory solution cannot be reached, assistance should be requested of the Dean of Student Personnel Services.
 - 5.2.1.3 If the student is not satisfied with the attempted resolution, the person may request a hearing of the College Affairs Committee.
 - 5.2.1.4 The committee shall proceed as follows:
 - A. The Committee Chairperson shall notify, in writing, the members of the College Community involved within one week of the hearing 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.
 - 5.2.1.5 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 Student Personnel 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 amendments.

Community and Continuing Education





About Community and Continuing Education

Chemeketa's Community and Continuing Education division strives to fulfill the college's commitment to make educational services available to citizens throughout the district. The division offers low-cost educational programs and opportunities which may help adults of all ages reach their objectives and realize their potential.

The college estimates 30,000 persons enrolled in community and continuing education classes during the 1978-79 academic year. Some of those students also took day courses, combining them with night classes and workshops.

Chemeketa's main campus is in Salem, but in a sense the campus includes the entire college district. In addition to the Salem campus, classes are held at other locations in Salem, and at college centers in Dallas, Independence-Monmouth, McMinnville, Silverton, Stayton, and Woodburn. They are also scheduled in many other communities throughout the district. Many of these classes are held in the evenings and on Saturdays.

Educational Variety

The division schedules a variety of short-term courses, workshops, lectures, and special programs as well as more traditional classes. Many are offered in response to requests from people in the college district. These are among the kinds of classes offered:

Career Preparation and Advancement

Persons interested in learning new job skills or in upgrading their skills as employees or managers may choose from a variety of courses in many areas of instruction. Many are non-credit classes but some may be taken for credit toward a degree or certificate.

In addition to individual classes, the division offers occupational programs. A three-year farm business management program offers assistance to farmers. There is also a three-year small business management program. A one-term nursing assistant program prepares students to become nurses aides.

College Transfer Courses

Credit courses which may be transferred to four-year colleges and universities are available in many fields. Chemeketa offers general studies and liberal art courses throughout the college district for the convenience of part-time students. For more information, see the college transfer section of this catalog.

Contract Services

Special programs and courses for business, industry, government, and civic and social groups may be arranged through the division. Many agencies use this service to provide specialized training for employees at minimal cost.

Special Events

During the year, Chemeketa sponsors and co-sponsors a variety of special interest programs. These include one-day workshops, mini-series, tours, field trips, and informal noon brown bag lectures. These programs are held on and off-campus in Salem and in various communities throughout the district.

Community and Continuing Education Continued

Enrollment

Persons enrolling in community and continuing education classes may register at the first class session except for limited enrollment courses which require early registration. Tuition and instructional fees are due at the time of registration and students need to know their Social Security numbers.

For the 1979-80 academic year, tuition for credit classes is \$15 per credit hour. For non-credit classes it is approximately 75 cents per contact hour (number of hours a class meets per week).

Students must be at least 16 years of age to enroll. Those under 18 years of age must receive special permission from their local high school districts.

Senior Citizens

Chemeketa includes special classes for senior citizens in its schedule. Many of these are held during daytime hours and at locations which are especially convenient to seniors.

The college issues Golden Age cards to adults 62 years of age and older. These allow free tuition for most classes and free or reduced admission to such college-sponsored activities as films, dramas, concerts, and athletic events.

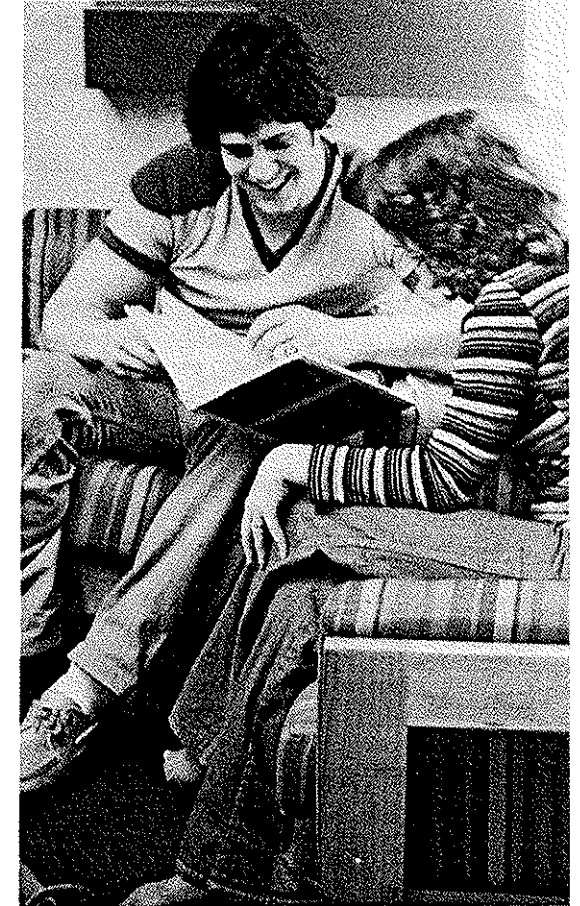
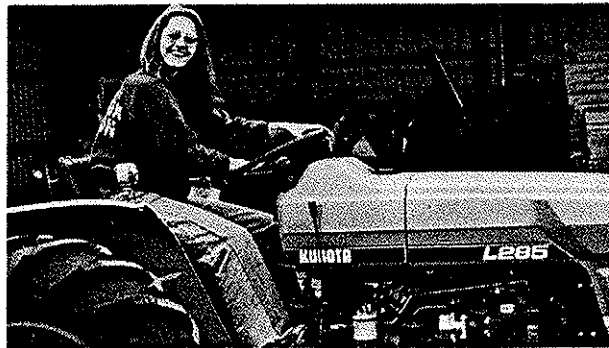
Eligible adults may apply for Golden Age cards through the community and continuing education office on the Salem campus or by contacting local coordinators in communities outside Salem. Application may also be made at the first class attended.

Counseling

Chemeketa's counseling staff is available to help students plan their educational goals. Counseling is available days and evenings at the counseling center on the Salem campus. Additionally, counseling hours are scheduled regularly at the college centers throughout the district.



Programs of Study



**Adult Basic Education
College Transfer
Occupational Programs**

Adult Basic Education

Chemeketa's **adult basic education** program offers instruction in basic academic skills and/or an opportunity for a person to earn a high school diploma or its equivalent.

Free developmental skills classes are taught in many communities in the college district and in the three county jails. Students who lack the equivalent of a high school diploma and/or need to improve their abilities to communicate in the English language may enroll weekly in open-entry, open-exit, highly individualized classes. Those who pass general education development (GED) tests receive high school diploma equivalency certificates.

English as a Second Language courses are also scheduled throughout the college district.

Adult high school completion classes are offered for persons who wish to earn credits toward a high school diploma. In some of these classes college level credits are also awarded. These classes usually offer more individualized help and schedule more lab hours than do the corresponding college-level classes.

Students who enter Chemeketa's adult high school completion program may transfer credits and competencies from former high schools. Twenty-one credits and 44 competencies are required to complete the program, which follows state guidelines. The goal of the program is to help adults learn to function effectively as individuals, learners, producers, citizens, consumers, and family members.

These programs are for adults. Students between 16 and 18 years of age are admitted only with releases from the high school districts in which they reside.



College Transfer

A number of Chemeketa's credit classes may be transferred to higher education institutions in Oregon.

Students planning to earn bachelor's degrees from four-year colleges and universities may transfer lower division credits from Chemeketa. In two years a student taking college transfer classes may also earn an Associate in Arts degree at Chemeketa by meeting certain requirements. Some of the college's vocational and technical programs also include additional college transfer courses.

College Transfer Credits

Students planning to transfer credits toward specified bachelor's degrees should

- 1) Contact the senior college they plan to attend to check entrance requirements and the suggested freshman and sophomore courses required in their chosen fields.
- 2) Consult the manual, *Transfer Curricula*, published by the Oregon State System of Higher Education. It lists all program requirements and is available through Chemeketa counselors and advisors, in the Chemeketa library, and in the offices of many high school counselors.
- 3) Confer with counselors and advisors at Chemeketa to plan a program.
- 4) Check with the senior college a term or two before completing work at Chemeketa to make sure they are meeting all the requirements.
- 5) Apply for admission and transfer 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. The college tries to keep courses current with those at Oregon's four-year institutions.

Associate in Arts Degree

To qualify for an Associate in Arts degree, a student must meet these requirements:

- 1) A minimum of 93 credit hours.
- 2) A cumulative grade point average of 2.00 or above in all work to be applied to the degree.
- 3) Six credit hours of English composition.
- 4) One term in personal health.
- 5) Five terms of physical education (partial or total waiver is available under certain circumstances).
- 6) One sequence in humanities (English composition sequence does not meet this requirement.)
- 7) One sequence in math or science.
- 8) One sequence in social science.
- 9) One additional sequence in humanities, math, science or social science.
- 10) Completion of a minimum of 30 credit hours at Chemeketa.

Up to 12 credit hours earned in one or more of the career programs may be applied toward the degree. (Students should be aware that these credit hours may not transfer to a four-year school.)

Courses which meet the above requirements include:

English composition — six credit hours
Wr 121, 122, 123 or 227

Personal health — one term
HE250

Physical education — five terms

Chemeketa offers beginning, intermediate, and advanced physical education courses so that students may enroll at their own levels and improve their abilities and skills. Most physical education classes meet three hours per week and carry one hour of college transfer credit. It is suggested that college transfer students take only one PE class per term as some four-year institutions do not accept more than that.

Under special conditions of health and age, this requirement may be waived or reduced with approval of the physical education director.

Humanities — one sequence

Classes in the college's English and humanities department cover a wide range of subjects including art, film arts, foreign languages, journalism, literature, multidisciplinary studies, music, philosophy and religion, speech, theater arts, and writing.

These humanities sequences satisfy the AA degree requirement:

Art 195, 196, 197
Art 201, 202, 203
Art 204, 205, 206
Art 290, 291A, 292 or 293
Art 291A, 291B, 291C
Eng 101, 102, 103
Eng 104, 105, 106
Eng 107, 108, 109
Eng 201, 202, 203
Eng 253, 254, 255
Eng 256, 257, 258
Eng 105, 106, 261
FA 255, 256, 257
J 224, 225, 226
MS 251, 252, 253
Mus 201, 202, 203
Phl 201, 202, 203
R 201, 202, 203
RL 101, 102, 103
RL 107, 108, 109
RL 201, 202, 203
RL 207, 208, 209
Sp 111, 112, 113
Sp 112, 113, 125
TA 111, 112, 113
Wr 241, 242, 243

Mathematics or science — one sequence

Chemeketa's **mathematics** department offers a variety of classes. Diagnostic tests determine a student's mathematical level. As an alternative to classroom teaching, students may study intermediate and college algebra on an individual basis, consulting with instructors and tutors. Tutoring is available for all students on a drop-in basis at the college's Center for Student Development.

These mathematics sequences satisfy the AA degree requirements:

Mth 095, 101, 102, 103, 106, 151 (three make a sequence)
Mth 200, 201, 202, 203 (three make a sequence)

Chemeketa's **science** classes which may be transferred for college credit include sequences in biology, botany, chemistry, geology, general science, physics, and zoology. These sequences meet the AA degree requirements:

Bi 101, 102, 103
Bi 121, 122, 124 for CCC Nursing
Bot 201, 202, 203
Ch 204, 205, 206
Ch 101, 102, 103
Ch 104, 105, 106
Ch 204, 205, 206
G 101, 102, 103
G 201, 202, 203
GS 104, 105, 106
GS 207, 208, 209
Ph 201, 202, 203
Zoo 201, 202, 203

Social science — one sequence

In order to qualify for the AA degree, students choose a sequence of courses in anthropology, ethnic studies, economics, geography, history, political science, psychology, sociology or women's studies. These sequences meet the requirement:

Anth 101, 102, 103
Anth 207, 208, 209
BS 202, 203, 204
Ec 201, 202, 203
Geog 105, 106, 107
Hst 107, 108, 109
Hst 157, 158, 159
Hst 201, 202, 203
Hst 257, 258, 259
PS 201, 202, 203 or 205
Psy 201, 202, 203
Soc 204, 205, 206
Ws 101, 102, 103

Associate in Science Degree

Students who earn Associate in Science degrees in some of Chemeketa's occupational programs such as Accounting, Business Management, Criminal Justice, and Educational Aide, may transfer a number of lower division credits to apply toward baccalaureate degrees at four-year colleges and universities. Others may want to follow specific programs for transfer credit. Their academic advisors will assist in planning such programs.

Career Choices

Chemeketa's college transfer program may be the first step a person takes toward a career goal. There are courses in each department which can fit into a student's program of training for a particular profession which requires a bachelor's degree. Undecided students have an opportunity to broaden their views as they explore possibilities for career choices.

Classes in **English** and the **humanities** may expand a person's understanding of what it means to be human as well as teaching him or her valuable skills in many areas of thought and creativity. Those who do well in **mathematics** may choose careers as researchers or teachers, business men and women, engineers or scientists.

An emphasis in the social sciences may lead students to jobs in government, research, counseling or social service professions. **Science** classes at Chemeketa may be incorporated in pre-preparatory studies of such professions as medicine, dentistry, optometry, pharmacy, and engineering as well as meeting some requirements for college science majors.

Students interested in teaching as a career may take a number of lower division classes at Chemeketa which meet transfer requirements to four-year institutions. Students interested in health education, for instance, will find a number of classes carrying college transfer credit in the course description list at the end of this catalog.

Occupational Programs

Chemeketa emphasizes vocational and technical education. The college offers occupational training in more than 40 areas. In most of these fields students may earn Associate in Science degrees by meeting requirements of two-year programs. There are also a number of one-year programs leading to Certificates of Completion.

These occupational programs are listed on the following pages:

Accounting
Agribusiness/Crop Production
Automotive Technology
Banking and Finance
Building Inspection
Business Management
Chemical Technology
Civil-Structural
Engineering Technology
Clerical Technology
Commercial Food Production
Computer Operations
Computer Programming
Criminal Justice
Dental Assisting
Early Childhood Education
Educational Aide
Electromechanical Technology
Electronic Engineering
Electronics Servicing Technology
Emergency Medical Technology
Farm Business Management
Fire Protection Technology
Food Service Management
Forest Products
Forest Technology
Human Resource Technology
Industrial Technology/Apprenticeship
Insurance Technology
Machine Shop
Mechanical Design
Medical Office Assistant and Health Records
Nursing Education
Office Occupations
Real Estate
Records Management
Secretarial Science
Small Business Management
Survey Technology
Technical Drafting
Visual Communications
Welding
Welding and Fabrication
Well Drilling

Accounting Business Technology

The Accounting curriculum offers a core of accounting, business, and general education courses to train graduates for entry level positions as full cycle bookkeepers, accounting clerks or junior accountants in government or private industry. The program emphasizes specialized knowledge of accounting plus a general knowledge of business. All of the classes may be taken at night as well as during the day.

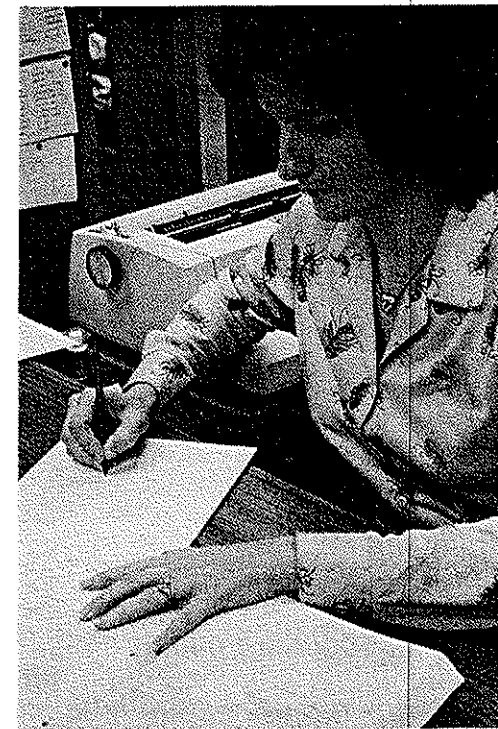
Students in the program must reach certain required proficiencies in mathematics, English, and typing. Initial placement in these courses is based upon tests. In math, completion of 6.918 Applied Business Math is the minimum achievement level accepted for credit in the program. Any college transfer class, Mth095 or higher, may be substituted.

The minimum required English achievement level course is BA214, Wr121, Wr122 or Wr123 may be substituted. SS121 is the minimum level typing class.

Cooperative Work Experience is recommended strongly for second-year students. Up to six CWE credits may be applied toward graduation requirements.

Students may earn an Associate in Science degree upon successful completion of the required 99 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
4.201	English Variable Business Mathematics or College Transfer Math Elective Psychology or Sociology Elective	3 3 3
BA211	Financial Accounting I	4
BA101	Business Environment	4
2.658	Introduction to Calculators	2
Term 2		
BA214	Business Communications	3
BA212	Financial Accounting II Psychology or Sociology Elective	4 3
SS121	Typing I	3
6.918	Applied Business Math or College Transfer Math Elective	3 3
Term 3		
BA252	Office Support Systems	3
BA213	Managerial Accounting Psychology or Sociology Elective	4 3
2.559	Governmental Accounting or Business Elective	3 3
BA131	Introduction to Data Processing	3
Term 4		
2.551	Intermediate Financial Accounting I	4
BA226	Business Law	3
BA216	Income Tax Accounting	3
Ec201	Principles of Economics or Outline of Economics	3 3
Ec100	Business Elective	3
Term 5		
2.552	Intermediate Financial Accounting II	4
BA222	Financial Management	3
BA206	Business Management Principles	3
BA215	Cost Accounting CWE or Business Elective	3 3



Term 6

2.553	Intermediate Financial Accounting III	4
2.555	Auditing	3
Wr227	Technical Report Writing	3
Sp111	Fundamentals of Speech or Business and Professional Speaking	3 3
Sp220	CWE or Business Elective	3

Agribusiness/ Crop Production

The Agribusiness/Crop Production program offers training for a number of jobs in agriculture. These include assistant crop and seed processors, irrigation and drainage planners, farm chemicals salespersons, and farm machinery and agricultural agents for banks, insurance companies, lending agencies, and farmer groups.

Students take 54 required credit hours of core curriculum the first year, then specialize in either agribusiness or crop production. After successfully completing an additional 49 required credit hours during the second year, a graduate earns an Associate in Science degree.

Cooperative Work Experience may be used instead of selected courses to complete program requirements. Appropriate summer employment may qualify as CWE through arrangements made before the end of spring term. CWE requires departmental approval.

Course No.	Course Title	Credit Hours
Term 1		
4.200	Mathematics	3
6.531	Agriculture Career Survey	3
6.530	Introduction to Oregon Soils	4
6.532	Plant Science	4
1.101	Communication Skills	3
Term 2		
4.202	Mathematics	3
6.536	Soil Management	4
6.923	Accounting Procedures I	4
6.533	Basic Orchard Practices	4
	Technical Electives	3-4

Term 3		
6.537	Pesticide Safety and Regulations	3
6.538	Weed Identification and Control	3
6.539	Farm Survey and Measurement	3
6.540	Irrigation and Drainage	4
6.542	Plant Identification (Agricultural and Ornamental)	3
6.577	Technical Electives	3

Second Year — Agribusiness Option

Term 4		
6.543	Agricultural Economics and Farm Management	3
Psy101	Psychology of Human Relations	3
6.544	Orchard Production	3
6.548	Field Crop Production	3
2.109	Salesmanship	3
Term 5		
4.190	Industrial Accident Prevention	3
6.940	Introduction to Data Processing	3
6.550	Agricultural Marketing	3
1.104	Communication Skills	3
	Technical Electives	6
Term 6		
2.672	Business Communications	3
6.552	Agricultural Finance and Banking	3
6.553	Vegetable Crop Production	3
6.554	Agriculture Seminar	1
	Technical Electives	7-9

Second Year - Crop Production Option

Term 4		
6.548	Field Crop Production	3
6.544	Orchard Production	3
6.556	Fertilizers and Plant Nutrition	4
4.172	Power Systems	4
	Technical Electives	3
Term 5		
1.104	Communication Skills	3
4.190	Industrial Accident Prevention	3
6.557	Farm Equipment Repair and Maintenance	3
	Technical Electives	7-9

Term 6		
6.553	Vegetable Crop Production	3
6.558	Agricultural Insects	4
6.559	Plant Diseases	4
6.554	Agriculture Seminar	1
	Technical Electives	4

Technical Electives

4.172	Power Systems	4
6.571	Seed Crop Production	4
6.564	Elevator Operations	2
6.572	Seed Quality and Testing	4
6.561	Construction of Farm Buildings and Farm Building Codes	3
4.150	Welding	2
6.562	Crop Improvements and Certification Programs	3
6.574	Soil Preparation, Equipment Operation, and Maintenance	3
6.575	Spray Equipment, Operation, and Maintenance	3
6.576	State Agriculture Laws, Grades, and Standards	3
6.577	Nursery and Greenhouse Operations	3
6.566	Grape Production and Management	3
6.573	Small Fruit Production	4
6.560	Christmas Tree Production	3
6.570	Plant Propagation	4
6.568	Nursery and Greenhouse Problems	3
6.569	Plant Clinic	2
6.567	Introduction to Agricultural Microbiology	4
6.563	Current Agriculture Problems and Environment	2
6.565	Farm Records	3

Other Related Courses

Ch104	General Chemistry	5
Ch226	Organic Chemistry	5
Bi101	General Biology	4
Ch228	Biochemistry	3
6.543	Agricultural Economics and Farm Management	3
BA226	Business Law	3
BA101	Business Environment	4
2.105	Merchandising	4
BA211	Accounting	4

Automotive Technology and Auto Parts Sales

The Automotive Technology program offers training for automotive maintenance and repair workers and for auto parts salespersons. The classes emphasize technical training and development of skills through the study of the various systems of the automobile.

To help students work effectively with people, the program also includes written and oral communications classes and general education electives. Cooperative Work Experience credits may be applied instead of approved electives with departmental approval. The curriculum emphasizes related scientific, mathematical, and general mechanical principles.

After completing the first year core curriculum students continue the second year in either the automotive technology program or the automotive parts sales option which explores aspects of jobber store management in addition to the sales of automotive parts.

To earn an Associate in Science degree, automotive technology students must successfully complete 93 required credits. Auto part sales students must successfully complete 94 required credits.

Course No.	Course Title	Credit Hours
Term 1		
3.300	Internal Combustion Engines	6
3.303	Automotive Shop Safety	1
4.153	Welding	2
1.101	Communication Skills	3
3.306	Applied Fluid Mechanics	3
Term 2		
3.305	Power Trains	5
3.309	Technical Diagram Interpretation	2
1.104	Communication Skills	3
4.200	Mathematics	3
3.307	Automotive Chassis	3
Term 3		
3.301	Fuel Systems and Carburetion I	3
3.327	Automotive Repair I	4
3.308	Automotive Machine Shop	3
3.304	Automotive Electrical Systems I	4
Second Year— Automotive Technology Program		
Term 4		
3.316	Fuel Systems and Carburetion II	4
3.325	Automatic Transmission	3
3.328	Automotive Repair II	4
	General Education Elective or Cooperative Work Experience	3
Term 5		
3.329	Automotive Repair III	4
3.317	Automotive Electrical Systems II	4
3.319	Automotive Auxiliary Systems	4
3.320	Automotive Service Operations	2
	General Education Elective or Cooperative Work Experience	3
Term 6		
3.330	Tune Up and Diagnosis	6
3.326	New Automotive Developments	3
Psy100	Introduction to Psychology	3
3.302	Automotive Materials	2
	General Education Elective or Cooperative Work Experience	3

Second Year— Automotive Parts Sales Option

Term 4		
3.325	Automotive Transmissions	3
	General Education Elective	3
4.201	Math (Business)	3
3.335	Automotive Parts I	6
Term 5		
3.319	Automotive Auxiliary Systems	4
3.320	Service Operations	2
	General Education Elective	3
6.923	Accounting Procedures I	4
3.338	Automotive Parts II	4
Term 6		
3.326	New Automotive Developments	3
Psy100	Introduction to Psychology*	3
3.302	Automotive Materials	2
3.339	Automotive Parts III	6
	General Education Elective	3

*Students may substitute Psy101 Psychology of Human Relations.

Banking and Finance

The two-year Banking and Finance program is for persons seeking training to enter the banking field and for bank clerks and tellers who want to become eligible for advancement or promotion to officer trainees or officers. 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. Students have three options; they may specialize in banking, credit union or savings and loan programs.

In addition, Chemeketa and two financial organizations, the Willamette chapter of the American Institute of Banking and the Salem chapter of the Institute of Financial Education, interchange credits for specified courses.

The Banking and Finance program has specific mathematics and English requirements with initial placement based upon proficiency tests. *In math*, the course at the minimum achievement level for graduation is 6.918, third in a sequence of courses including 4.200 and 4.201. Mth010, Mth095 or higher level college transfer courses also fulfill the requirement.

BA214 is the minimum English achievement level required for graduation. It is third in a sequence which includes Wr40 and 2.673. Wr121, Wr122, and Wr123 also fulfill the English requirement.

Students are encouraged to enroll in Cooperative Work Experience. A maximum of six CWE credit hours may be applied toward graduation requirements. CWE requires departmental approval.

An Associate in Science degree is granted upon successful completion of the required 93 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
	English Variable (based on placement test) or General Education Elective	2
	Math Variable (based on placement test)	3
BA211	Financial Accounting I or Accounting Procedures I	4
6.923	Business Environment	4
BA101	Social Science Elective	3
Term 2		
	English Variable (based on placement test) or General Education Elective	3
6.918	Applied Business Math	3
	Social Science Elective	3
BA212	Financial Accounting II or Accounting Procedures II	4
6.924	Objective elective (from Banking, Credit Union or Savings and Loan)	3
Term 3		
BA214	Business Communications	3
BA213	Managerial Accounting or Accounting Procedures III	4
6.925	Principles of Marketing	3
BA223	Objective elective (from Banking, Credit Union or Savings and Loan)	3
	Business Elective	3
Second Year Courses		
Required Core Courses:		
BA226	Business Law I	3
Ec201	Principles of Economics	3
Wr227	Technical Writing or Technical Report Writing	3
1.106	Personnel Principles and Supervision	3
2.685	Small Business Management	3
BA250	Salesmanship	3
BA238	Finance	3
BA222		3

BA131	Introduction to Data Processing	3
	Objective electives (from Banking, Credit Union or Savings and Loan)	9
	Cooperative Work Experience or Business Elective	3
	Social Science Elective	6
	Business Elective	3

Objective Electives

Banking Objective:

BA269	Principles of Bank Operations	3
BA270	Money and Banking	3
BA278	Law and Banking	3
BA280	Bank Management	3
BA281	Installment Credit	3

Credit Union Objective:

BA286	Credit Union Accounting	3
BA287	Credit Union Directorship	3
BA288	Credit Union Management	3
BA289	Credit Union Law	3
BA290	Financial Counseling	3

Savings and Loan Objective:

2.408	Real Estate Appraisal I or Escrow Procedures I	3
2.423	Savings and Loan Accounting	3
BA291	Real Estate Principles I	3
BA260	Real Estate Law	3
BA263	Savings Operations	3
BA292		3

Suggested Business Electives:

2.401	Real Estate—A Consumer Approach	3
BA227	Business Law II	3
BA229	Consumer Finance	3
BA277	Business Ethics	3
BA217	Business Machines	3
SS121	Typing	3
2.429	Public Relations in Business	3
9.263	Agricultural Finance	3
2.408	Real Estate Appraisal I	3
2.423	Escrow Procedures I	3
BA232	Introduction to Business Statistics	3

Suggested Social Science Electives:

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

Building Inspection

The Building Inspection program has two options. There is a one-year plan for students with experience in the building trades and a two-year option for those new to the field. Graduates of both programs may qualify for state of Oregon certification as building inspectors at the C level or higher, depending upon experience.

There is an increasing need for certified building inspectors working for public agencies. With some experience in the field, graduates of the program also may become construction managers or clerks-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.

Students in the one-year program are awarded Certificates of Completion upon successful completion of the required 51 credit hours. Those in the two-year program may gain experience through the Cooperative Work Experience plan. Up to 18 CWE credit hours may be substituted for certain technical courses approved by the department. The Associate in Science degree is awarded after successful completion of the required 103 credit hours.

One-Year Certificate Program

Course No.	Course Title	Credit Hours
Term 1		
1.101	Communication Skills I	3
Psy100	Introduction to Psychology	3
6.423	Introduction to Uniform Building Code	3
4.200	Mathematics	3
6.116	Building Code I	3
Term 2		
1.104	Communication Skills II	3
4.202	Mathematics	3
6.420	Techniques of Inspection I	3
6.281	Building Materials	3
6.119	Building Codes II	3
6.121	Dwelling Construction/UBC	3
Term 3		
6.411	Engineering for Building Inspection	3
6.430	Building Department Administration	3
6.122	Soil Mechanic Fundamentals	3
6.410	Non-Structural Plan Review	3
6.126	Building Codes III	3
4.204	Mathematics	3

Two-Year Associate in Science Degree

Course No.	Course Title	Credit Hours
Term 1		
1.101	Communication Skills I	3
4.200	Mathematics	3
Psy101	Psychology of Human Relations	3
5.101	Fire Prevention Fundamentals	3
6.423	Introduction to Uniform Building Code	3
6.192	Introduction to Engineering Calculators	1
Term 2		
1.104	Communication Skills II	3
4.202	Mathematics	3
4.120	Print Reading	2
6.420	Techniques of Inspection I	3
6.121	Dwelling Construction under UBC	3
2.425	Zoning, Subdivision, and Community Planning	3

Term 3

6.122	Soil Mechanic Fundamentals	3
6.411	Engineering for Building Inspectors	3
4.204	Mathematics	3
1.106	Technical Report Writing	3
6.139	Environmental Quality Control	3
6.430	Building Department Administration	3

Term 4

6.116	Building Codes I	3
6.424	Structural Inspection/Concrete	3
6.426	Structural Inspection/Wood	3
6.281	Building Materials	3
6.118	Contracts and Specifications	3
6.405	Plumbing Code and Inspection I	3

Term 5

6.119	Building Codes II	3
6.415	Structural Inspection/Masonry	3
4.123	Project Development	3
5.106	Fire Protection and Extinguishing Systems	3
6.422	Structural Inspection/Steel	3
6.120	Mechanical Code and Inspection I	3

Term 6

6.126	Building Codes III	3
6.410	Non-Structural Plan Review	3
5.108	Hazardous Materials	3
6.421	Techniques of Inspection II	3
6.425	Electrical Code and Inspection I	3
FE205	Creative Job Search	1

Business Management

Graduates of Chemeketa's two-year Business Management program may become management trainees or other entry level employees of small business or large retail firms.

The curriculum offers a core of business courses. Included also are specific mathematics and English levels of achievement which students must meet in order to graduate.

In mathematics, the minimum achievement level course required for graduation is 6.918 Applied Business Math. This is the third in a sequence of courses which includes 4.200 and 4.201. Mth010 and Mth095 also fulfill the mathematics requirement.

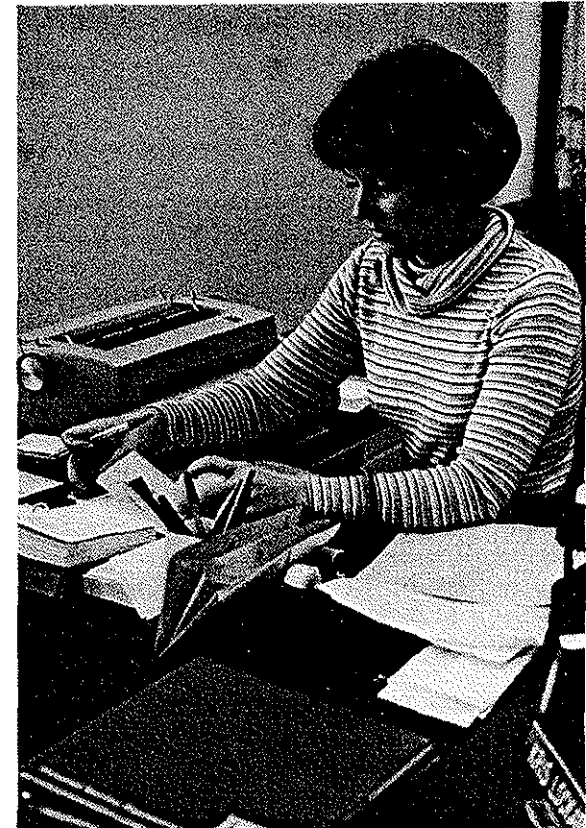
In English, the minimum achievement level course required for graduation is BA214, Business Communications, third in a sequence of Wr040 and 2.673. (However, Wr040 does not count toward graduation requirements.) Wr121, Wr122, and Wr123 also fulfill the English requirement.

A student's initial placement in a mathematics or English course is determined by his/her scores on proficiency tests.

Cooperative Work Experience is recommended for second-year students. This program combines work experience with class studies. Up to 12 CWE credit hours may apply toward graduation.

An Associate in Science degree is awarded upon successful completion of 97 required credit hours.

Course No.	Course Title	Credit Hours
Term 1		
	English Variable or General Education Elective (based on placement test)	3
	Math Variable (based on placement test)	3
BA211	Financial Accounting I or	
6.923	Accounting Procedures I*	4
BA101	Business Environment	4
BA131	Introduction to Data Processing	3
Term 2		
BA214	Business Communications	3
SS121	Typing I	3
6.918	Applied Business Math	3
BA212	Financial Accounting II or	
6.924	Accounting Procedures II*	4
	Psychology or Sociology Elective	3
Term 3		
BA213	Managerial Accounting or	
6.925	Accounting Procedures III*	4
	Psychology or Sociology Elective	3
BA223	Marketing Principles	3
BA206	Business Management Principles	3
	Approved Business Elective	3
Term 4		
	Psychology or Sociology Elective	3
BA226	Business Law I	3
BA215	Cost Accounting	3
	Approved Business Electives	6
Term 5		
	Elective	3
BA222	Finance	3
Ec100	Outline of Economics or	
Ec201	Principles of Economics	3
	Approved Business Electives	6
	Cooperative Work Experience or	
	Business Elective	3



Term 6		
	Elective	3
2.685	Personnel Principles and Supervision	3
Sp220	Business and Professional Speaking or	
Sp111	Fundamentals of Speech	3
	Approved Business Elective	3
2.687	Cooperative Work Experience or	
	Approved Business Elective	3

*Students who take the Accounting Procedures sequence must enroll in BA213 before they take BA215.

Chemical Technology

The two-year Chemical Technology program offers training in analytical testing, product development, and research techniques used in chemical laboratories. There are occupational opportunities within the college district in industrial laboratories of metal refiners, forest product suppliers, electronics firms, food processors, and pharmaceutical companies. There are also government laboratories dealing with consumer and environmental concerns, waste water treatment, and development of natural resources.

The curriculum includes a basic core of courses dealing with laboratory principles and techniques using modern equipment. These courses cover the major disciplines of chemistry plus mathematics and communications classes.

With the approval of an advisor, students may also select a number of related science or technical courses to meet their individual educational goals and may choose approved general education electives in the social sciences and/or mathematics. Students planning to continue their education at four-year institutions may acquire college transfer credit in certain courses including first year chemistry.

The program has two levels of entry. Students with no previous chemistry background take the Ch104, 105, 106 series, while those with enough math and chemistry are placed in the Ch204, 205, 206 series. A student with college chemistry credits may be eligible for advanced term placement. Students are advised to take placement examinations to enter the appropriate levels of mathematics.

An important aspect of the program is Cooperative Work Experience. With departmental approval students may earn up to 12 credit hours as technical electives while working in a commercial laboratory. A number of industrial and governmental labs in the area are involved in the program.

An Associate in Science degree is granted upon successful completion of the 104 required credit hours.

Course No.	Course Title	Credit Hours
Term 1		
Ch104	General Chemistry	5
Ch204	General Chemistry	5
6.327	Chemical Lab Methods I	1
1.101	Communication Skills	1
Wr121	English Composition	3
	Math*	4
	Science or Technical Electives**	4
Term 2		
Ch105	General Chemistry	5
Ch205	General Chemistry	5
6.328	Chemical Lab Methods II	1
1.104	Communication Skills	1
Sp111	Fundamentals of Speech	3
	Math*	4
	Science or Technical Electives**	4
Term 3		
Ch106	General Chemistry	5
6.329	Chemical Lab Methods III	1
Ch206	General Chemistry	5
6.339	Glass Blowing	1
1.106	Technical Report Writing	1
Wr122	English Composition	3
	Math*	4
	Science or Technical Electives**	4
Term 4		
6.330	Organic Chemistry I	4
6.333	Analytical Chemistry	4
BA131	Introduction to Data Processing	1
Mth151	Introduction to Programming, Basic	3
	Science or Technical Elective	4
	General Education Elective	3

Term 5		
6.331	Organic Chemistry II	4
6.334	Instrumental Analysis	4
6.345	Radiation Measurements	3
	Science or Technical Elective	4
	General Education Elective	3

Term 6		
6.332	Synthetic Polymers and Natural Products	4
6.336	Instrumentation and Special Techniques	4
	Science or Technical Electives	6
	General Education Elective	3

*Required math sequences are Technical Mathematics 6.261, 6.262, 6.266, or Mth095, 101, and one of the following: Mth102, 103 or 106.

**Approved science and technical electives are:

First Year Sequences	Credit Hours
Bi101, 102, 103 General Biology	4 each
Bi123, Microbiology	4
Bi124 Medical Microbiology	4
(Any three of the above courses)	
or	
G201, 202, 203 Geology	3 each
G204, 205, 206 Geology Laboratory	1 each
or	
6.200 Electrical Theory DC	4
6.202 Electrical Theory AC	4
6.210 Transistor Fundamentals	4
Second Year Sequences and/or Courses	
Ch228 Introduction to Biochemistry	3
Math courses—see above requirements	4 each
Ph201, 202, 203 General Physics	4 each
Wr227 Technical Writing	3
4.281 Pulp and Paper Technology	4
4.444 Pulp and Paper Technology II	4
6.279 Wood Adhesives and Coatings	4
6.109 Applied Mechanics	3
6.105 Strength of Materials	3
6.128 Strength of Materials II	3
6.211 Transistor Circuits	5
6.212 Electronic Circuit Concepts	4
6.220 Electronic Instruments	3
6.370, 6.371 Applied Physics	4 each
Cooperative Work Experience	12 maximum
or any first year General Education electives	

Civil-Structural Engineering Technology

The Civil-Structural Engineering program offers practical training in the application of current theory and practices common to the field of civil engineering.

Comprehensive training in surveying, strength of materials, and construction activities helps students apply the theoretical and mathematical courses taken concurrently.

Graduates may qualify for employment and advancement in various civil and structural fields.

The program is designed to prepare engineering technicians for positions in related engineering technology, with opportunities for careers in highway, bridge, dam and factory development, and construction, design drafting, estimating, inspection, material analysis, and photogrammetry.

In construction, civil-structural technicians help estimate costs, prepare specifications for materials, and may do surveying, drafting or design work. Once actual construction has begun, they may assist contractors or engineers in scheduling construction activities and inspecting work for conformance with blueprints and specifications.

Job opportunities for recent graduates are inspector, civil engineering technician, contracting technician, junior surveyor, estimator, draftsman, and quantity estimators.

Preparation for advancement in and adaption to changing technological and social conditions offers students a base for general civil engineering and related work. With further study and sufficient experience, the graduate may advance to a civil engineering rating in certain federal, state or city agencies.

Possibilities for experienced engineering technicians are jobs as construction supervisors, highway engineering technicians, photogrammetrists, specifications writers, survey party chiefs, and structural designers.

Students in the program may gain practical experience through Cooperative Work Experience. CWE may be used instead of selected technical courses to complete program requirements. CWE requires departmental approval.

A student is awarded an Associate in Science degree upon successful completion of the required 98 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
6.101	Plane Surveying	4
4.101	Drafting	2
6.261	Technical Mathematics	4
6.136	Engineering Technician Orientation	2
1.101	Communication Skills	3
Psy100	Introduction to Psychology	3
Term 2		
6.371	Applied Physics	4
4.120	Print Reading	2
6.103	Plane Surveying	4
6.262	Technical Mathematics	4
6.109	Applied Mechanics	3
Term 3		
6.500	Surveying Computations	3
6.105	Strength of Materials	3
6.266	Technical Mathematics	4
1.106	Technical Report Writing	3
6.139	Environmental Quality Control	3
Term 4		
6.335	Land Division and Mapping	3
6.128	Strength of Materials	3
4.123	Project Development	3
6.281	Building Materials	3
6.118	Contracts and Specifications	3
Term 5		
6.110	Construction Estimating	3
4.236	Civil Engineering Drafting	3
6.113	Hydraulics	4
6.125	Timber and Steel Construction	4
1.104	Communication Skills II	3
Term 6		
6.123	Concrete Construction and Design	3
6.140	Sanitary Engineering	3
6.124	Soil Mechanics	3
6.507	Route Surveying	3
4.287	Methods of Supervision	3

Clerical Technology

The Clerical Technology curriculum offers practical training for students interested in working as general office clerks, receptionists, typists, file clerks, transcribing machine operators, and accounting clerks. The program is recommended for students who wish to prepare themselves for work in a minimum amount of time.

An advisor works with each student to develop a program to fit the student's needs for a desired position. Approved electives allow flexibility for students to specialize for work in such offices as law, real estate, insurance, accounting, medical, engineering, data processing, and word processing.

A minimum of 18 credit hours of electives is required for graduation. Career-oriented electives may be selected from business or general education courses or Cooperative Work Experience and must be approved by an assigned advisor. CWE is recommended for a minimum of three credit hours and a maximum of six credit hours. Students are eligible for CWE if they have a grade point average of 2.5 or better and have completed 24 credit hours of the program.

A Certificate of Completion is awarded upon successful completion of the required 48 credits.

Course No.	Course Title	Credit Hours
Term 1		
4.201	Business Math	3
SS121	Typing I	3
SS101	Office Careers Survey	1
	Approved Electives	6
	English Variable or General Education Elective	3
Term 2		
2.709	Typing Skillbuilding	3
2.658	Introduction to Calculators	2
	Social Science Elective	3
	Approved Electives	6
	English Variable or General Education Elective	3
Term 3		
BA214	Business Communications	3
2.641	Office Procedures	3
SS122	Typing II	3
	Electives*	6

*CWE recommended

Commercial Food Production

The one-year Commercial Food Production program is designed primarily for training food service personnel in quality food production and service.

The program includes preparatory training for students planning to enter the food trades industry and supplementary training for persons already employed in the occupation who wish to increase their knowledge and skills.

Graduates may find work in restaurants, hotels, hospitals, country clubs, military installations, institutions, fast foods and other large food complexes.

A Certificate of Completion is awarded upon successful completion of the required 52 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
3.200	Basic Food and Nutrition	2
3.201	Quantity Foods Production I	8
3.204	Dining Room Operation I	2
3.210	Sanitation and Safety	2
1.104	Communication Skills	
	or	
3.216	Math for Food Service	3
Term 2		
3.211	Menu Planning and Culinary Terms	2
3.202	Quantity Foods Production II	8
3.205	Dining Room Operation II	2
3.212	Purchasing and Store Control	3
1.104	Communication Skills	
	or	
3.216	Math for Food Service	3
Term 3		
3.213	Elementary Food Cost Analysis	2
3.203	Quantity Foods Production III	8
3.206	Dining Room Operation III	2
3.214	Food Production Organization and Planning	2
2.687	Cooperative Work Experience	3



Computer Operations

The one-year Computer Operations program features concentrated study and practical experience in all positions of a computer center operation. These include control clerk, console operator, scheduler, peripheral equipment operator, librarian, and operations supervisor. The student-oriented computer center is equipped with unit record equipment and an IBM/370 Model 125 computing system.

The program emphasizes professional performance by students. This includes advanced operating standards and techniques, problem solving, recovery procedures, and working in coordination with other people. This helps students to become efficient and to obtain reliable results.



Students must demonstrate proficiency in English on a level equal to completion of 1.101 Communications Skills. This may be shown by achieving a comparable score on an English placement test or by successfully completing 1.101 or WR121 English Composition.

During the second and third terms, students may be eligible for Cooperative Work Experience which allows them to gain computer operations experience at local firms while earning credit hours. Students may qualify for CWE if they have grade point averages of 2.5 or better in all the data processing courses they have completed and are recommended by the CWE instructor-coordinator for computer operations.

A Certificate of Completion is awarded upon satisfactory completion of 52 required credits. This certificate meets the minimum education/experience requirements to qualify for a state of Oregon employment classification as a Computer Operator I.

Course No.	Course Title	Credit Hours
Term 1		
1.101	Communications Skills	
	or	
Wr121	English Composition	
	or	
BA211	General Education Elective Financial Accounting I	3
	or	
6.923	Accounting Procedures	4
BA131	Introduction to Data Processing	3
6.979	Keypunch I	3
6.950	Computer Center Operations I	5
FE205	Job Search Techniques	1
Term 2		
1.106	Technical Report Writing	
	or	
Wr122	English Composition	3
6.956	System 370 Concepts and Facilities	3
6.951	Computer Center Operations II	3
6.983	RJE Operation	2
6.993	Computer Center Lab II	
	or	
6.991	Computer Center Lab II (3 cr. hrs.) and FE201 Cooperative Work Experience (3 cr. hrs.)	6
Term 3		
6.952	Computer Center Operations III	3
6.975	DOS/VS Utility and Librarian Programs	3
6.994	Computer Center Lab III	
	or	
6.992	Computer Center Lab III (3 cr. hrs.) and FE201 Cooperative Work Experience (3 cr. hrs.)	6
2.679	RPG for Operators	4

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 actual programming tasks. The curriculum emphasizes accounting and management principles, problem solving, and how to work effectively with people.

The program includes:

English: Students must reach a proficiency level equal to completion of 1.101 Communications Skills or Wr121 English Composition. Proficiency may be shown by a comparable score on an English placement test. After meeting this requirement, students may take a three-credit hour general education elective.

Speech: Students must successfully pass Sp125 Interpersonal Communications or Sp111 Fundamentals of Speech.

Composition: Students must successfully complete Wr227 Technical Writing or Wr122 English Composition.

Mathematics: Before enrolling in 6.941 Fundamentals of Computer Programming II, students must show a math proficiency level equal to satisfactory completion of Mth010 Beginning Algebra. They may do so by achieving a comparable score on a math placement test. Students may then take an advanced math course.

Accounting: Students choose an accounting sequence, either BA211, BA212 Financial Accounting, and a business elective or 6.923, 6.924, and 6.925 Accounting Procedures.

During the second year, students may be eligible for Cooperative Work Experience. This allows them to gain computer programming experience at a local firm while earning credit hours. CWE requires approval of an instructor-coordinator.

An Associate in Science degree is awarded upon successful completion of the required 98 hours. This degree meets the minimum education/experience requirement to qualify for a state of Oregon employment classification as a Computer Programmer I.

Course No.	Course Title	Credit Hours
Term 1		
1.101	Communication Skills	
	or	
Wr121	English Composition	3
Mth010	Beginning Algebra	3
BA211	Financial Accounting I	
	or	
6.923	Accounting Procedures I	4
BA131	Introduction to Data Processing	3
6.948	Fundamentals of Computer Programming I	3
Term 2		
BA212	Financial Accounting II	
	or	
6.924	Accounting Procedures II	4
6.941	Fundamentals of Computer Programming II	4
6.956	System 370 Concepts and Facilities	4
BA231	COBOL I	4

Term 3		
6.963	Business Elective	3
6.969	COBOL II	5
6.944	Assembler I	5
FE205	Systems Design I	3
	Job Search Techniques	1
Term 4		
6.945	Systems Design II	3
6.971	OS/VS Job Control and Utilities	4
6.988	RPG for Programmers	4
BA213	Managerial Accounting	4
	Business Elective	
	or	
FE201C	Cooperative Work Experience	3
Term 5		
6.976	Data Communications	2
6.964	COBOL III	5
Wr227	Technical Writing	
	or	
Wr122	English Composition	3
	Social Science Elective	3
FE201C	Cooperative Work Experience	
	or	
	Business Elective	3
Term 6		
	Programming Elective	3
	General Education Elective	3
Ec100	Outline of Economics	
	or	
Ec201	Principle of Economics	3
FE201C	Cooperative Work Experience	
	or	
	Business Elective	3
Sp111	Fundamentals of Speech	
	or	
Sp125	Interpersonal Communications	3

Criminal Justice

The Criminal Justice program is both for persons who want to enter the field and for employees seeking further training. There are five career options: criminal justice administration, corrections, law enforcement, law enforcement technician (criminalistics), and security systems management. The curriculum has been developed in cooperation with the Oregon Department of Education and the State Board on Police Standards and Training.

Students may enter the program any term and complete the course in two full-time years. Both day and evening classes are scheduled to accommodate working students who may attend part-time.

Students are required to meet with an academic advisor before registering for the second term. College transfer students should meet with the program manager for program planning and course approval before completing the first term.

Students may gain practical experience and additional credits through Cooperative Work Experience. In some cases, these credits may satisfy a student's elective requirements. Such credits require departmental approval. Students may be eligible for financial assistance from certain grants and loans which are available in this program.

An Associate in Science degree is awarded upon successful completion of the required credit hours for each career option.

Students in all five options must meet the same 34 credit hours of general education and certain core course requirements. There are additional professional course requirements and electives for each option.

General Education Requirements (34 hours)

English/Communication Skills	
Speech	3
Writing	6
Math/Science	4
P.E./Health	3
Social Science/Humanities	18

Core Course Requirements *

Course No.	Course Title	Credit Hours
CJ100	Survey of Criminal Justice System	3
CJ101	Introduction to Criminology	3
CJ110	Introduction to Law Enforcement	3
CJ140	Introduction to Criminalistics	5
CJ201	Juvenile Delinquency	3
CJ210	Introduction to Criminal Investigation	3
CJ220	Introduction to Substantive Law	3
CJ223	Rules of Evidence	3

*All core courses are required in all options except CJ140 which is not required in the corrections option.

Corrections Option

Professional Course Requirements (21 hours)

CJ131	Introduction to Penology	3
CJ132	Introduction to Probation and Parole	3
CJ215	Criminal Justice Administration	3
CJ227	Introduction to Constitutional Law	3
CJ230	Introduction to Juvenile Corrections	3
CJ231	Introduction to Corrections Process	3
CJ232	Introduction to Corrections Casework	3

General Education Electives (21 hours)

(see academic advisor)

Total credit hours required 97

Criminal Justice Administration Option

Professional Course Requirements (15 hours)

CJ200	Introduction to Community Relations	3
CJ215	Criminal Justice Administration	3
CJ221	Criminal Law II	3
CJ227	Introduction to Constitutional Law	3
CJ231	Introduction to Corrections Process	3
	or	
CJ230	Introduction to Juvenile Corrections	3

General Education Electives (21 hours)

(see academic advisor)

Total credit hours required 96

Law Enforcement Option

Professional Requirements (21 hours)

CJ200	Introduction to Community Relations	3
CJ204	Seminar in Criminal Justice	3
CJ215	Criminal Justice Administration	3
CJ221	Criminal Law II	3
CJ227	Introduction to Constitutional Law	3
CJ228	Moot Court	3
CJ230	Introduction to Juvenile Corrections	3

General Education Electives (15 hours)

(see academic advisor)

Total credit hours required 96

Law Enforcement Technician Option

Science Requirements (29 hours)

Bi103	General Biology	4
Ch204	General Chemistry	5
Ch205	General Chemistry	5
Ch206	General Chemistry	5
Ch226	Organic Chemistry	5
Ch227	Organic Chemistry	5

General Education Electives (9 hours)

(see academic advisor)

Total credit hours required 98

Security Systems Management Option

Professional Course Requirements (18 hours)

CJ150	Security Administration	3
CJ251	Embezzlement and Shoplifting	3
CJ252	Educational Security	3
CJ254	Transportation Security	3
CJ256	Personnel Screening and Investigation	3
CJ258	Communications Security	3

General Education Electives (18 hours)

(see academic advisor)

Total credit hours required 96

Dental Assisting

The one-year Dental Assisting program offers technical training necessary for persons to qualify for jobs in dental offices, laboratories, and clinics. The program is accredited by the American Dental Association, Council on Dental Education.

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

Typical duties of dental assistants are preparation of patients for treatment, mixing restoration materials and dental cement, checking and sterilizing equipment, taking inventory and ordering supplies. Laboratory duties include pouring study models of teeth, casting inlays, and exposing and developing X-ray films. As office manager, the dental assistant acts as receptionist, schedules appointments, keeps accounts and records, sends out statements, and is responsible for the general appearance of the office.

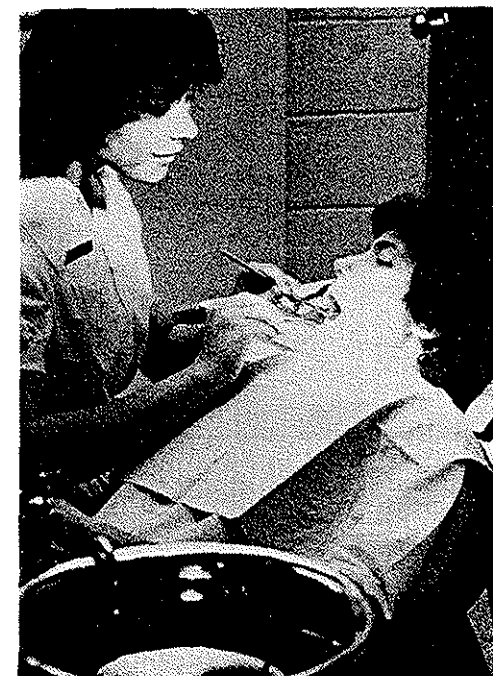
In order to graduate, students must be able to type at least 35 words per minute and must show a competency in mathematics equivalent to 4.200 Basic Mathematics.

Prior to graduation, students are required to take an examination for a state certificate of radiological proficiency. A Certificate of Completion is awarded upon successful completion of the required 56 credit hours. Graduates are eligible to take the national American Dental Assistants Association certification examination.

Course No.	Course Title	Credit Hours
Term 1		
5.601	Basic Science for Dental Assistants	2
5.405	Dental Anatomy and Physiology	4
5.411	Introductory Concepts in Dental Assisting	4
5.404	Dental Materials and Instrumentation	4
5.415	Dental Sciences I	3
Term 2		
5.403	Chairside and Basic Lab Procedures	3
5.416	Dental Science II	4
5.401	Expanded Duties I	1
5.410	Dental Office Management	3
5.408	Principles and Basic Application of Dental Radiology	4
Term 3		
5.407	Advanced Lab	4
5.402	Expanded Duties II	1
5.413	Applied Radiography II - First 5 weeks only	1
5.417	Dental Office Practicum I - Last 5 weeks only	3
1.104	Communication Skills	3
5.700	Health Occupations Overview	1
He261	Cardiopulmonary Resuscitation	1

Term 4

5.409	Dental Office Practicum II	5
5.418	Dental Assistant Review	2
Psy111	Processes in Living	3



Early Childhood Education



The Early Childhood Education curriculum is a training program for persons who want to work with young children as child care aides, assistants, and teachers. Many of the courses may be helpful to parents of pre-school age children.

Graduates may work in nursery schools, kindergartens, Head Start programs, and day care centers or as team members in schools. National trends indicate increasing employment opportunities with the increase of a greater understanding of the importance of early development.

There are two options in the program. A student who successfully completes 60 required credit hours in a four-term curriculum may be awarded a Certificate of Completion. Students who successfully complete 95 required credit hours in the two-year program will earn Associate in Science degrees.

Course No.	Course Title	Credit Hours
Term 1		
7.119	Development in Childhood I	3
7.129	Introduction to Early Childhood Education	3
1.101	Communication Skills	
	or	
Wr121	English Composition	3
Psy100	Introduction to Psychology	
	or	
Psy201	General Psychology	3
7.131	Observing and Recording in the Preschool	3

Term 2		
7.120	Development in Childhood II	3
7.137	Personal Dynamics	3
7.132	Observing and Guiding Behavior	3
1.104	Communication Skills	
	or	
Wr122	English Composition	3
Psy101	Psychology of Human Relations	
	or	
Psy202	General Psychology	
	or	
Psy111	Processes in Living	3
Term 3		
7.115	Child Nutrition	
	or	
FN225	Nutrition	3
7.136	Creative Activities	3
7.134	Supervised Field Experience I	3
	Physical Education Elective	1
	General Education Elective*	5
He264	Childhood Emergencies	1
	(valid First Aid card required as prerequisite)	
Term 4		
7.117	Children's Literature	3
7.123	Environments for Young Children	3
7.127	Family Living	
	or	
Fl222	Partner Relationships	3
7.135	Supervised Field Experience II	4
	General Education Elective*	3
Term 5		
7.125	The Exceptional Child	3
7.130	Music for Young Children	3
7.124	Learning Experiences for Young Children	3
7.121	Directed Participation I	7
Term 6		
7.126	Home, School, Community	3
7.113	Administration of Child Care Centers	3
7.122	Directed Participation II	8
	General Education Elective*	3

*Suggested electives: personal health, art, Spanish, speech, ethnic history, sociology, Cooperative Work Experience, consumer finance, science.

Educational Aide

The one- and two-year Educational Aide programs offer training for persons who wish to become classroom aides. There is also a one-term orientation course for students who are exploring education as a career.

Students take a core of required courses the first year with classes in four general areas: instructional, non-instructional support, human relations, and communication/computation. They 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 is planned so that a student may continue to work toward earning a baccalaureate degree and a professional teaching certificate. A number of the courses may be transferred for credit to four-year colleges and institutions in Oregon.

After successfully completing the required 48 credit hours in the one-year program, a student may earn a Certificate of Completion. An Associate in Science degree is awarded upon successful completion of 96 required credits in the two-year program.

Course No.	Course Title	Credit Hours
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Core Courses

Term 1

Ed207	Seminar: Education Aide Orientation	3
Ed111	Contemporary Education	3
Ed209	Practicum: Introductory Observation and Experience	3
	Approved Electives*	5-8

Term 2

Ed133	Instructional Media and Materials	3
Ed210	Practicum	6
Ed110	Psychology of Learning	3
	Approved Electives*	3-6

Term 3

Ed210	Practicum	6
He252	First Aid	3
	Approved Electives*	6-9

*Electives may include:

Ed131	Teaching Techniques (Term 1)	3
Ed123	Tutoring and Instructional Practices for Paraprofessionals I (Term 2)	3
Ed124	Tutoring and Instructional Practices for Paraprofessionals II (Term 3)	3

Second Year Options

Second year students complete the general courses for all options (nine credits) and 18 hours of general education courses. They also take 15 credits in the option they select, including at least six credits in practicum experience.

General Courses for all options:

Ed251	Introduction to Special Learner Problems	3
7.125	Exceptional Child	3
5.442	Community Resources	3

Classroom Aide

Kindergarten/Lower Elementary

Mth191	Math for Elementary Teachers	3
Mth192	Math for Elementary Teachers	3
Mth193	Math for Elementary Teachers	3
Ed221	PE/Playground Activities	3
7.136	Creative Activities	3
7.119	Development in Childhood I	3
7.120	Development in Childhood II	3
7.123	Environments for Young Children	3
7.124	Learning Experiences for Young Children	3
7.130	Music for Young Children	3
7.117	Children's Literature	3
7.140	Kindergarten Education	3
Ed210	Practicum	6-18

Junior/Senior High

Psy299	Growth and Development	3
	Social Science Sequence	9
	Humanities Sequence	9
Ed210	Practicum	6-18

Handicapped/Disadvantaged Learner

Deaf/Blind

1.116	Manual Communication with the Deaf I	3
1.125	Manual Communication with the Deaf II	3
1.126	Manual Communication with the Deaf III	3
1.127	Conversational Sign I	3
1.128	Beginning Interpreting for the Deaf	3
1.129	Studies in Deafness	3
Ed210	Practicum	6-18

Bilingual/Bicultural

Hst257, 258, 259	Ethnic History	9
Eng256, 257, 258	Minority Literature	9
	Language	9-12
Ed257	Second Language Teaching Techniques—Paraprofessional I	3
Ed258	Multicultural Children's Activities and Literature	3
Ed259	Bilingual Methodology	3
Ed210	Practicum	6-18

Mental Retardation

Ed267	Introduction to Education of the Mentally Retarded	3
Ed268	Introduction to Classroom Management of Mentally Retarded	3
Ed269	Introduction to Classroom Management of Emotionally Disturbed	3
Ed210	Practicum	6-18

Vocational-Technical Education Aide

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

Electro- mechanical Technology

Graduates of the two-year Electromechanical Technology program may qualify for a variety of positions. With technical knowledge and engineering skills, they may assist in the design and development of electromechanical devices or systems, work as field engineers, design and install industrial control systems, and operate, maintain, and repair mechanical equipment.



There are other job opportunities in field engineering, research, quality control, technical writing, industrial control, automation, sales, technical representation, atomic energy control, instrumentation, medical devices, and automatic production.

The program aims to help students gain the depth of understanding and technical knowledge required of these technicians. Practical laboratory practice allows students to apply the theories presented in the technical, mathematical, and scientific classes they take concurrently.

Cooperative Work Experience offers students an opportunity to work in the field while attending school. CWE may be taken instead of certain technical courses and may be used to complete program requirements. CWE requires departmental approval.

An Associate in Science degree is awarded upon successful completion of the required 113 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
6.200	Electrical Theory DC	4
6.194	Engineering Orientation	1
6.261	Technical Mathematics	4
4.124	Basic Drafting for Electronics	2
6.370	Applied Physics	4
1.101	Communication Skills	3
Term 2		
6.202	Electrical Theory AC	4
6.138	Engineering Problems	1
6.262	Technical Mathematics	4
6.210	Transistor Fundamentals	4
6.371	Applied Physics	4
1.104	Communication Skills	3

Term 3

6.211	Transistor Circuits	5
6.243	Electromechanical Devices	2
6.244	Electromechanical Shop Practice	2
6.247	Rotating Machines	4
6.195	Properties of Materials	3
	General Education Elective	3

Term 4

6.267	Digital Applications	3
6.238	Solid State Devices	3
6.196	Fluid Systems	3
6.245	Electromechanical Fabrication	2
6.612	Electromechanical Devices II	4
	General Education Elective	3

Term 5

6.255	Electrical Control Systems	3
6.241	Data Communications	3
6.240	Electronic Data Processing	3
6.218	Industrial Electronics	4
6.269	Computer Programming	3
	General Education Elective	3

Term 6

6.221	Mechanical and Electrical Measuring Principles	3
6.246	Electromechanical Maintenance Procedures	3
6.256	Servo and Regulator Systems	3
6.268	Digital Control Systems	4
6.257	Electrical/Electronic Troubleshooting	3
	General Education Elective	3

Electronic Engineering

The two-year *Electronic Engineering* program offers a broad technical background in electronics by balancing theory with technique. It is a comprehensive program planned to prepare graduates for diverse high-level, specialized technician positions in the electronics industry.

These include research and development, radio and television, microwave station operations and maintenance, calibration, commercial and domestic maintenance, and other areas using vacuum tubes and semiconductor circuits. A strong background in electronic theory, math, and physics is included to enable students to handle complex technical work.

In the program, the student gains experience in the practical application of theory, analyzing, circuits, developing elementary electronic units, working with modern test and measuring equipment, trouble shooting, and evaluating operating characteristics of electronic equipment.

Graduate electronic technicians employed in research and development activities usually assist physical scientists or engineers in designing, testing, and modifying experimental electronic devices. They may be called upon to devise practical solutions to problems of design, select suitable material, determine the best methods of building equipment, and test and evaluate the operating characteristics of the electronic devices. They may also make necessary modifications in experimental equipment.

Graduates may be employed as radio communications technicians (aircraft, etc.), radio operators and dispatchers, electronics technicians, electronic laboratory technicians, electronic instrument technicians, guided missile technicians, electronic computer technicians, microwave radio technicians, electronic instrument service technicians, industrial electronic technician supervisors, electronic equipment designers, and electronic engineering technicians.

Cooperative Work Experience may be used instead of selected technical courses to complete program requirements. CWE requires departmental approval.

An Associate in Science degree is awarded upon successful completion of the required 112 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
6.200	Electrical Theory DC	4
6.261	Technical Mathematics	4
4.124	Basic Drafting for Electronics	2
6.275	Introductory Chemistry	4
1.101	Communication Skills	3
6.194	Engineering Orientation	1
Term 2		
6.202	Electrical Theory AC	4
6.138	Engineering Problems	1
6.262	Technical Mathematics	4
6.210	Transistor Fundamentals	4
6.370	Applied Physics	4
1.104	Communication Skills	3

Term 3		
6.206	Electrical Circuits	4
6.211	Transistor Circuits	5
1.106	Technical Report Writing	3
6.266	Technical Mathematics	4
6.371	Applied Physics	4
Term 4		
6.212	Electronic Circuit Concepts	4
6.234	Wave Generation and Shaping	3
6.237	Semiconductors	3
6.230	Network Analysis	2
	General Education Elective	3
6.267	Digital Applications	3
Term 5		
4.103	Electrical Drafting	2
6.218	Industrial Electronics	4
6.228	Industrial Television	5
6.240	Electronic Data Processing	3
6.231	Antennas and Transmission Lines	2
	General Education Elective	3
Term 6		
6.216	Advanced Electronic Circuits	2
6.220	Electronic Instruments	2
6.235	Closed Circuit Systems	4
6.248	Advanced Industrial Electronics	3
6.242	Microwaves	3
	General Education Elective	3

Electronics Servicing Technology

The two-year Electronics Servicing Technology curriculum includes broad technical training, theory, and skills development to prepare students for work in electronics servicing fields.

The core program requirements cover the basic electronics background required for the generalist. The options or tracks in the second year offer students opportunities to specialize in advanced television-radio servicing, two-way communications servicing or audiovisual maintenance. Individualized instruction is used in many areas of this program.

Cooperative Work Experience may be taken either in addition to listed program requirements or instead of selected courses. CWE requires departmental approval.

There are three options to prepare students for employment in electronics service shops and to qualify graduates to advance or expand into such occupations as technical writing, sales engineering, designing, service training, and self employment.

An Associate in Science degree is awarded upon successful completion of the required 96-100 credit hours (depending on the option).

Course No.	Course Title	Credit Hours
Term 1		
6.200	Electrical Theory DC	4
6.202	Electrical Theory AC	4
6.205	Applied Electronic Calculations	5
1.101	Communication Skills I	3

Term 2		
4.263	Electronic Principles	4
6.210	Transistor Fundamentals	4
6.207	Radio Circuits	4
1.104	Communication Skills II	3

Term 3		
4.266	Television Principles	5
6.211	Transistor Circuits	5
6.209	Introduction to IC's	4
Psy101	Psychology of Human Relations	3

Term 4		
6.238	Solid State Devices	3
6.213	Pulse Fundamentals	3
6.214	Electronic Circuit Practices	4
	General Education Electives	3
	Electronic Electives*	3

Term 5		
2.275	Electronic Management Orientation	2
6.215	Digital and Analog Circuits	4
4.274	Logical Troubleshooting	4
	Electronic Electives*	6-8

Term 6		
4.272	Solid State Servicing	4
5.513	Multimedia First Aid	1
He261	Cardiopulmonary Resuscitation	1
	Electronic Electives*	10-12

*Note: Electronic electives depend on the student's major area of study. The proper elective should be chosen from the list of the student's area of study.

Electives for Advanced Radio and Television Servicing Option:

Term 4		
6.222	Television Circuits	3
Term 5		
4.268	Television Servicing	2
6.223	Stereo/Hi-Fi	3
6.224	Changers and Recorders	3

Term 6		
6.225	Advanced Television Servicing	5
6.235	Close Circuit Systems	4
6.244	Electromechanical Shop Practice	2

Electives for Communications Option:

Term 4		
6.226	Introduction to Communication	3
Term 5		
6.231	Antennas and Transmission Lines	2
6.227	Transmitters and Receivers	4
Term 6		
6.242	Microwaves	3
6.244	Electromechanical Shop Practice	2
6.229	FCC License Preparation	3
6.232	Two-way Radio Servicing	4

Electives for Audiovisual Maintenance Option:

Term 4		
6.233	Introduction to Audiovisual Equipment	3
Term 5		
6.236	Projector Maintenance	4
6.224	Changers and Recorders	3
Term 6		
6.235	Close Circuit Systems	4
6.244	Electromechanical Shop Practice	2
6.239	Audiovisual Maintenance	4

Emergency Medical Technology

The Emergency Medical Technology program offers continuous training to practicing Emergency Medical Technicians for their personal development and career advancement and entry level training for students who want to become EMT's. Efforts are made to keep the program up-to-date with current community practices and with new technology.

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 into four levels of certification (EMT I, II, III, and 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 EMT to other health care and emergency services providers and the role and responsibilities of the EMT in the community.

An Associate in Science degree is awarded upon successful completion of the required 95 to 97 credit hours. This usually takes two full-time years. Satisfactory completion of clinical courses helps prepare students 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. Further information on current regulations regarding eligibility in Oregon or other states is available from appropriate state agencies.

Course No.	Course Title	Credit Hours
Term 1		
5.129	EMT-I	6
5.142	Rescue Fundamentals	3
5.615	Body Structure and Function I	3
Bi121	Anatomy and Physiology	4
5.600	Medical Terminology I	3
	Communication Elective	3
Term 2		
5.143	Emergency Response Driving	1
5.144	Dispatching and Radio Communications	2
5.616	Body Structure and Function II	3
Bi122	Anatomy and Physiology	4
5.610	Medical Terminology II	3
4.200	Mathematics	3
He261	CPR Instruction	1
Term 3		
5.138	EMT-II	1
5.120	Fire Service Rescue Practices	2
BA101	Business Environment	4
	Psychology Elective	3
	Social Science Elective	3
5.611	Medical Law and Ethics	3
5.145	Introduction to Emergency Medical Services Systems	3
Term 4		
5.139	EMT-III Part A	8
5.146	Ambulance Service in the Community	3
5.605	Introduction to Medical Science	3
	Business Elective	3
Term 5		
5.140	EMT-III Part B	8
5.700	Health Occupations Overview	1
BA206	Business Management Principles	
	or	
BA250	Small Business Management	3
5.147	Crisis Intervention	3
Term 6		
5.141	EMT-IV	6
FE205	Job Search Techniques	1
	Business Elective	3
	Business Elective	3

Communication Electives

Sp125	Interpersonal Communication	3
Sp220	Business and Professional Speaking	3
Wr121	English Composition, Exposition	3
1.101	Communication Skills I	3
1.104	Communication Skills II	3

Psychology Electives

Psy101	Psychology of Human Relations	3
Psy111	Processes in Living	3
Psy114	Career Development, Personal Perspective	3
5.436	Survival in the Bureaucracy, HRT-1	3

Social Science Electives

Ec100	Outline of Economics	3
Ec201	Principles of Economics	3
Ec202	Principles of Economics	3
PS199	Political Power and Political Action	3
PS201	American Government	3
PS203	State and Local Governments	3
WS101	Introduction to Women's Studies	3

Business Electives

BA226	Business Law I	3
BA227	Business Law II (BA226 required)	3
BA211	Financial Accounting I	4
BA212	Financial Accounting II	4
BA222	Financial Management (BA212 required)	3
PA250	Introduction to Public Administration	3
PA255	Public Personnel Administration	3
PA266	Public Personnel Supervision	3
2.429	Public Relations in Business	3
2.685	Personnel Principles and Supervision	3
5.442	Community Resources	3

Farm Business Management



This three-year program is for farm operators and their spouses who lease or manage farms and keep or have access to full sets of farm financial records.

The farm management records analysis program consists of monthly class meetings and farm visits by the instructor. Instruction focuses on keeping basic farm records, annual computer analysis of each farm business, a cost production summary, and the application of analysis information to improving the management and organization of each business.

The tuition covers the instruction and the year-end computer farm business analysis. For information contact the community and continuing education office in Salem or Chemeketa's McMinnville Center.

First Year

Farm Management I—9.820 Farm Records.

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

Second Year

Farm Management II—9.821 Farm Business Analysis.

Income tax and social security, interpreting farm records and analysis, measures of efficiency and business size, crop and livestock costs and return, labor costs and return, capital costs and returns, wills and estate planning, use of computerized farm records system and tax management, closing accounts for analysis, profit and loss statements, the process of making decisions.

Third Year

Farm Management III—9.822 Farm Business Organization.

Evaluating the farm business, net worth, credit planning and budgeting, optimum production levels, studying income possibilities, developing crop and livestock plans, planning investments in buildings and equipment, purchasing or leasing land, planning non-farm investments, developing alternative farm plans and closing accounts for analysis.

Fire Protection Technology

The two-year Fire Protection curriculum is for persons interested in careers in protecting life and property from fire. The program offers training for those wishing to enter the field and for workers who want to expand their training. The program has two options.

The fire suppression option offers training for firefighters. The course is accredited by the Oregon Fire Standards and Accreditation Board and meets the requirements for Firefighter I, II, and most of Level III.

The fire prevention insurance risk inspection option is for men and women who want to become fire inspectors for public or private employers. Courses from both options relate indirectly to industrial fire safety.

An Associate in Science degree is awarded upon satisfactory completion of 98 required credit hours for the fire suppression option or 92 required credit hours for the prevention/insurance risk inspection option.

Fire Suppression Option

Course No.	Course Title	Credit Hours
Term 1		
4.200	Mathematics	3
1.101	Communication Skills I	3
5.100	Introduction to Fire Protection	3
5.122	Fire Related Experience	3
PE185	Approved Physical Education	1
	General Education Elective	3

Term 2		
4.202	Mathematics	3
1.104	Communication Skills II	3
5.103	Elementary Science for Firefighters	4
5.104	Fire Service Hydraulics	4
5.123	Fire Related Experience	3
PE185	Approved Physical Education	1

Term 3		
Psy101	Psychology of Human Relations	3
6.995	Fire Science I	4
5.105	Fire Pump Construction and Operations	3
5.120	Fire Service Rescue Practices	2
5.123	Fire Related Experience	3
PE185	Approved Physical Education	1

Term 4		
5.135	EMT I, Part A	2
6.996	Fire Science II	4
5.101	Fundamentals of Fire Prevention	3
5.108	Hazardous Materials I	3
PE185	Approved Physical Education	1
	Technical Electives (5.151 and 5.125 recommended)*	6

Term 5		
5.136	EMT I, Part B	3
5.109	Hazardous Materials II	3
5.131	Building Construction for Fire Suppression	3
PE185	Approved Physical Education	1
	Technical Electives (5.126, 5.116 and 5.106 recommended)*	6

Term 6		
1.106	Technical Report Writing	3
PE185	Approved Physical Education	1
	Technical Electives (5.127, 5.112, 5.107, 5.113, and 5.137 recommended)*	9

*Technical Electives: 5.106 Fire Protection Systems, 5.107 Fire Investigation, 5.110 Fire Training Program and Grading Schedules, 5.111 Fire Insurance Principles and Grading Schedules, 5.112 Fire Department Organization and Management, 5.113 Firefighting Tactics and Strategy, 5.116 Fire Codes and Ordinances, 5.117 Water Distribution Systems, 5.125, 5.125, 5.127 Fire Related Experience, 5.137 EMT Basic Emergency Medical Practicum, 5.151 Natural Cover Fire Protection.

Fire Prevention/Insurance Risk Inspection Option

Term 1		
4.200	Mathematics	3
1.101	Communication Skills I	3
5.100	Introduction to Fire Protection	3
5.160	Fire Prevention Fundamentals	3
5.164	Building Construction—Fire Protection	3

Term 2		
4.202	Mathematics	3
1.104	Communication Skills II	3
5.103	Elementary Science for Firefighters	4
5.106	Fire Protection Systems/Extinguishers	3
5.116	Fire Codes and Ordinances	3

Term 3		
Psy101	Psychology of Human Relations	3
5.107	Fire Investigation	3
5.162	Firefighters' Law	1
5.163	Water Supplies	1
6.995	Fire Science I	4
FE201C	Work Related Experience	3

Term 4		
5.108	Hazardous Materials I	3
6.116	Building Code I	3
6.996	Fire Science II	4
	General Education Elective	3
FE201C	Work Related Experience	3

Term 5		
5.109	Hazardous Materials II	3
5.161	Fire Prevention Inspection	3
5.165	Industrial Fire Protection	3
6.119	Building Code II	3
FE201C	Work Related Experience	3

Term 6		
1.106	Technical Report Writing	3
5.166	Advanced Detection and Prevention System	3
5.167	Fire Insurance Fundamentals	3
6.120	Building Codes and U.M.C.	3
	Technical Elective*	3

*Technical Electives: 5.110 Fire Training Program and Techniques, 5.111 Fire Insurance Principles and Grading Schedules, 5.112 Fire Department Organization and Management, 5.113 Firefighting Tactics and Strategy, 5.117 Water Distribution Systems, 5.151 Natural Cover Fire Protection, 5.122, 5.123, 5.124, 5.125, 5.126 and 5.127 Fire Related Experience.

Food Service Management

Food Service Management is a preparatory program for those persons desiring to enter food service occupations with an ultimate goal of becoming managers. It is open to persons without any previous training or experience in food services or to persons who are working and want supplementary training. The program has two options in restaurant management and institution food service management.



Graduates of the two-year program may become managers or assistant managers of food service establishments or fill positions in one of four specialty areas: 1) control (business management including personnel managers, purchasing agents, merchandising supervisors or cost control clerks), 2) service (dining room supervisors, hosts or hostesses), 3) support (food production managers, kitchen stewards, pantry supervisors and sanitation supervisors) and 4) production (chefs, sous chefs or bakers).

The program has these requirements: Mathematics: 4.201 Business Mathematics is the minimum achievement level required for graduation. It is the second in a sequence which includes 4.200 Mathematics. Initial placement is based on a math proficiency test.

English: BA214 Business Communications is the minimum achievement level required for graduation. It is third in a sequence of courses which includes Wr40 Writing Skills and 2.673 Business English. Initial placement is based on an English proficiency test. Wr121, Wr122, and BA214 will also fulfill the English requirement.

It is strongly recommended that students enroll in Cooperative Work Experience during their second year of training. To be eligible, a student must have completed 48 credit hours of the program and have a minimum of 2.0 grade point average. Students not meeting these qualifications may choose elective courses with advisor approval. A maximum of six credit hours of CWE may be applied toward graduation.

Upon successful completion of the required 92 credit hours, an Associate in Science degree is awarded.

Course No.	Course Title	Credit Hours
Term 1		
3.250	Survey of Food Service Industry	1
3.200	Basic Food and Nutrition	2
3.201	Quantity Food Production I	8
1.101	Communication Skills	3
3.210	Sanitation and Safety	2
Term 2		
4.200	Mathematics	3
3.211	Menu Planning and Culinary Terms	2
3.202	Quantity Food Production II	8
6.923	Accounting I	4
Term 3		
3.203	Quantity Food Production III	8
3.206	Dining Room Operation III	2
BA131	Introduction to Data Processing	3
He252	First Aid	1
He261	CPR	1
Term 4		
3.212	Purchasing and Store Control	3
3.214	Food Production, Organizing, and Planning	2
2.673	Business English	3
3.255	Advanced Menu Planning	3
3.256	Dining Room Supervision	3
Term 5		
2.672	Business Communication	3
	Social Science Elective	3
BA206	Business Management Principles	3
3.260	Organization and Management of Institutional Food Service	
	or	
3.261	Restaurant Management	3
FE201B-L	Cooperative Work Experience	3
Term 6		
3.262	Purchasing for Institutions	
	or	
BA223	Marketing	3
BA226	Business Law	3
	Social Science Elective	3
3.263	Inventory Control	3
FE201B-L	Cooperative Work Experience	3

Forest Products

The Forest Products program includes training for a wide range of occupations within the forest products and related industries. The courses cover basic industry processes and equipment, quality control and testing, technical representation, and selling of building materials.

There are two options in the program: wood processing and pulp and paper - adhesives and coatings. Students take specialized courses in those options plus common core subjects.

Students may arrange with their advisors for course deviations and substitutions. Cooperative Work Experience may be used instead of selected technical courses to complete program requirements. CWE requires departmental approval.

An Associate in Science degree is awarded upon successful completion of the required 97 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
6.282	Wood Preservation and Drying	4
1.101	Communication Skills I	3
3.603	Equipment, Machines, and Instruments	2
	Mathematics Elective	3-4

Term 2		
6.285	Plywood Composite and Laminated Wood Products	3
1.192	Introduction to Engineering Calculators	1
	Mathematics Elective	3-4
	Physics Elective	4

Term 3		
6.281	Building Materials	3
	Mathematics Elective	3-4
	Science or Technical Elective	4

Term 4		
4.281	Pulp and Paper Technology I	4
1.104	Communication Skills II	3
Ec100	Outline of Economics	3

Term 5		
4.286	Wood Industry Economics	3
6.279	Wood Adhesives and Coatings	4
1.106	Technical Report Writing	3
5.513	Multimedia First Aid	1

Term 6		
3.614	Wood Products Marketing	3
6.287	Industrial Quality Control	4
4.283	Milling Practices	3
4.287	Methods of Supervision	3

Courses for students selecting the wood processing option:

3.600	General Forestry	3
4.280	Forest Products	4
4.101	Drafting	2
6.275	Introductory Chemistry	4
3.612	Commercial Trees	2
6.208	Electricity	4
4.173	Hydraulic and Pneumatic Systems	3
3.617	Scaling Practices	4
6.280	Wood Structure and Identification	3
6.244	Electromechanical Shop Practices	2

Courses for students selecting the pulp and paper-- adhesives and coatings option:

Ch104	General Chemistry	5
Ch105	General Chemistry	5
Ch106	General Chemistry	5
6.323	Organic Chemistry	4
6.324	Organic Chemistry	4
6.325	Synthetic Polymers and Natural Products	4
4.284	Pulp and Paper II	4



Forest Technology

The two-year Forest Technology curriculum includes instruction in the basic knowledge and technical skills required for employment as a forest technician.

There are job opportunities in log scaling, timber management, fire control, recreation, timber stand improvement, and forest engineering.

Cooperative Work Experience may be used instead of selected technical courses to complete program requirements. CWE requires departmental approval.

Upon satisfactory completion of the required 108 term units, the student is awarded an Associate in Science degree.

Course No.	Course Title	Credit Hours
Term 1		
3.600	General Forestry	3
1.101	Communication Skills I	3
4.101	Drafting	2
4.202	Mathematics	3
3.605	Tools and Equipment	2
3.611	Tree Identification	2
6.192	Introduction to Engineering Calculators	1
Term 2		
1.104	Communication Skills II	3
4.135	Project Graphics	2
3.610	Tree Identification	2
4.280	Forest Products	4
4.204	Mathematics	3
5.513	Multimedia First Aid	1
Psy100	Introduction to Psychology	3

Term 3		
6.300	Forest Mensuration I	4
3.624	Forest Photogrammetry	3
3.626	Forest Sciences	3
6.101	Plane Surveying	4
4.302	Practical Physics	4
Term 4		
5.151	Natural Cover Fire Protection	4
4.282	Logging Practices	4
Ec100	Outline of Economics	3
6.103	Plane Surveying	4
6.301	Forest Mensuration II	4
Term 5		
6.280	Wood Structure and Identification	3
3.617	Scaling Practices	4
4.286	Wood Industry Economics	3
1.106	Technical Report Writing	3
3.601	Forestry Seminar	1
3.630	Silviculture	3
Term 6		
3.614	Wood Products Marketing	3
4.287	Methods of Supervision	3
4.172	Power Systems	4
6.510	Forest Road Survey	4
4.190	Industrial Accident Prevention	3
	General Education Elective	3

Human Resource Technology

The Human Resource Technology program offers training for entry-level positions in human service agencies. The two-year program combines academic work with five terms of practicum (supervised field work in human service agencies).

The curriculum includes courses in basic skills in observation, interviewing, and counseling (individual and group). Students gain a working knowledge of the various health, social, and welfare services in the community.

Students must meet admission criteria for both the college and the Human Resource Technology program. The program has a limited enrollment and early application is encouraged.

The Associate in Science degree is awarded upon successful completion of the required 95 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
Psy201	General Psychology	3
Wr121	English Composition*	3
Psy299	Growth and Development	3
5.436	Human Resource Technology I	3
5.442	Community Resources	3
5.450	HRT Practicum Seminar I	1

Term 2		
Psy202	General Psychology	3
He261	Cardiopulmonary Resuscitation	1
Wr122	English Composition**	3
5.437	Human Resource Technology II	3
5.445	Practicum Experience	5
5.451	HRT Practicum Seminar II	1

Term 3		
Psy203	General Psychology	3
Sp111	Fundamentals of Speech	
	or	
Sp125	Interpersonal Communication	3
5.438	Human Resource Technology III	3
5.445	Practicum Experience	5
5.452	HRT Practicum Seminar III	1

Term 4		
	Elective	3
	Health Education Electives†	3
5.439	Human Resource Technology IV	3
5.445	Practicum Experience	5
Soc204	General Sociology	3
5.453	HRT Practicum Seminar IV	1

Term 5		
	Math or Science Elective††	3
5.440	Human Resource Technology V	3
5.445	Practicum Experience	5
Soc205	General Sociology	3
5.454	HRT Practicum Seminar V	1

Term 6		
	Vocational Elective°	3
5.441	Human Resource Technology VI	3
5.445	Practicum Experience	5
Soc206	General Sociology	3
5.455	HRT Practicum Seminar VI	1

*Wr40 if indicated by placement test.

**Wr123, 277, 242, 243 are also acceptable. Wr121 to be taken if Wr40 is taken in Term 1.

†He250, He199A, He199B, He199D, He251
 ††Students unable to demonstrate proficiency at the 4.200 Mathematics level will be required to take 4.200.

°May include classes in gerontology, mental retardation, Educational Aide, Early Childhood Education, juvenile corrections, grant writing, sign language, etc., to be approved by HRT advisor.

Industrial Technology/ Apprenticeship

Chemeketa Community College grants an Associate in Science degree in industrial technology. Credit may be earned for on-the-job training and related instruction. The degree is awarded to students who 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 6 credit hours of communication skills.
5. Compile a total of at least 90 credit hours. Up to 45 credit hours may be awarded for journeyman status and 27 credit hours may be awarded for trade-related training.

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. Classes generally consist of apprentices registered with Oregon Bureau of Labor, journeyman tradesmen who wish to upgrade their skills and knowledge, pre-apprenticeship students, and others as approved by local committees.

Currently Chemeketa has apprenticeship classes for these trade areas: plumber, industrial manufacturing, electrician, electrical inside wiring, sheet metal, radio-TV, automotive, machinist, welding, baker, and mechanical systems.



Insurance Technology

The two-year Insurance Technology curriculum emphasizes a broad knowledge of the insurance industry and a general knowledge of business. It is designed for men and women seeking lifetime careers serving the needs of the insurance-buying public.

There are employment opportunities for graduates as salespersons, in office operations and administration, claims work, entry level risk management positions, and in certain government offices.

The curriculum also provides continuing education for persons active in the insurance industry and allows them an opportunity to reinforce and sharpen their knowledge and skills. Insurance Institute of America courses and other society-sponsored courses assist insurance personnel with the professional preparation required for a successful career.

The program has these requirements:

Math: 6.918 Applied Business Mathematics is the minimum achievement level required for graduation. It is the third in a sequence of courses including 4.200 Mathematics and 4.201 Business Mathematics. Initial placement is based on a math proficiency test. Mth095 or a higher level will also fulfill the requirement.

English: BA214 Business Communications is the minimum achievement level required for graduation. It is the third in a sequence of courses which includes Wr40 Basic Writing and 2.673 Business English. Initial placement is based on an English proficiency test. Wr40 does not count toward graduation requirements. Wr121, 122, and 123 will also fulfill the English requirement.

A maximum of six credit hours of Cooperative Work Experience may also be applied toward graduation.

Upon successful completion of the required 100 credit hours an Associate in Science degree is awarded.

An agreement between Oregon College of Education and Chemeketa Community College provides for the transfer and acceptance of 45 credit hours of selected vocational-technical course credits from this insurance technology program to apply toward the BA/BS degree curriculum in interdisciplinary studies. This transfer credit is possible only for students who have been formally admitted to Oregon College of Education.

Course No.	Course Title	Credit Hours
Term 1		
	English Variable	
	or	
	General Education Elective	3
	Math Variable	3
BA211	Financial Accounting I	
	or	
6.923	Accounting Procedures I	4
BA101	Business Environment	4
BA241	Risk and Insurance	3
2.344	Insurance Occupational Survey	1
Term 2		
BA214	Business Communications	3
BA212	Financial Accounting II	
	or	
6.924	Accounting Procedures II	4
6.918	Applied Business Math	3
SS121	Typing	3
2.119	Insurance—Property and Casualty	3

Term 3		
BA213	Managerial Accounting	
	or	
6.925	Accounting Procedures III	4
BA223	Marketing Principles	3
	Psychology or Sociology Elective	3
BA206	Business Management Principles	3
2.343	Insurance—Life and Health	3
	or	
2.241	Security and Individual Life Insurance—CLU301	4
Term 4		
BA226	Business Law I	3
Sp111	Speech	3
	Psychology or Sociology Elective	3
	Approved Insurance Elective*	4
5.600	Medical Terminology	3
Term 5		
BA222	Finance	3
Ec100	Economics	
	or	
Ec201	Economics	3
BA227	Business Law II	3
2.231	Risk Management	3
	Approved Insurance Elective*	4
	CWE or Approved Elective	3
Term 6		
2.685	Personnel Principles and Supervision	3
	Psychology or Sociology Elective	3
	Approved Insurance Elective*	4
2.226	Regulations and Law	2
	CWE or Approved Elective	3

*Choose any CLU course except 301, any IIA course or any CPCU course.

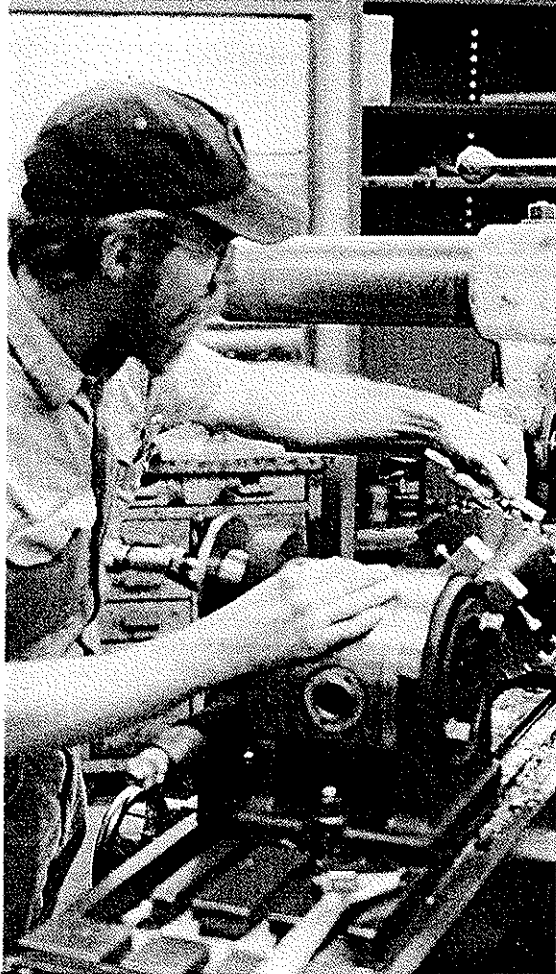
Machine Shop

The Machine Shop program offers training in knowledge and skills needed by workers in machine shops and related occupations. The training includes practice using machine tools plus courses in industrial materials, drafting, print reading, sketching, and layout practices. The program also includes instruction in written and verbal communication skills.

Machinists set up and operate all machine and shop tools, including drill presses, engine and turret lathes, milling machines, grinders, and saws. They must work from blueprints or sketches to produce mechanical items in a variety of materials. This requires mastery of layout operations, making and using jigs, fixtures, and patterns, and the use of automated control equipment. Graduate machinists may qualify for positions in job shops, production, specialty, maintenance, tool setup, and layout work.

Cooperative Work Experience may be substituted for approved electives. CWE requires departmental approval.

Upon satisfactory completion of the required 103 credit hours, the student is awarded an Associate in Science degree.



Course No.	Course Title	Credit Hours
Term 1		
4.200	Mathematics	3
1.101	Communication Skills I	3
Psy100	Introduction to Psychology	3
4.807	Machine Tool Processes I	4
4.253	Shop Safety	1
4.810	Shop Drawing and Layout I	3

Term 2		
4.202	Mathematics	3
4.300	Practical Physics	4
4.808	Machine Tool Processes II	4
4.150	Welding	2
4.811	Shop Drawing and Layout II	2
Term 3		
4.204	Mathematics	3
1.104	Communication Skills II	3
4.809	Machine Tool Processes III	5
4.302	Practical Physics	4
4.170	Industrial Materials and Processes	3
Term 4		
4.171	Mechanical Systems	4
4.820	Machine Shop Problems	3
4.841	Machine Shop Practices	6
4.173	Hydraulic and Pneumatic Systems	3
	Approved Elective	
	OR	
	Cooperative Work Experience	3
Term 5		
4.176	Hydraulic and Pneumatic Systems II	3
4.174	Metal Fabrication and Finishing	4
4.833	Advanced Lathe Practices	4
4.837	Advanced Milling Machine Practices	3
	Approved Elective	
	OR	
	Cooperative Work Experience	3
Term 6		
4.824	Machine Shop Automation	2
4.845	Job Machining Practices	8
4.847	Tool and Fixture Design and Application	4
4.500	Employer-Employee Relations	3

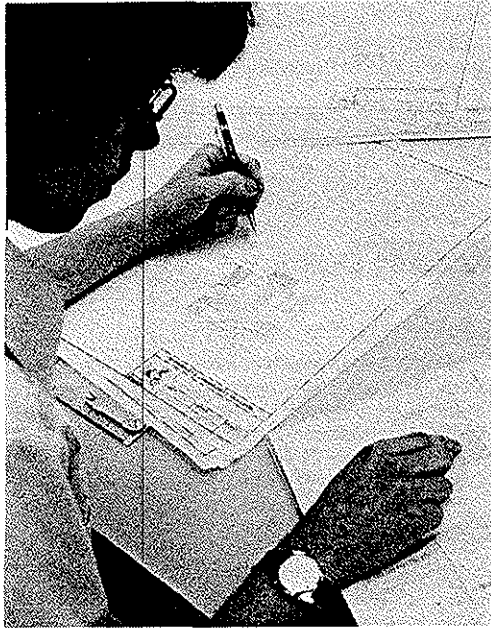
Mechanical Design

The Mechanical Design technology program offers a *comprehensive drafting curriculum* along with a practical approach to engineering concepts.

Courses are offered to train technicians in the areas of machine, electronics, pipe and flow systems, control systems, and sheet metal drafting. Instruction in design stresses the use of manufacturers' technical catalogs, technical handbooks, and practical application of concepts from theoretical and mathematical subjects which are taken concurrently.

Cooperative Work Experience may be used in-
stead of selected technical courses to complete program requirements. CWE requires departmental approval.

Upon satisfactory completion of the required 98 credit hours, the student is awarded an Associate in Science degree.



Course No.	Course Title	Credit Hours
Term 1		
4.221	Machine Drafting	4
4.118	Sketching	1
6.261	Technical Mathematics	4
4.802	Machine Shop I	3
1.101	Communication Skills	3
	General Education Elective	3
Term 2		
4.222	Machine Drafting	4
4.126	Drafting Room Computation	1
6.262	Technical Mathematics	4
4.170	Industrial Materials and Processing	3
1.104	Communication Skills	3
	General Education Elective	3

Term 3		
4.115	Descriptive Geometry	3
6.109	Applied Mechanics	3
6.266	Technical Mathematics	4
1.106	Technical Report Writing	3
4.177	Foundry and Metal Forming Applications	3
Term 4		
4.100	Electronic Drafting	3
4.230	Pattern Development	3
Mth151	Introduction to Programming, Basic	3
6.105	Strength of Materials I	3
6.275	Introductory Chemistry	4
Term 5		
4.232	Machine Design Lab	3
4.231	Tool Design Lab I	3
4.175	Industrial Control Systems	3
6.602	Metallurgy	3
6.128	Strength of Materials II	3
Term 6		
4.233	Machine Design Lab	3
4.220	Tool Design Lab	3
4.178	Industrial Control Systems Design Lab	3
4.224	Pipe and Flow Systems Drafting	3
	General Education Elective	3

Medical Office Assistant and Health Records

The one-year Medical Office Assistant program includes two options for students to become assistants in medical offices or to handle health records.

The program tries to help students develop an understanding of the professional nature of a physician's practice and a respect for human dignity and the rights of patients. The courses of study also offer training in the skills a person needs to work safely and effectively as a health team member.

Medical office assistants have a wide range of duties. Their business and administrative responsibilities may include scheduling and receiving patients, obtaining information from patients, keeping medical records, handling telephone calls and correspondence, and purchasing and maintaining supplies and equipment. They may be responsible for an office and handle insurance matters, accounts, fees, and collections.

Their medical 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 students go on field trips and during the last term practice in approved clinical settings.

The Medical Assistant program is accredited by the Council on Medical Education of the American Medical Association in collaboration with the American Association of Medical Assistants which certifies graduates by examination.

Students who choose the health records option may meet the requirements for certification as health records clerks or as medical transcriptionists. They may become medical admitting clerks or health unit secretaries.

With further training graduates may become insurance claims clerks or industrial claims examiners. Successful completion of the health records option at Chemeketa may be accepted by Portland Community College for the first year in medical record technology. Both PCC and Central Oregon Community College offer two-year associate degree programs for medical records technicians.

Students in the program at Chemeketa must earn grades of "C" or better in all major courses. They must provide their own transportation to clinical facilities within the college district. A prerequisite of the program is the ability to type 35 words per minute.

Upon successful completion of the required 52 credit hours, a Certificate of Completion is awarded.

Medical Office Assistant

Course No.	Course Title	Credit Hours
Term 1		
5.602	Medical Assisting, Basic Procedures	3
5.700	Health Occupations Overview	1
5.611	Medical Law and Ethics	3
5.600	Medical Terminology I	3
4.200	Mathematics	3
5.615	Body Structure and Function I	3
2.607	Typing*	3

Term 2

5.616	Body Structure and Function II	3
5.604	Medical Office Procedures	4
5.513	Multimedia First Aid	1
5.610	Medical Terminology II	3
5.603	Medical Transcription	2
He261	CPR	1
5.606	Medical Office Assisting, Advanced Procedures	3

Term 3

5.603	Medical Science	3
5.607	Medical Office Management	3
5.609	Medical Office Practice	6
5.000	Medical Practice Seminar	1
Psy100	Introduction to Psychology	3

*Typing at 35 words per minute is prerequisite for 2.607. Students not meeting this requirement must first pass 2.606.

Health Records Option

Term 1

5.700	Health Occupations Overview	1
5.615	Body Structure and Function I	3
5.600	Medical Terminology I	3
5.620	Health Information Systems Procedures I	4
5.611	Medical Law and Ethics	3
He261	Cardiopulmonary Resuscitation	1

Term 2

5.616	Body Structure and Function II	3
5.610	Medical Terminology I	3
5.621	Health Information Systems Procedures II	5
5.604	Medical Office Procedures	3
5.603	Medical Transcription	2

Term 3

5.622	Health Records Processing	5
5.605	Introduction to Medical Science	3
5.609	Medical Office Practice	6
5.000	Medical Practice Seminar	1
4.200	Mathematics	
	or	
1.101	Communication Skills	
	or	
Wr121	English Composition	
	or	
Psy201	General Psychology	3

Nursing Education

*All 4 General Education
info*

Chemeketa offers a career ladder program in nursing education for those students who want to become licensed practical nurses or registered nurses.

The nursing curriculum is designed to prepare men and women for positions as licensed personnel at the following levels:

First Level Nursing

Licensed Practical Nurse

The 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. The licensed practical nurse assists the RN in complex nursing situations.

Completion of the one-year program entitles the student to take the Oregon licensure examination to become a licensed practical nurse and to make application for the second year of the Chemeketa program. A Certificate of Completion is awarded upon successful completion of the required 52 credit hours.

Nursing Assistant

The student who successfully completes the required first-term courses and leaves the educational program is eligible to receive a certificate as a nursing assistant.

The nursing assistant works under the direction and supervision of a registered nurse or licensed practical nurse. He or she assists licensed nursing personnel with meeting normal patient needs for safety, comfort, hygiene, activity, rest, sleep, nutrition, elimination and fluid balances, oxygen, and emotional support.

Course No.	Course Title	Credit Hours
Term 1		
Nur101	Nursing	10
Bi110	Life Science Principles	4
Psy201	General Psychology	3
5.700	Health Occupations Overview	1
Term 2		
Nur102	Nursing	10
Wr121	English Composition	3
Bi121	Human Anatomy and Physiology	4
Term 3		
Nur103	Nursing	10
Bi122	Human Anatomy and Physiology	4
Psy299	Growth and Development	3

Second Level Nursing

Registered Nurse

The registered nurse, or RN, applies knowledge drawn from broad, in-depth education in the social and physical sciences in assessing, planning, ordering, giving, delegating, teaching, and supervising care which promotes a patient's optimum health and independence.

The RN guides other team members with less education and/or experience, evaluates the need for patient instruction, plans and participates in health teaching, and applies mental health principles to nursing care and function. RN's must also assume responsibility for their professional development.

Upon successful completion of the required 111 credit hours, the student is awarded an Associate in Science degree. This is a two-year program.

Chemeketa advises and helps students plan their pre-nursing programs for transfer to a school of nursing which grants the baccalaureate degree and offers general education courses applicable to the B.S. program. Licensed nursing personnel who want to continue their education may take general education courses for transfer into a senior college.

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 their field (see course descriptions for Nur113, 224, and 228).

Term 4

Nur224	Nursing	6
	Elective*	3

Term 5

Nur208	Nursing	10
Bi124	Medical Microbiology	4
	Elective*	3

Term 6

Nur202	Nursing	10
	Sociology Elective	3
	Elective*	3

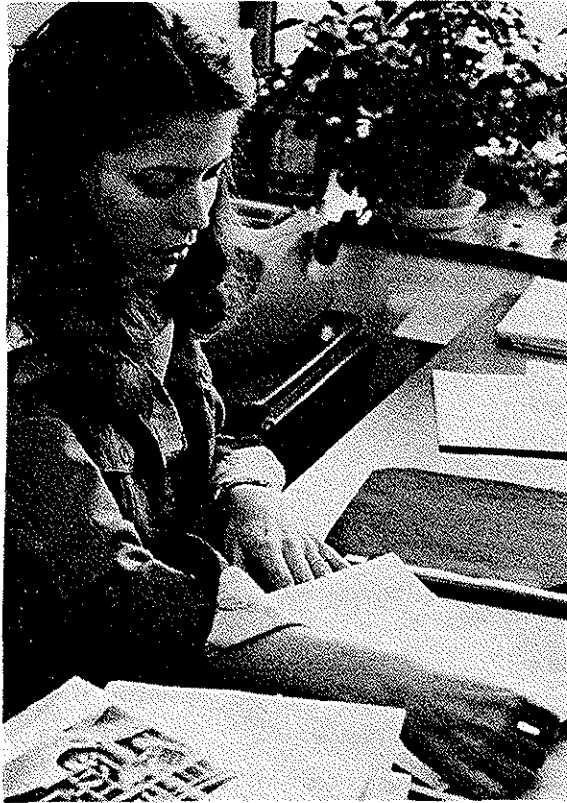
Term 7

Nur203	Nursing	11
Nur207	Nurse at Work	3
	Elective*	3

*Electives combined with required courses must meet Oregon State Board of Nursing minimum requirements:
 6 credit hours - humanities or social science (anthropology, art, composition, economics, foreign language, geography, history, journalism, literature, political science, psychology, speech, sociology)
 6 credit hours - free electives

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 a student attains certain competency goals.



The Office Occupations program is offered on the Salem campus and at the McMinnville Center. At the time of printing this catalog plans are being made to offer the program in Dallas also. Students may enroll each Monday when openings exist. For additional information, call the Business and Management department.

The program concentrates on developing basic skills to prepare students as receptionists, file clerks, typists, and other related jobs. Independent study and individualized instruction give students a comprehensive review of typing, shorthand, machine transcription, filing, business English, and calculators.

The average length of time to complete the full program is two terms (22 weeks) if the student attends 30 hours per week. Students who wish to refresh specific skills may enroll on a weekly basis.

After successfully completing the required 16 credit hours, students receive a Certificate of Completion and a proficiency statement for the subjects studied. Those who enroll on a weekly basis receive proficiency statements.

Course No.	Course Title	Credit Hours
SS121A	Typing I	1
SS121B	.....	1
SS121C	.....	1
SS122A	Typing II	1
SS122B	.....	1
SS122C	.....	1
2.515	Filing	3
2.658A	Introduction to Calculators	1
2.658B	.....	1
SS110A	Shorthand Refresher	2
SS110B	.....	1
2.662A	Introduction to Machine Transcription	1
2.662B	.....	1
2.720	Civil Service Exam Prep I	3
2.271	Civil Service Exam Prep II	3

Real Estate

The goal of the two-year Real Estate program is to develop in students an awareness of the complexities of real estate. The required courses cover factors affecting the value, control, use, appreciation, responsibilities, and privileges associated with real property.

Students may specialize in three basic areas: appraisal, brokerage, and escrow and loan officer training or they may select a combination of these options.

Men and women with this technical training may fill a variety of jobs. They may be employed in county assessors' or county recorders' offices, city planning departments, the federal housing administration, veterans affairs, title insurance companies, escrow departments, state highway departments, mortgage companies, savings and loan associations, commercial banks, state tax commissions, federal land banks, farm credit administration, building and subdivision firms, real estate brokerages, and appraising offices.

Proficiency in both oral and written communication skills is required for graduation. The minimum achievement level for written communication is BA214 Business Communications. It is third in a sequence with Wr40 and 2.673. The Wr121, 122, and 123 sequence may be substituted. Placement in the initial English course is based upon a proficiency test.

Students must also be able to demonstrate proficiency in expressing their ideas orally. Minimum requirement is one course in speech.

Mathematics is an integral part of the curriculum. The minimum achievement level is 6.918 Applied Business Math. Any transfer math, Mth095 or higher, will be accepted in place of 6.918. Placement tests assist students in choosing math courses consistent with their abilities.

During the second year, students may be eligible for Cooperative Work Experience which allows them to gain valuable on-the-job training in their field of emphasis. CWE may be used instead of selected technical courses to complete the program requirements. CWE requires departmental approval.

An Associate in Science degree is awarded upon satisfactory completion of the required credit hours.

Course No.	Course Title	Credit Hours
Term 1		
	English Variable (based on placement test)	
	or	
	General Education Elective	3
	Math Variable	3
BA101	Business Environment	4
BA260	Real Estate Principles	3
BA211	Financial Accounting I	
	or	
6.923	Accounting Procedures I	4
Term 2		
	English Variable	
	or	
	General Education Elective	3
	Math Variable	3
BA261	Real Estate Principles II	3
BA264	Real Estate Finance	3
2.437	Legal Descriptions	2
2.658	Introduction to Calculators	2
BA263	Real Estate Law	3



Real Estate Continued

Term 3

BA214	Business Communications	3
BA262	Real Estate Practices	3
SS121	Typing I	3
BA226	Business Law I	3
2.408	Real Estate Appraisal I	3
Ec100	Outline of Economics	
	or	
Ec201	Principles of Economics	3

Appraisal Option

Term 4

Sp220	Business and Professional Speaking	
	or	
Sp111	Fundamentals of Speech	3
2.409	Real Estate Appraisal II	3
2.423	Escrow Procedures I	3
Psy101	Psychology of Human Relations	3
2.415	Real Estate Investment Analysis I—Principles	3
FE201		
	or	
2.687	Cooperative Work Experience	
	or	
	General Education Elective*	3

Term 5

2.411	Real Estate Appraisal III	3
2.418	Elements of Design and Construction	3
2.416	Real Estate Investment Analysis II—Taxation	3
2.424	Escrow Procedures II	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Elective*	3

Term 6

2.425	Zoning, Subdivision, and Community Planning	3
2.428	Real Estate Seminar	3
2.429	Public Relations in Business	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Electives*	6

Total credit hours required: 102.

Brokerage Option

Term 4

2.409	Real Estate Appraisal II	3
2.423	Escrow Procedures I	3
2.415	Real Estate Investment Analysis I—Principles	3
BA238	Salesmanship	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Electives*	6

Term 5

2.424	Escrow Procedures II	3
2.418	Elements of Design and Construction	3
2.416	Real Estate Investment Analysis II—Taxation	3
Sp220	Business and Professional Speaking	
	or	
Sp111	Fundamentals of Speech	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Elective*	3

Term 6

2.426	Escrow Procedures III	3
2.417	Real Estate Investment Analysis III—Sales and Exchange	3
2.425	Zoning, Subdivision, and Community Planning	3
2.428	Real Estate Seminar	3
2.429	Public Relations in Business	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Elective*	3

Total credit hours required: 105.

Escrow Option

Term 4

Sp220	Business and Professional Speaking	
	or	
Sp111	Speech	3
2.423	Escrow Procedures I	3
Psy101	Psychology of Human Relations	3
SS122	Typing II	3
2.415	Real Estate Investment Analysis I—Principles	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Elective*	3

Term 5

2.424	Escrow Procedures II	3
2.416	Real Estate Investment Analysis II—Taxation	3
2.641	Office Procedures	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Electives*	6

Term 6

2.426	Escrow Procedures III	3
2.417	Real Estate Investment Analysis III—Sales and Exchange	3
2.428	Real Estate Seminar	3
2.429	Public Relations in Business	3
FE201 or		
2.687	Cooperative Work Experience	
	or	
	General Education Electives*	6

Total credit hours required: 105.

*Electives must be approved by the student's advisor.

Records Management

The two-year Records Management program offers training to students who wish to enter or advance in the expanding field of control and management of records for offices and businesses.

The curriculum includes such specific technical courses as records storage, forms analysis and control, data processing, micrographics, and records administration as well as personnel selection, office organization, and general business and education courses. Some of the courses may be transferred to four-year educational institutions in Oregon. All of the classes are offered at night as well as during the day.

The program has these mathematics and English requirements:

Mathematics: The minimum achievement level course required for graduation is 6.918 Applied Business Math. This is the third in a sequence of courses which includes 4.200 and 4.201. Mth010 and Mth095 also fulfill the mathematics requirements.

English: The minimum achievement level course required for graduation is BA214 Business Communications, third in a sequence or Wr40 and 2.673. (However, Wr40 does not count toward graduation requirements.) Wr121, Wr122, and Wr123 also fulfill the English requirement.

A student's initial placement in a mathematics or English course is determined by proficiency tests.

The program includes preparation for the national Certified Records Manager examination. An Associate in Science degree is awarded upon successful completion of the required 93 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
1.101	Communication Skills	3
4.201	Business Mathematics	3
2.658	Introduction to Calculators	2
BA251	Business Environment	4
	Psychology Elective	3
2.801	Records Career Survey	1
Term 2		
2.673	Business English	3
6.918	Applied Business Math	3
SS121	Typing	3
BA131	Introduction to Data Processing	1
2.642	Principles of Records Management	3
Term 3		
BA211	Financial Accounting I	4
SS122	Typing	3
	Elective	3
2.641	Office Procedures	3
6.944	Introduction to Systems and Procedures	3
Term 4		
BA214	Business Communications	3
	Elective	3
	Psychology Elective	3
BA206	Business Management Principles	3
2.820	Forms Design, Analysis, and Control	3
2.924	Records Storage and Retrieval	3
Term 5		
BA260	Business Law	3
1.106	Report Writing	3
BA251	Office Management	3
2.826	Micrographics	3
	Cooperative Work Experience	3
Term 6		
2.685	Personnel Principles	3
2.828	Records Administration	3
	Cooperative Work Experience	3
	Business Elective	3
	Sociology Elective	3



Secretarial Science

The two-year Secretarial Science program offers training for students who want to become stenographers and secretaries. It is also for employed secretaries who want further training to increase or add to their skills in order to advance in their careers.

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

The Secretarial Science program has five options for specialization as engineering, insurance, legal, medical, and professional secretaries. Upon successful completion of the required credit hours in each option, the student is awarded an Associate in Science degree.

Cooperative Work Experience is recommended in all the options. Students are eligible for assignment to CWE if they have grade point averages of 2.5 or better and have completed approximately 60 credit hours in the program. Engineering secretarial students may substitute three approved CWE credit hours; in the other four options a maximum of six CWE credit hours will be accepted toward graduation requirements.

Engineering Secretary Option

Graduates of the engineering secretary option may become employees of consulting firms, civil or structural engineering businesses or drafting and architectural companies. In these offices, a secretary may have a variety of duties such as typing contracts and specifications, billing, handling correspondence, drafting, keeping financial records, and maintaining technical reference materials and manuals.

To prepare students for these jobs, the program includes classes in written communication skills, technical mathematics, and civil and structural engineering as well as secretarial skills.

The Associate in Science degree is awarded upon successful completion of 96 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
SS111	Stenography	
	or	
SS114	Briefhand	3
SS121	Typing I	3
BA101	Business Environment	3
SS101	Office Careers Survey	1
	Math Variable or General Education Elective	3
	English Variable or General Education Elective	3
Term 2		
SS112	Stenography	
	or	
2.701	Briefhand	3
SS122	Typing II	3
2.661	Reprographics	3
6.261	Technical Math I	4
	English Variable or General Education Elective	3

Term 3

SS113	Stenography III	
	or	
2.702	Briefhand III	3
2.641	Office Procedures	3
6.193	Engineering Terminology	4
6.262	Technical Math II	4
BA214	Business Communications	3

Term 4

SS123	Typing III	3
2.663	Machine Transcription I	3
2.710	Secretarial Practicum	3
6.192	Introduction to Engineering Calculators	1
	or	
2.658	Introduction to Calculators	2
	Engineering Elective	3
	Business Elective	3

Term 5

BA211	Financial Accounting	
	or	
6.923	Accounting Procedures	4
6.118	Contracts and Specifications	3
2.642	Records Management	3
2.715	Introduction to Word Processing	3
	Social Science Elective	3

Term 6

Ec100	Outline of Economics	
	or	
Ec201	Introduction to Economics	3
BA226	Business Law	3
BA131	Introduction to Data Processing	3
	Engineering Elective	3
	Business Elective (CWE recommended)	3

Secretarial Science Continued

Insurance Secretary Option

Graduates of the insurance secretary option may be employed in an independent insurance agent's office, a large district insurance office or in the personnel benefits department of a corporation or institution.

The insurance secretary often has a variety of duties including processing applications and forms, answering questions of policyholders and handling all kinds of written communications.

The program includes these requirements:

Mathematics: minimum achievement level, 6.918 *Applied Business Math*.

English: minimum achievement level BA214 *Business Communications*. An English placement test is administered by the counseling staff.

An Associate in Science degree is awarded upon successful completion of the required 99 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
	English Variable (based on placement test) or	
	General Education Elective	3
	Math Variable (based on placement test)	3
BA101	Business Environment	4
SS121	Typing I	3
BA241	Risk and Insurance	3
Term 2		
	English Variable or	
	General Education Elective	3
	Math Variable	3
SS122	Typing II	3
Ec100	Outline of Economics or	
Ec201	Principles of Economics	3
2.119	Insurance—Property and Casualty	3
2.344	Insurance Occupational Survey Seminar	1
Term 3		
BA214	Business Communications	3
SS123	Typing III	3
1.610	Public Speaking or	
Sp111	Fundamentals of Speech	3
BA226	Business Law I	3
2.658	Introduction to Calculators	2
2.343	Insurance—Life and Health	3
Term 4		
BA211	Financial Accounting I or	
6.923	Accounting Procedures I	4
SS114	Briefhand I or	
SS111	Stenography I	3
2.663	Machine Transcription I	3
2.342	IIA—Insurance 21	4
	Business Elective	3
Term 5		
BA212	Financial Accounting II or	
6.924	Accounting Procedures II	4
2.701	Briefhand II or	
SS112	Stenography II	3
2.231	Risk Management Analysis	3
2.641	Office Procedures	3
	General Education Elective* or	
FE201	Cooperative Work Experience	3

Term 6

2.702	Briefhand III or	
SS113	Stenography III	3
2.226	Regulations and Law	2
	General Education Electives*	6
FE201	Cooperative Work Experience or	
	Business Elective	3
	Social Science Elective	3

*Electives must be approved by the student's advisor.

Legal Secretary Option

Legal Secretary graduates may qualify for beginning secretarial positions in law offices or in legal departments of companies or agencies.

The program emphasizes training in Gregg shorthand dictation, machine transcription, typing legal documents and correspondence, managing legal files, answering the telephone, 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 students the opportunity to use the skills, knowledge, and attitudes required in a legal environment.

The program includes these requirements:

Mathematics: 4.201 *Business Mathematics*, second in a sequence with 4.200. Placement is based upon a proficiency test.

English: BA214 *Business Communications*, third in a sequence of Wr40 and 2.673. Placement in the prerequisites for this course is based on an English test administered by the counseling staff.

Secretarial Science Continued

An Associate in Science degree is awarded upon successful completion of the required 95 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
	English Variable or General Education Elective	3
SS101	Office Careers Survey	1
4.201	Math	3
SS111	Stenography I	3
SS121	Typing I	3
BA131	Introduction to Data Processing	3
Term 2		
	English Variable or General Education Elective	3
SS112	Stenography II	3
BA101	Business Environment	4
SS122	Typing II	3
2.641	Office Procedures	3
Term 3		
BA214	Business Communications	3
SS113	Stenography III	3
SS123	Typing, Advanced	3
2.661	Reprographics	3
2.658	Introduction to Calculators	2
2.713	Legal Terminology and Documents	3
Term 4		
SS211	Applied Stenography	3
2.714	Legal Office Procedures	3
2.642	Records Management	3
2.663	Machine Transcription	3
BA211	Financial Accounting I	4
Term 5		
SS212	Applied Stenography	3
2.711	Legal Transcription I	3
BA251	Office Management	3
BA226	Business Law I	3

Term 6

	Business Elective	3
SS213	Applied Stenography	3
2.712	Legal Transcription II	3
	Cooperative Work Experience	3
	Approved Elective	3
	Social Science Elective	3

Suggested Electives: 5.600 Medical Terminology I, 2.715 Introduction to Word Processing, 5.611 Medical Law and Ethics, Ec100 Outline of Economics or Ec201 Principles of Economics.

Medical Secretary Option

The Medical Secretary curriculum helps to prepare persons to work in medically-related offices where they make appointments, manage patient records, meet patients, type correspondence, transcribe patient records, maintain financial records, and complete insurance forms.

The program includes these requirements:

Mathematics: 4.201 Business Mathematics.

English: Minimum achievement level is BA214 Business Communications. An English placement test is administered by the counseling staff.

The Associate in Science degree is awarded upon successful completion of the required 95 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
	English Variable (based on placement test) or General Education Elective	3
4.201	Business Mathematics	3
SS111	Stenography I	3
	or	
SS114	Briefhand I	3
SS121	Typing I	3
5.600	Medical Terminology I	3
SS101	Office Careers Survey	1

Term 2

	English Variable or General Education Elective	3
SS122	Typing II	3
SS112	Stenography II	3
	or	
2.701	Briefhand II	3
BA131	Introduction to Data Processing	3
5.610	Medical Terminology II	3
2.658	Introduction to Calculators	2

Term 3

BA214	Business Communications	3
SS113	Stenography III	3
	or	
2.702	Briefhand III	3
SS123	Typing III	3
2.663	Transcribing Machine Operation	3
5.611	Medical Law and Ethics	3
5.513	Multimedia First Aid	1

Term 4

5.615	Body Structure and Function I	3
2.569	Medical Machine Transcription I	3
2.641	Office Procedures	3
SS211	Applied Stenography	3
2.642	Records Management	3

Term 5

5.616	Body Structure and Function II	3
2.566	Medical Secretary Practicum	3
6.923	or	
BA211	Financial Accounting I	4
2.570	Medical Machine Transcription II	3
	Business or Medical Elective	3

Term 6

5.605	Medical Science	3
	Social Science Elective	3
Ec100	Outline of Economics	3
	or	
Ec201	Business Economics	3
	Elective—CWE recommended	3
	Business or Medical Elective	3

Secretarial Science Continued

Professional Secretary Option

The professional secretary program is for students who wish to become secretaries. Secretarial work requires the ability to organize a variety of tasks, to accept responsibility, and to use initiative as a member of a team. Some of the required skills are typing, transcribing from machine or shorthand dictation; serving personal and telephone callers; operating business machines; maintaining records; performing mathematical calculations; and storing and retrieving records. Secretaries also apply their working knowledge of office organization, office procedures, accounting, business law, economics, records management, data processing, and human relations.

The program includes these requirements:

Mathematics: 4.201 Business Mathematics, second in a sequence with 4.200.

English: BA214 Business Communications, third in a sequence of Wr40 and 2.673. Placement in prerequisites for this course is based on an English test administered by the counseling staff.

During the second year of the program, students may choose either a full-time course of study or an integrated work and study program (See options A and B below.)

Students who satisfactorily complete requirements for the professional secretary curriculum are eligible to sit for the Certified Professional Secretary examination in the final term of the program.

An Associate in Science degree is awarded upon satisfactory completion of the required credit hours in the optional programs.

Course No.	Course Title	Credit Hours
Term 1		
Wr40	Writing Skills	
	or	
	General Education Elective	3
BA101	Business Environment	4
4.201	Business Math	3
SS111	Stenography	3
SS121	Typing I	3
SS101	Office Careers Survey	1

Term 2		
2.673	Business English	
	or	
	General Education Elective	3
SS112	Stenography	3
BA131	Data Processing	3
SS122	Typing II	3
2.715	Introduction to Word Processing	3
2.658	Introduction to Calculators	2

Term 3		
BA214	Business Communications	3
SS113	Stenography	3
2.663	Machine Transcription I	3
2.641	Office Procedures	3
2.661	Reprographics	3
2.642	Records Management	3

Second Year—Option A

This option requires successful completion of 99 required credit hours for the Associate in Science degree.

Term 4		
SS211	Applied Stenography	3
2.710	Secretarial Practicum	3
BA211	Financial Accounting	
	or	
6.923	Accounting Procedures I	4
SS123	Typing III	3
BA217	Business Machines	3

Term 5		
SS212	Applied Stenography	
	or	
	Approved Substitute*	3
BA251	Office Management	3
BA212	Financial Accounting II	
	or	
6.924	Accounting Procedures II	4
BA226	Business Law	3
BA226	Business Elective	3

Term 6		
SS213	Applied Stenography	
	or	
	Approved Substitute**	3
Ec100	Economics	
	or	
Ec201	Economics	3
	Social Science Elective	3
	Business Electives*	6

*CWE recommended for one term
**If student has achieved minimum competency

Second Year—Option B

This option allows the student to be employed in a full-time paid position while earning 12 term units. The position is secured by the work related experience office to enable the student to integrate secretarial skills and knowledge with practical and valuable on-the-job experience with business or governmental agencies.

An Associate in Science degree is awarded upon successful completion of the required 108 credit hours.

Term 4		
	Cooperative Education	12

Term 5		
SS211	Applied Stenography IV	3
SS123	Typing III	3
BA211	Financial Accounting	
	or	
6.923	Accounting Procedures I	4
BA217	Business Machines	3
2.710	Secretarial Practicum	3

Term 6		
	Cooperative Education	12

Term 7		
SS212	Applied Stenography V	3
BA251	Office Management	3
BA212	Financial Accounting II	
	or	
6.924	Accounting Procedures II	4
BA226	Business Law	3
Ec100	Outline of Economics	
	or	
Ec201	Introduction to Economics	3

Small Business Management

The three-year business management program is for small business operators and their spouses who own, lease or manage businesses or have access to a full set of financial records.

The records analysis program involves monthly class meetings as well as visits by the instructor once a month to each small business. Instruction includes how to keep basic records, annual computer analyses of these records, cost of operation summaries, and the applications of analysis information to improve the management and organization of each business.

Tuition covers the instruction and the year-end computer analysis. Contact the community and continuing education office for enrollment information.

First Year

9.298 Small Business Management I— In-service

Stimulates an interest in small business management, showing the need for small business records, how to measure the progress of a small family business, the use of small business and home records, how inventories are an important part of small business records, how to keep business accounts current. Also covers balance sheets and monthly summaries, cash flow and cash flow projections, employer's records, social security and income taxes, unemployment compensation, workers' compensation and fair labor standards act, employee relations, and OSHA and safety considerations. Includes depreciation schedules, income tax management and tax planning, end-of-year inventory, and closing record books for computer analysis.

Second Year

9.298A Small Business Management II

How to calculate income, self-employment and social security taxes, measure business profit and size, the importance of inventories, how to analyze customer service departments and mechanization, labor, equipment and building costs, analysis of major department efficiencies, income tax planning and management, and closing business account books for analysis.

Third Year

9298B Small Business Management III

Covers attributes of successful small business entrepreneurs, determining the most profitable levels of operation, selection of departments, evaluation of customer service and other major departments, evaluation of overhead and general business costs, maximizing income, site buildings, merchandise handling, planning and transitional stages, and analysis of records for closing the business year.

Survey Technology

The two-year Survey Technology curriculum emphasizes the basic concepts and rules of surveying and inspection. Graduates may become surveyor technicians who do location work on highways and roads and for buildings, property surveys, map preparation, and office computations. They may also qualify as construction inspectors who represent engineers on job sites, inspecting the progress of construction to assure its compliance with plans and specifications.

Actual on-the-job experience may be gained through Cooperative Work Experience which may be used instead of selected technical courses to complete program requirements. CWE requires departmental approval.

An Associate in Science degree is awarded upon successful completion of the required 106 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
6.101	Plane Survey	4
6.261	Technical Mathematics I	4
1.101	Communication Skills	3
4.101	Drafting	2
6.136	Engineering Technician Orientation	2
	Psychology Elective	3
Term 2		
6.103	Plane Survey	4
6.262	Technical Mathematics II	4
6.109	Applied Mechanics	3
4.120	Print Reading	2
6.371	Applied Physics	4

Term 3		
6.500	Survey Computations	3
6.266	Technical Mathematics III	4
1.106	Technical Report Writing	3
4.123	Project Development	3
4.131	Mapping and Platting	3
3.605	Tools and Equipment	2
Term 4		
6.118	Contracts and Specifications	3
4.236	Civil Engineering Drafting	3
4.190	Industrial Accident Prevention	3
3.600	General Forestry	3
	Geology Elective	3
	Science Elective	3
Term 5		
6.132	Survey Law	3
6.134	Public Land Survey	3
6.110	Construction Estimating	3
4.235	Photogrammetry I	3
6.113	Hydraulics	4
3.610	Tree Identification	2
Term 6		
6.507	Route Surveying	3
4.237	Photogrammetry II	3
4.287	Methods of Supervision	3
6.122	Soil Mechanics Fundamentals	3
3.611	Tree Identification	2
	Speech Elective	3



Technical Drafting

The two-year Technical Drafting program offers training in mechanical drafting, design, technical illustration, and other drafting oriented jobs in engineering.

The curriculum centers around occupational skills which usually cannot be learned through experience alone, such as principles of design, materials and processes, mathematics, and physical science concepts as applied to technical drafting.

Through Cooperative Work Experience, eligible students may earn credits while working in local businesses. A student makes this arrangement with a CWE instructor-coordinator in the program. Cooperative Work Experience may be used instead of selected technical courses to complete the program requirements. CWE requires departmental approval.

An Associate in Science degree is awarded upon successful completion of the required 94 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
1.101	Communication Skills I	3
Psy100	Introduction to Psychology	3
4.202	Mathematics	3
4.118	Sketching	1
4.221	Machine Drafting	4
Term 2		
1.104	Communication Skills II	3
4.222	Machine Drafting	4
6.261	Technical Mathematics	4
6.606	Manufacturing Processes	3
4.126	Drafting Room Computations	1
Term 3		
1.106	Technical Report Writing	3
4.115	Descriptive Geometry	3
4.131	Mapping and Platting	3
6.101	Plane Surveying	4
6.262	Technical Mathematics	4
Term 4		
4.111	Structural Drafting	3
6.370	Applied Physics	4
6.103	Plane Surveying	4
Mth151	Introduction to Programming: BASIC	3
Select one:		
4.100	Electronics Drafting	3
or		
4.234	Architectural Design	3
Term 5		
4.236	Civil Engineering Drafting	3
4.226	Architectural Drafting	3
6.371	Applied Physics	4
General Education Elective*		
Select one:		
4.235	Photogrammetry I	3
or		
4.228	Technical Illustration	3
or		
Selected course from Mechanical Design curriculum by consent of instructor and advisor		
Term 6		
4.102	Introduction to Specifications	3
4.224	Pipe and Flow Systems Drafting	3
General Education Elective*		
Select two:		
4.227	Architectural Drafting (3 cr. hr.)	3
and/or		
4.229	Technical Illustration (3 cr. hr.)	3
and/or		
4.237	Photogrammetry II (3 cr. hr.)	3
and/or		
Selected course from Mechanical Design curriculum with consent of instructor and advisor (3 cr. hr.)		

*Typing 2.606 or 5S121 is strongly recommended.

Visual Communications

The Visual Communications curriculum offers students opportunities to gain knowledge, skills, and experience to become press operators, process photographers, and graphic designers. Students may learn to operate a variety of graphic equipment including process cameras, printing presses, densitometers, enlargers, and phototypesetters.

Students may take lower division college transfer courses instead of general education, mathematics, and science classes to complete program requirements. Any other deviations from the program must be approved by the department.

Cooperative Work Experience may be used instead of selected technical courses to complete program requirements. CWE requires departmental approval.

An Associate in Science degree is awarded upon satisfactory completion of the required 92 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
6.163	Basic Technical Photography	5
4.200	Mathematics	3
1.101	Communication Skills	3
Select one with consent of instructor*:		
6.166	Graphic Design and Character Generation	5
or		
6.168	Process Photography, Stripping and Platemaking	6
or		
6.170	Presswork and Reproduction Systems	7
Term 2		
4.202	Mathematics	3
1.104	Communication Skills	3
	Science Elective	4
Select one (see term 1):		
6.166 or 6.168 or 6.170		
Term 3		
Psy100	Introduction to Psychology	3
	Communication Elective (English, speech, etc., to be arranged with advisor or counselor)	3
Select one (see term 1):		
6.166 or 6.168 or 6.170		
Term 4		
6.164	Intermediate Technical Photography	6
General Education Elective		
Select one with the consent of instructor**:		
6.167	Advanced Graphic Design	
or		
6.169	Image Conversion and Image Carriers for Offset Lithography	6
or		
Special Problems in Graphic Communications: 6.172 (3 cr. hr.), 6.173 (5 cr. hr.), 6.174 (6 cr. hr.) or 6.175 (7 cr. hr.)		
Term 5		
6.171	Advanced Presswork	6
General Education Elective		
Select one (see term 4):		
6.167, 6.169, 6.172, 6.173, 6.174, 6.175		
Term 6		
Special Problems in Graphic Communications: 6.172, 6.173, 6.174, 6.175 to equal		
16		

*Courses 6.166, 6.168, 6.170 will be taught concurrently each term. Students are counseled on enrollment on an individual basis.

**Courses 6.167, 6.169, 6.171, 6.172, 6.173, 6.174 and 6.175 will be taught concurrently each term. Students are counseled on enrollment on an individual basis.

Welding

The one-year Welding program combines training with classes in the background knowledge needed by workers in welding occupations. Students practice and develop their welding skills in the laboratory.



There is an opportunity for students to take the Oregon State Department of Commerce examination for certification in arc welding. An extra fee for the test is determined by the number of students taking it and the type of test.

Graduates may find employment in job specialty, production, and maintenance shops, choosing from a variety of positions including oxyacetylene burner, MIG welder, arc welder, oxyacetylene welder, semiautomatic welding equipment operator and TIG welder.

Cooperative work experience instead of selected technical courses may be used to complete program requirements. Appropriate summer employment may be used for CWE by arrangement before the end of spring term. CWE requires departmental approval.

A Certificate of Completion is awarded upon successful completion of the required 45 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
4.240	Basic Arc Welding	5
4.161	Basic Oxyacetylene Welding	4
4.244	Blueprint Reading and Sketching	2
4.200	Mathematics	3
4.253	Shop Safety	1
4.242	Oxyacetylene Cutting	1
Term 2		
4.241	Intermediate Arc Welding	6
4.245	Layout Practices	3
4.250	Basic MIG Welding	2
4.251	Basic TIG Welding	2
4.247	Welding Metallurgy I	2
Term 3		
4.252	Advanced MIG Welding	3
4.166	Advanced Arc Welding	3
4.249	Weid Shop Problems	6
4.248	Welding Metallurgy II	2

Welding and Fabrication

The two-year *Welding and Fabrication* program is for persons who want to acquire the technical knowledge and skills required of workers in welding, fabrication, and related occupations.

Welding and fabrication technicians are skilled in the use of oxyacetylene welding and cutting equipment, manual arc, tungsten inert gas and metallic inert gas processes. They have a good working knowledge of shop blueprints and welding symbols, jig fabrication, and assembly processes.

Graduates 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 students a background in manufacturing materials, processes and systems, drafting, blueprint reading, and shop sketching. The curriculum includes written and oral communications and general education classes and emphasizes related scientific, mathematical, and general mechanical principles.

Cooperative Work Experience credits may be substituted for approved electives. CWE requires departmental approval.

At the end of the sixth term students may take the plant and/or pipe certification test administered by the Oregon State Department of Commerce. An extra fee for this test is determined by the number of students involved and the type of test.

Upon satisfactory completion of the required 105 credit hours the student is awarded an Associate in Science degree.

Course No.	Course Title	Credit Hours
Term 1		
4.160	Electric Arc Welding	4
4.244	Blueprint Reading and Sketching	2
4.802	Machine Shop I	3
4.200	Mathematics	3
1.101	Communication Skills	3
4.101	Drafting	2
4.253	Shop Safety	1

Term 2		
4.161	Basic Oxyacetylene Welding	4
Psy100	Introduction to Psychology	3
1.104	Communication Skills	3
4.155	Fabrication Practices I	3
4.300	Practical Physics	4
4.202	Mathematics	3

Term 3		
4.250	Basic MIG Welding	2
4.251	Basic TIG Welding	2
4.204	Mathematics	3
4.302	Practical Physics	4
4.500	Employer-Employee Relations	3
4.156	Fabrication Practices II	3
6.600	Elements of Metallurgy	3

Term 4		
4.849	Heat Treatment of Steel	3
4.238	Advanced TIG Welding	2
4.162	Electric Arc Welding	5
4.243	Fabrication Procedures	3
4.168	Fabrication Shop Problems	3

Term 5		
4.157	Fabrication Practices III	3
4.169	Fabrication Problems	3
4.252	Advanced MIG Welding	3
4.804	Machine Shop II	3
	Approved Elective	3
	or	
	Cooperative Work Experience	

Term 6		
4.167	Welding for Certification	4
4.158	Fabrication Practices IV	4
4.165	Production MIG Welding	3
4.254	Shop Projects	2
	Approved Elective	3
	or	
	Cooperative Work Experience	

Well Drilling

The two-year Well Drilling program is for students who want to enter the well drilling industry. There are employment opportunities for drillers, helpers, equipment salesmen, field engineers and other related jobs.

The curriculum includes various methods of well construction, taking and analyzing samples, choosing and setting correct screens, proper grouting methods and test pumping. Through classroom and field experience, students study geology and hydrology as these subjects pertain to ground water. The program emphasizes the importance of the protection of water as a valuable resource.

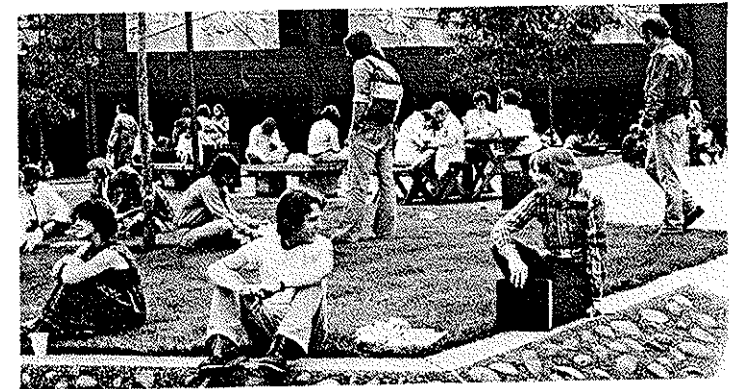
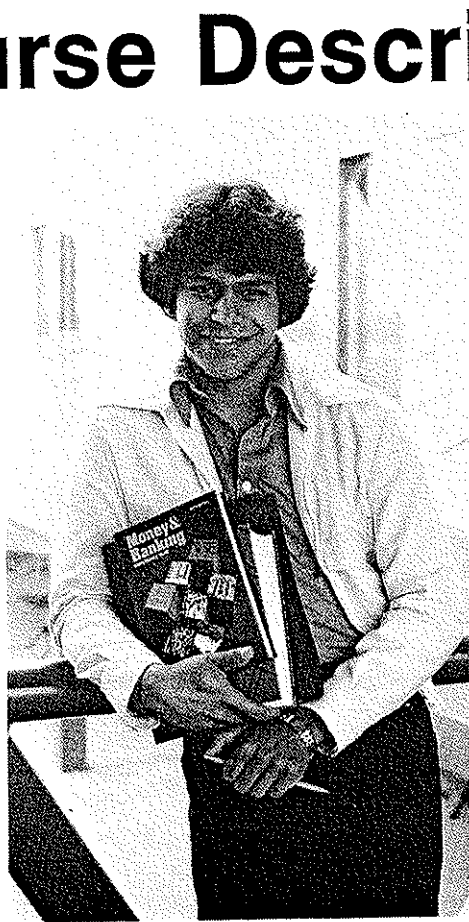
A maximum of six credits of Cooperative Work Experience may be substituted for approved electives.

In the first year, students may take the pipe certification arc welding test administered by the Oregon State Department of Commerce.

An Associate in Science Degree is granted upon successful completion of the required 97 credit hours.

Course No.	Course Title	Credit Hours
Term 1		
4.200	Mathematics	3
1.101	Communication Skills I	3
4.810	Shop Drawing and Layout I	3
4.305	Elementary Geology	4
4.150	Welding	2
4.290	Drilling Operations I	4
Term 2		
4.202	Mathematics	3
1.104	Communication Skills II	3
4.802	Machine Shop I	3
4.154	Intermediate Arc Welding for Drillers	4
4.152	Oxyacetylene Welding for Drillers	2
4.253	Shop Safety	1
Term 3		
4.302	Practical Physics	4
4.170	Industrial Materials and Processes	3
4.167	Welding for Certification	4
4.292	Drilling Operations II	3
	Approved Elective	
	or	
	Cooperative Work Experience	3
Term 4		
Ec100	Outline of Economics	3
4.293	State Drilling Standards and Record Keeping	3
4.172	Power Systems	4
4.295	Drilling Operations III	5
Term 5		
4.171	Mechanical Systems	4
4.291	Engine Theory and Maintenance	3
4.296	Drilling Operations IV	5
	Approved Elective	
	or	
	Cooperative Work Experience	3
Term 6		
Psy101	Psychology of Human Relations	3
4.294	Hydrology for Drillers	4
4.297	Drilling Operations V	8

Course Descriptions



Course Descriptions

KEY TO COURSE DESCRIPTIONS

course number	+ college transfer course	*offered in alternate years	course name	class hours/week	lab hours/week	credit hours/term
Ch205	+	*	General Chemistry	3	6	5
		F W Sp Su				

term course is usually offered (fall, winter, spring, summer)

This list of course descriptions gives an overview of classes usually offered by Chemeketa Community College. It is intended as a guide to students in selecting courses for their particular educational programs. Courses may be added to this list and are sometimes scheduled for different terms than indicated here. The *schedule of classes* published four times a year gives a complete list of courses offered at Chemeketa each term.

In addition to the college transfer courses indicated by the symbol (+), some other courses with alphabetic prefixes may be transferred as *general education credits* to

four-year colleges and universities in Oregon. Acceptance of these courses is determined by the senior institution.

Vocationally numbered courses may also transfer, as agreements have been made in a number of programs with other institutions who will accept certain vocational credits. Students should check with their advisors or a counselor to learn which vocational classes may be transferred.

Courses numbered 9.000-9.999 are *ungraded courses* offered to meet special vocational needs. These are primarily short-term technical or business courses designed to im-

prove job competency, and with very few exceptions do not accumulate credit toward a degree. Some programs, however, accept them as electives; hence they are considered part of a full course load for students receiving financial aid of various types. Students should consult with their advisors or counselors to determine if this applies to their programs.

Chemeketa offers many personal enrichment and special vocational courses which are not listed here. Schedules of these courses are printed quarterly. For information, call the community and continuing education office.

AH199 Issues in Allied Health 3 0 3
A study of important topics in allied health and the current health care system. Offered as needed.

Anth101 + Human Evolution 3 0 3
An examination of human evolution—both physical and cultural. Focuses on evolutionary concepts and processes, genetics, the fossil record, primate classification and the myth of race. A study of the human race and its place in nature. No prerequisite necessary. F, Su, W

Anth102 + Archeology 3 0 3
A study of prehistoric development, archeological method and theory, and dating techniques. Emphasizes the agricultural revolution and its antecedents and the foundations of old and new world civilizations. W

Anth103 + Introduction to Cultural Anthropology 3 0 3
A survey of culture and its relationship to human nature. Examines cross-cultural methodology and anthropological theory. A general view of human language, economic systems, technology, sex and social organization, governmental forms, art, religion, warfare, and play. Investigates the problem of controlling culture and managing society. F

Anth207 + *Cultural Anthropology 3 0 3
An analysis of the concept of culture, its significance for

human beings, 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. Interdependence of heredity, society, and environment. F

Anth208 + Cultural Anthropology 3 0 3
A study of the variety of human social organizations and political forms and the nature of cross-cultural belief systems. Includes an examination of art and ritual. W

Anth209 + *Cultural Anthropology 3 0 3
An exploration of the processes of cultural growth and expansion and the nature of culture change. Adaptation of new culture patterns. Implications of programs of technical assistance to developing nations. Ethics of applied anthropology. Sp

Art195, 196, 197 + Basic Design 2 2 3
A three-term introductory sequence on the basic principles of design. Two hours studio-lecture with outside assignment for each hour of credit. Art195: F; 196: W; 197: Sp
Prerequisite: Courses taken in sequence or consent of instructor.

Art201, 202, 203 + *Survey of Visual Arts 3 0 3
An art appreciation course of architecture, landscape architecture, crafts and industrial design, photography, the motion pictures, illustration, printmaking and easel and mural painting. Intensive study of examples from the various cultures. Not an art history survey. Art201: F; 202: 203: Sp

Art204, 205, 206 + *Introduction to the History of Art 3 0 3
An historical survey of the visual arts from prehistoric to modern times. Study of selected works of painting, sculpture, architecture, and other arts in relation to the cultures that produced them. For both non-major and major students. Art204 F, 205 W, 206 Sp

Art255 + Pottery I—Handbuilding 0 6 3
Beginning ceramics stressing three-dimensional design, shape, form, basic construction techniques, and becoming acquainted with the medium. F, W, Sp

Art256 + Pottery II—Wheel Throwing 0 6 3
Wheel throwing methods in ceramics. Glaze calculations and kiln firing techniques. W
Prerequisite: Art 255.

Art257 Pottery III—Advanced Pottery 0 6 3
Expanding on basic techniques, students pursue their in-

dividual directions and ideas. Includes marketing, sales, and public showings. **Sp**

Prerequisite: Art 256.

Art260 General Photography 2 4 3
Fundamental and technical aspects of photography including types of cameras, f/systems, shutter speeds, film types and specifications, developing, basic enlarging, composition, familiarity with basic materials and processing, vocabulary and equipment. For students interested in photography as a part of general education. Directed photographic assignments and photo lab work. Students supply cameras, film, paper, exposure meters, tripods, and flash equipment. Cost of film and paper varies from \$35 to \$75 per quarter. The college furnishes enlargers, chemicals and other incidental darkroom equipment. **W, Sp, Su**

Art261 Intermediate Photography 2 4 3
A continuation of the basic photography course. Covers more complex aspects of photography including varied materials and processing techniques, such as light measuring, gamma, densitometry, interpretation of and uses of technical data, improving design, and aesthetic approaches to photography. Uses of darkroom techniques, densitometers, special films, and special developers incorporated into project-oriented assignments. **W, Sp, Su**

Art281 + Printmaking 0 6 3
An introduction to techniques of silkscreen printing. **F, Sp**
Prerequisite: Art291A or consent of instructor.

Art290 + Painting 0 6 3
An introduction to painting. Emphasis is on basic skills and approaches to traditional subject matter. Stresses disciplined study, observation and representation. Development of an awareness of composition, the importance of close observation of detail, problems and solutions in the use of color, and the potential of painting for personal expression. Up to nine hours in this course may be applied toward an A.A. degree. **W, Sp**
Prerequisite: Art291A or consent of instructor.

Art291A Beginning Drawing 0 6 3
Basic principles of drawing, seeing, and observation. Emphasis is on developing traditional skills with a variety of drawing media. Variety of subject matter, from still life to photographic imagery. A brief introduction to figure drawing. **F, W**

Art291B Intermediate Drawing 0 6 3
Further exploration of media and subject matter with a concentration on life drawing. **W, Sp**
Prerequisite: Art291A.

Art291C Advanced Drawing 0 6 3
Continuation of drawing problems with an emphasis on the development of personal style and expression, exploration of personal imagery, and mixed media approaches. **Sp**
Prerequisite: Art291B.

Art292 + Watercolor 0 6 3
An introduction to printing problems and the technique and use of watercolor. Fundamental skills and approaches to traditional subject matter. Characteristics of watercolor as a medium, compositional problems, color problems, observation or detail, and the potential for personal expression. **Sp**
Prerequisite: Art291 or consent of instructor.

Art293 + *Elementary Sculpture 0 6 3
An introduction to materials and elementary considerations of form—technical and compositional exercises in clay, plaster, wood, and stone. A two-hour studio period for each hour of credit. **Sp**

At5101 Rudiments of Meteorology 3 0 3
A descriptive meteorology course discussing winds, air masses, fronts, clouds, wave cyclones, and precipitation. A knowledge of science is not a prerequisite. **F**

BA101 + Business Environment 4 0 4
An introduction to the inter-relationships of business, government, and society. The defined and/or established roles of members of the business community. Ethics and social responsibility. Exploration of employment opportunities in various disciplines of the business field. **F, W, Sp, Su**

BA131 Introduction to Data Processing 3 0 3
An introduction to data processing. Brief history of data processing, current uses of computers and an introduction to computer interactions (FORTRAN). How computers work and how people interface with computers and control them. Introduction to data processing machines and writing simple computer instructions. **F, W, Sp, Su**

BA200 Perspectives in Business Methodology 3 0 3
Forum on special issues in business and management program specialties by visiting instructors or regular faculty. Provides opportunities for presentation of current trends in various functions of business. **F, W, Sp, Su**

BA206 Business Management Principles 3 0 3
Analyzes current and historical theories of leadership and motivation, group processes, organizational structure, personnel policies, management of change, effective communication, and decision-making. Synthesized case studies and various reports. **F, W, Sp, Su**

BA211 + Financial Accounting I 4 0 4
Recording transactions, adjustments, financial statements, worksheets, closing entries, accounting for merchandising concerns, cash and accounts receivable, notes and interest, and payrolls. For students in the accounting curriculum and/or students transferring to four-year institutions. **F, W, Sp, Su**
Prerequisite: Concurrently enrolled in Business Math 4.201, 6.918, Math 10 or higher math, or consent of instructor.

BA212 + Financial Accounting II 4 0 4
Accounting for current liabilities, payroll, corporate organization and operation, corporate stock transactions, corporate retained earnings. Covers long-term liabilities and investments, accounting principles, partnerships, price-level changes, analysis and interpretation of financial statements, funds flows, and statement of changes in financial positions. **F, W, Sp, Su**
Prerequisite: BA211.

BA213 + Managerial Accounting 4 0 4
The role of the accountant in the 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. **F, W, Sp, Su**
Prerequisite: BA212, 6.925 or consent of instructor.

BA214 + Business Communications 3 0 3
The purpose and effectiveness of communications in business. Analysis and writing simulated business letters, memoranda and reports. **F, W, Sp, Su**
Prerequisite: 2.673, Wr122 or the equivalent.

BA215 Cost Accounting 3 0 3
Analyzes methods of detailed and specific identification of cost elements within the business enterprise especially job order, process, and standard cost accounting systems and their related theory. Emphasizes principles, techniques, managerial use of cost accounting data, and the use of budget and performance reports, as related to cost accounting. **F, W**
Prerequisite: BA213.

BA216 Income Tax Accounting 3 0 3
Comprehensive study of income tax withholding, individual income taxes, form 1040, declaration of estimated taxes, supporting schedules and forms for individuals, and special individual tax situations. **F, Su**
Prerequisite: BA211 or 6.923 or consent of instructor.

BA217 Business Machines 1 3 3
Operation of electronic display and electronic printing calculators. Solving business problems with calculators. **F, Sp**
Prerequisite: Introduction to Calculators 2.658 or consent of instructor.

BA222 Financial Management 3 0 3
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. **W, Sp**
Prerequisite: BA212 or 6.924.

BA223 Principles of Marketing 3 0 3
Functions of marketing from marketing research and product development to the sale of products or services and

feedback of consumer acceptance. Emphasis on marketing planning and strategy as dictated by the consumer. A preview of marketing as a foundation for advanced marketing courses. **F, W, Sp**

Prerequisite: BA101 or consent of instructor.

BA224 Introduction to Marketing Research 3 0 3

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. **Sp**

Prerequisite: One term of psychology or sociology.

BA226 + Business Law I 3 0 3

The nature and function of the law in the business society. Obligations arising out of tort, formation and performance, and discharge of contracts. **F, W, Sp, Su**

Prerequisite: BA101 or consent of instructor.

BA227 Business Law II 3 0 3

A continuation of BA226. Includes legal aspects of business associations, sales and commercial paper and property. **W, Sp**

Prerequisite: BA226.

BA229 Consumer Finance 3 0 3

The role of the consumer in society. Includes consumer decision-making, money and material happiness, credit and borrowing, food shopping, clothing management, home ownership, family transportation, health care and services, social security, life insurance, annuities, estate planning, wills, trusts, and consumer protection. **F, W, Sp, Su**

BA231 COBOL I 3 3 4

Application of computers to business data processing using COBOL. The development of a common business-oriented computer language and its use in modern business organizations. Comparison of COBOL with other automatic programming languages. **W**

Prerequisite: BA131.

BA232 + Introduction to Business Statistics 3 0 3

Elementary statistical techniques to aid decision making in the business environment. Includes populations and samples, estimating, hypothesis testing, analysis of variances, indexes, and time series. **Sp**

Prerequisite: Mth095.

BA238 Salesmanship 2 2 3

The role of sales as an integral part of the total marketing function. The application of selling to the behavioral sciences is included with special emphasis on sales, psychology, sales techniques, and the fundamental principles of sales communications. **F**

BA239 Principles of Advertising 3 0 3

An examination of advertisements within each segment of the media. Explores the relative merits of several media. Practice in the planning and analysis of complete advertis-

ing campaigns and their coordination with other marketing strategies. **W**

Prerequisite: BA101 or consent of instructor.

BA241 Risk and Insurance 3 0 3

Concepts of risk, probability, and insurance and the role of insurance in the management of risk. An examination of the underlying legal principles and common elements of most insurance contracts. Special emphasis on the roles of insurance from the viewpoint of the consumer and business. Personal applications of the major types of property and liability insurance, life and health insurance, with emphasis on the underlying economic need each is designed to meet. **F, Sp**

BA250 Small Business Management 3 0 3

A study of general functions and procedures used in operation of a small business. An introduction to the basic aspects of managing a small business. The five management functions of planning, organizing, staffing, actuating, and controlling as applied to a small business. **Sp**

Prerequisite: Second year standing or consent of instructor.

BA251 Office Management 3 0 3

A study of the broad scope of responsibilities of the administrative manager. Includes portrayal of the centralization of office services necessitating a knowledge of planning, organizing and controlling of business services, systems and procedures. **W**

BA252 Office Support Systems 3 0 3

Designed to acquaint the non-secretarial science major with some of the fundamentals of operating an office efficiently and effectively. Includes office management, copy methods, office machines, and records management. **W, Sp**

BA260 Real Estate Principles I 3 0 3

A study of the nature, importance and character of real property, the real estate business, the real estate market, the real estate brokerage, taxes and assessment, and contracts and ownership. **F, W, Sp**

BA261 Real Estate Principles II 3 0 3

A continuation of BA260. Land use, taxation, valuation, planning, zoning and development with emphasis on their relationships to economic and social problems. Examines property management, brokerage, appraisal, and escrow functions as they relate to the overall real estate community and its participants. **W**

Prerequisite: BA260 or consent of instructor.

BA262 Real Estate Practices 3 0 3

A sheltered insight into the workings of real estate transactions. Students are expected to become familiar with various 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 plant data. **Sp**

Prerequisite: BA263 and BA264.

BA263 Real Estate Law 3 0 3

Examines the complexities of Oregon real estate law to enable the student to identify a problem area when dealing with a client and to recognize the need for services of a competent attorney specializing in real property. The agent's role in the agency relationship between broker and client. **W**

Prerequisite: BA260 or consent of instructor.

BA264 Real Estate Finance 3 0 3

Operation of the real estate mortgage market and its ability to compete with other desired products purchased on credit. Forces that modify the operation of the mortgage market, and the availability of funds, lending policies, and methods of financing real property. **W**

Prerequisite: One course in real estate principles or practices.

BA265 Real Estate Office Management 3 0 3

A survey of methods for establishing and operating a small real estate office. Emphasis on organizational formats, planning, office facilities, financial records, non-financial records, financial reports, office personnel, office manuals, and public relations. **Offered as needed.**

Prerequisite: BA262.

BA266 Supervision of Real Estate Sales Personnel 3 0 3

A survey of methods for supervising real estate sales personnel. Emphasis on licensing requirements, planning, selection, training of sales personnel and supervision of sales personnel, motivation, leadership, authority, discipline, communication, advertising, and public relations. **Offered as needed.**

Prerequisite: BA262

BA269 Principles of Bank Operation 3 0 3

Description of the fundamentals of bank functions to give the beginning banker a broad (and operational) perspective. A broad perspective necessary for career advancement in banking. **F, W, Sp**

BA270 Money and Banking 3 0 3

Basic economic principles most closely related to money and banking in a context of topics of interest to present and prospective bank managers. Stresses practical application of the economics of money and banking to the 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 0 3

A comparative study of ethical and economic systems designed to increase decision-making capabilities. Emphasis on issues and policy formation in varied business settings. **F, W, Su**

BA278 Law and Banking 3 0 3

An introduction to basic rules of American law which

underlie banking. Topics include jurisprudence, the court system and civil procedure, contracts, quasi-contracts, property, torts and crimes, agencies, partnerships, and corporations. Also sales of personal property, commercial paper, bank deposits and collections, documents of title, and secured transactions. Emphasizes uniform commercial code. **Sp**

BA280 Bank Management 3 0 3
New trends in the philosophy and practice of management. The study and application of these principles offer new and experienced bankers a working knowledge of bank management. **F**

BA281 Installment Credit 3 0 3
The techniques of installment lending. Emphasis on establishing the credit, obtaining and checking information, servicing loans, and collecting the amounts due. A survey of banking installment credit operation. Inventory financing, special loan programs, business development and advertising, and the public relations of installment lending. **F**

BA286 Credit Union Accounting 3 0 3
Basic accounting principles and procedures used by credit unions. For all credit union employees whether or not they are directly involved in accounting operations. **W**

BA287 Credit Union Directorship 3 0 3
The role, function, authority, and potential liability of the director's position in a credit union. Describes basic responsibilities of the director in relation to the historical development of the credit union movement, common practices, and federal and state laws. **Sp**

BA288 Credit Union Management 3 0 3
Managerial and financial aspects of credit union operations under federal and state laws. Managerial accounting practice, financial analysis, and credit union structure. **F**

BA289 Credit Union Law 3 0 3
Coverage of the federal and state laws under which credit unions operate. Review of the Credit Union Act. **W**

BA290 Financial Counseling 3 0 3
Explores the need for financial counseling, different types of counseling, and ideas for action. **Sp**

BA291 Savings and Loan Accounting 3 0 3
Basic accounting principles and procedures used by savings associations. Important for all employees of associations, whether or not they are directly involved in accounting operations. **F**

BA292 Savings Association Operations 3 0 3
An introduction to the financial and management operations of a savings and loan association. Includes the concept of money and its flow to and from associations, its movement to and from assets, liabilities and capital, as measured periodically by the balance sheet, the income statement and other reports. Detailed study of handling savings flows, home mortgage loans, other investments, and

branch operations. The effect of taxes on operations, the impact of the computer in operation and management, and the increasing financial complexities of savings associations. **W**

Bi101, 102, 103 + General Biology 3 3 4
An introduction to biological principles as applied to ecology and populations. Introduction to lower plants and animals of ecosystems. Emphasis on cell structure and function, introduction to organismal biology, and Mendelian genetics with concentration on human genetics and related disease. **Bi101: F, W, Sp. 102: W, Sp. 103: Sp, Su**

Bi110 Life Science Principles 3 3 4
Core concepts and principles of life sciences specifically for health workers, from microbiology to biochemistry and physics. **F, W, Sp, Su**
Prerequisite: Ch101 or acceptable score on chemistry test.

Bi121 Human Anatomy and Physiology 3 3 4
Structure and functions of the human body beginning with the single cell and continuing through tissues, organs, and body systems. **F, W, Su**
Prerequisite: Ch101, Bi110, high school chemistry or permission of instructor.

Bi122 Human Anatomy and Physiology 3 3 4
See Bi121. **W, Sp, Su**
Prerequisite: Bi121 or permission of instructor.

Bi123 Microbiology 3 3 4
An overview of the various microorganisms (bacteria, algae, fungi, protozoa, viruses) and their effects upon man and the environment. **W**

Bi124 Medical Microbiology 3 3 4
A continuation of the survey of bacteria and other microorganisms emphasizing their impact upon human health. Includes discussion of infection, immunity, common pathogens, and methods of mechanisms of control. **F, Sp, Su**
Prerequisite: Bi110 or Bi123.

Bi125 Advanced Topics in Microbiology for Laboratory Tech 3 0 3
For laboratory technologists, to the MT (ASCP) registry educational training and experience level but not limited to those who hold this registry. An in-depth discussion of current technologic procedures and biologic basis of common human infectious diseases. An aid to the laboratory technologist who wants to function more efficiently as a team member of the health care system. **Offered as needed.**

Bot201, 202, 203 General Botany 3 3 4
An introductory study of principles of plant biology. Covers introductory ecological principles, cell structure photosynthesis, respiration, genetics, and evolution of the plant kingdom including bacteria, algae, fungi, mosses, ferns, conifers and flowering plants. **Bot 201: F; 202: W; 203: Sp**
Prerequisite: Completion of high school biology and chemistry with a grade of 'B' or better.

BS202, 203, 204 Introduction to Afro-American History 3 0 3
An introductory history of the black race in the new world. Lectures and discussions plus speakers and films. Traces the pertinent contacts between the African and European worlds from ancient times to the present. Develops skills to re-examine traditional historical concepts and information from the perspective of the black experience. **Offered as needed.**

BS261 Black Economic Experience 3 0 3
An introductory sequence of the historical context and development of contemporary urban and black economic parameters. Begins with the Civil War through early black business enterprises. A lecture-discussion course, augmented with speakers and film. **Offered as needed.**

BS262 Black Economic Experience 3 0 3
The modern 'city-state' of megalopolis as a special type of urban structure whose inner perimeters circumscribe the majority of America's black population. The classic structure with its real or implied economic opportunities is balanced against the realities of the current situation. **Offered as needed.**

Ch100 Chemistry, Man and Society 3 2 4
A one-term introductory course for students who have little or no background in chemistry. Includes atomic structure, nuclear power, bonding, plastics, energy, food products, water and air pollution, drugs, and poisons. **Offered as needed.**

Ch101 + Consumer Chemistry 3 2 4
A general introduction to chemical principles, including atomic structures, states of matter, chemical reactions, thermodynamics and energy. Chemistry of life, including carbohydrates, lipids, proteins and nucleic acids. Includes chemical processes in the ecosphere. **F, W, Su**

Ch102 + Consumer Chemistry 3 2 4
A study of chemistry and consumer materials including food and food additives, poisons, drugs, plastics, fuel sources and energy alternatives, and nuclear chemistry and nuclear energy options. **W**

Ch103 + Consumer Chemistry 3 2 4
A survey of the major air and water pollutants and their effects on the environment. A close look at the pesticide dilemma and alternative methods of insect control. A look at the future. **Sp**

Ch104, 105, 106 + General Chemistry 4 3 5
An introduction to chemistry including the structures of atoms, molecules, and ions and their interactions, and a foundation for further study of chemistry. Three lectures, one lecture-discussion, and one three-hour laboratory period. **Ch104: F, W; 105: W, Sp; 106: Sp, F**
Prerequisite: Math 095 or equivalent.

Ch204 + General Chemistry 3 5 5
 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, and gas laws. **F**
Prerequisite: One year of high school chemistry and Math 095.

Ch205 + General Chemistry 3 5 5
 A continuation of Ch204 with emphasis on crystal theory, changes of state, properties of solutions, thermodynamics, kinetics, chemical equilibrium, and acid-base theory. **W**
Prerequisite: Ch204.

Ch206 + General Chemistry 3 6 5
 A continuation of Ch204 and Ch205 with emphasis on ionic equilibria, electrochemistry, spontaneity, coordination compounds, radioactivity and organic chemistry. **Sp**
Prerequisite: Ch205 or Ch106.

Ch226, 227 Organic Chemistry 3 6 5
 Chemistry of the carbon compounds, the aliphatics, aromatics and derivatives. **Ch226: W; 227: Sp**
Prerequisites: For Ch226: Ch106, Ch206. For Ch227: Ch226, Ch207.

Ch228 Introduction to Biochemistry 3 0 3
 An introductory course in biochemistry highlighting the structure, biological function, biosynthesis, and breakdown of molecules found in living cells. For students majoring in biology and biology-related disciplines and for students generally interested in biochemistry. **Sp**

Ch234 + Quantitative Analysis 3 6 5
 The fundamental principles of quantitative analytical chemistry including gravimetric, volumetric and limited instrumental methods. Designed to satisfy the requirements in quantitative analysis for pharmacy, pre-medical, pre-dental and medical technology students. **Sp**
Prerequisite: Ch206 or consent of instructor.

CJ100 Survey of the Criminal Justice System 3 0 3
 A review of the court systems and procedures from occurrence of criminal violation to final disposition. Covers the six primary functional areas of administration of justice and reviews the principles of federal, state, criminal, and civil laws as they apply to and affect law enforcement. **F, W, Sp**

CJ101 Criminology 3 0 3
 Factual materials pertaining to control of crime are related to sociological and psychological theories of punishment and treatment. Imprisonment, probation, parole, etc., are identified as society's reactions to crime and variations of these reactions are studied. Operations of police departments, court probations, parole departments are examined. **F, W, Sp**

CJ110 + Introduction to Law Enforcement 3 0 3
 An orientation in law enforcement, history and philosophy of enforcement of criminal laws, administration of justice, etiology of criminal behavior, correctional treatment, and professional career opportunities. **F, W, Sp**

CJ112 Traffic and Patrol 3 0 3
 Routine and emergency police patrol of public education, enforcement, and engineering. Preparation necessary to effective handling of such major divisions of a police department. **F, W, Sp**

CJ121 Oregon Criminal Code 3 0 3
 Comprehensive coverage of the Oregon criminal code sections as they relate to offenses against persons, habitation and occupancy, property, morality and decency, public order and sovereignty and to the administration of governmental functions. **F, W, Sp**

CJ131 Introduction to Penology 3 0 3
 A basic introductory overview of the current role of imprisonment as a correctional tool, together with a survey of some of the more significant activities involved in the treatment of prisoners. **F**

CJ132 Introduction to Parole and Probation 3 0 3
 An introductory survey of the basic principles and techniques involved in the correctional programs of probation and parole, together with a critical analysis of their individual roles in the administration of criminal justice. **Sp**

CJ140 + Introduction to Criminalistics 3 4 5
 A survey of the basic principles and techniques involved in criminalistics and definitions and distinctions between criminal investigation and criminalistics. Criminalistics laboratory must be taken concurrently. **F, W, Sp**
Prerequisite: CJ223 and CJ210 or consent of instructor.

CJ141 Criminalistics II 3 4 5
 An in-depth inquiry into criminalistics, with special emphasis on legal medicine, toxicology, firearms identification, questioned document analysis, and the correlation and synthesis of different methods of approach to criminalistics problems. **Offered as needed.**
Prerequisites: CJ223, CJ210 and CJ140, or consent of instructor.

CJ143 Personal Identification 2 2 3
 The science of fingerprints in law enforcement work. Includes techniques and procedures involved in classification, latent prints and imprints, chemical treatment of questioned evidence for the development of fingerprints and court room presentation. **W**

CJ150 Security Administration 3 0 3
 A study of alarm and protection devices, protective patrol and internal precautionary procedures in administration of security programs in business and industry. Includes protection against burglary, robbery and industrial espionage.

Prevention of lawsuits and certain business frauds. Emphasis on planning and implementation of a well-rounded program in these areas. **F**

CJ199 Independent Study in Criminal Justice Variable
 Independent work in criminal justice for students with ability to assume responsibility. Includes research projects and written and oral reports. Requires consent of an instructor to act as project sponsor. **Offered as needed.**

CJ200 + Introduction to Community Relations 3 0 3
 A survey of the role of the police in a changing community. Explores the subject of racial and community tension and minority group crime, social forces in the community, and factors relating to police image. **F, W, Sp**

CJ201 + Juvenile Delinquency 3 0 3
 Examines facts of crime and delinquency and relates them to data including variations of crime and delinquency rates with age, sex, race, poverty, educational status, urbanization and other variables. Discusses the incidence among criminals and delinquents of various biological, psychological and social traits, characteristics and processes. **F, W, Sp**

CJ203 Issues in Criminal Justice 3 0 3
 A forum for special course offerings focusing upon special issues in criminal justice by visiting instructors or regular faculty. **Offered as needed.**
Prerequisite: Consent of instructor.

CJ204 + Seminars in Criminal Justice 3 0 3
 Workshops designed for personnel staffing management positions in the criminal justice system, focusing upon solutions to particular administrative problems. **Offered as needed.**
Prerequisite: Consent of instructor.

CJ210 + Introduction to Criminal Investigation 3 0 3
 Introduction to the history and theory of the fundamentals of criminal investigation from crime scene to court room. Includes scientific techniques, psychology of the offender and recent pertinent court decisions. **F, W, Sp**

CJ213 Crime Scene Technician Variable
 A seminar consisting of three eleven-hour segments. Includes comprehensive theory and practice in crime scene photography, sketching, collection and identification of physical evidence, laboratory processing of physical evidence, preparation of evidence for courtroom presentation, and actual presentation of a case in a mock trial. Emphasis is on participation in these activities. **F, W, Sp**
Prerequisite: CJ210 and CJ140 or consent of instructor. Segments must be taken in sequence unless prior consent of instructor is obtained.

CJ215 Criminal Justice Administration 3 0 3 A survey of the administrative practices of criminal justice agencies. Administration in the public sector including organizational theory, public management, and policy making in criminal justice. Special emphasis on agencies in law enforcement and correction. F, W, Sp	CJ230 Introduction to Juvenile Corrections 3 0 3 An introduction to the historical and contemporary aspects of the juvenile offender including examination of juvenile court philosophy and current treatment programs. Sp	legal and moral aspects of invasion of privacy relating to these matters. Sp
CJ216 Criminal Justice Management 3 0 3 Principles of evaluating, testing, and selecting personnel plus supervision and advancement evaluations. Study and practice of general and specific testing and evaluating procedures. Offered as needed.	CJ231 Introduction to Corrections Process 3 0 3 An analysis of the historical and contemporary background of the adult offender with emphasis on current prevention, control, and rehabilitative programs. Sp	CS213 Introduction to Symbolic Language Programming FORTRAN 4 0 4 Computer applications and elementary FORTRAN. Sp
CJ218 Police Personnel Seminar 3 0 3 A study of police profile, employment applications and resume testing techniques. Criminal justice personnel problems arising from communications reporting, and attitudinal conflict difficulties. Studies all aspects from both the employer's and employee's viewpoint. Offered as needed.	CJ232 Introduction to Corrections Casework 3 0 3 An introduction to approaches of behavior modification through interviewing and counseling. An overview of the techniques available to entry level practitioners in corrections in counseling and interviewing. Traces the development of positive relationships between the client and corrections personnel. W	CT210 + Clothing Construction 0 8 3 The application of principles and techniques of construction and fitting to individual projects. F
CJ220 + Introduction to Substantive Law 3 0 3 Introduction to the origin and structure of common-law crimes and procedures as well as 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. F, W, Sp	CJ244 Questioned Documents 2 2 3 Analysis of handwriting, typewriting, and forged and altered documents as they pertain to criminal justice and presentation of document evidence in court. Offered as needed.	CT211 + Clothing and Man 3 0 3 Sociological, psychological, economic, and aesthetic factors affecting the selection of clothing. W
CJ221 Criminal Law II 3 0 3 A continuation of CJ220. Further study of the administration of governmental functions. Concepts of imputability, causation, and intent. Sp	CJ251 Embezzlement and Shoplifting 3 0 3 A general overview of security problems which develop from external theft (shoplifting) and internal theft (embezzlement) in retail establishments. F	CT250 + Textiles 3 0 3 Properties, identification, selection, use, and care of textile fibers and fabrics. Sp
CJ223 + Rules of Evidence 3 0 3 Survey of basic principles of the law of criminal evidence with emphasis on the role of the investigator in collecting, preserving, and introducing evidence in court. Discussion of current court decisions as they affect the rules of evidence. F, W, Sp	CJ252 Educational Security 3 0 3 An examination of the problems of establishing and maintaining a balanced and inclusive program of educational security. Included are routine patrol, parking, traffic control, investigations, key control, administration advising in the case of riots, demonstrations, and all other types of disturbances. A look at how to develop and maintain rapport with students, staff, and faculty of educational institutions. W	Ec100 Outline of Economics 3 0 3 An introduction to the fundamental concepts of economics basic to the American economic system. An analytical approach rather than descriptive, dealing with the purpose of an economic system, the factors business uses in producing goods and services, income analysis and modern fiscal policy, the American economy in relation to the world scene, and contemporary problems of the American economy. F, W, Sp, Su
CJA227 Introduction to Constitutional Law 3 0 3 An intensive study and analysis of the U. S. Constitution, a study of court decisions which determine the admissibility of evidence in criminal cases and which affect police procedures, and a consideration of the criminal procedure process with emphasis on the role of law enforcement in this process. F, W, Sp	CJ254 Transportation Security 3 0 3 A study of the problems of security in the transportation industry, including airlines, trucking lines, and railways. Emphasis on hijacking and skyjacking. The skyjacker profile is analyzed and modus operandi in such crime studied. Equal stress is placed on protective measures and investigative operations in this broad field. Sp	Ec201 Principles of Economics 3 0 3 An in-depth study of economic theory including definition of economics, economic systems, supply and demand, and elasticity. Also national income and productivity, government spending, taxes, unemployment, inflation and stagnation, consumption, savings and investment, income and employment, fiscal policy, money and banking and the Keynesian model and the role of money. F, W, Su
CJ228 Moot Court 2 3 3 A study of proper courtroom procedures with emphasis on the part played by the police witness. The proper attire for the witness, demeanor in court, manner of response to questioning and maintenance of a strictly unbiased and impartial attitude are reviewed and studied. The student participates in moot court sessions gaining experience in court procedures. F	CJ256 Personnel Screening and Investigation 3 0 3 A study of the three aspects of screening and investigation of personnel. The actual screening and investigation of personnel in industry, business, education and government are studied and alternate programs analyzed. W	Ec202 Principles of Economics 3 0 3 Examines demand and consumer choice, business cost, firm competition, monopoly management, regulation wealth, capital, savings, and income distribution. W, Sp
	CJ258 Communications Security 3 0 3 Covers security measures pertaining to all police, industrial and commercial telecommunications systems, including computers, telephone, teletypes and radios. Reviews the	Ec203 Principles of Economics 3 0 3 Trade among nations, financing world trade, trade and lending, and the current balance of payments. Reviews public goods, externalities, population economics, less developed countries' economic growth, population and environment, taxes and comparative economic systems. Sp, Su, F Prerequisite: Ec201 or consent of instructor.
		Ed110 Psychology of Learning 3 0 3 Distinguishing between learning and teaching as two separate processes that do not necessarily go on simultaneously in the classroom. Study and evaluation of recent as well as established research on learning patterns, growth, and development. F

Ed111 Contemporary Education 3 0 3
Exploration of trends and educational practices in today's schools. **Sp**

Ed123 Tutoring and Instructional Practices for Paraprofessionals I 3 0 3
Student demonstration of familiarity with the aide's role in assisting in the development of skills in math, science, and social science. **W**

Ed124 Tutoring and Instructional Practices for Paraprofessionals II 3 0 3
Student demonstration of familiarity with the aide's role in assisting in the development of skills in language arts, writing, and reading. **Sp**

Ed131 Teaching Techniques 3 0 3
Survey of various methods of teaching in different subject matter areas; e.g. art, P.E., science. **F**

Ed133 Instructional Media and Materials 3 0 3
Preparing and using instructional media and materials commonly found in public schools. Understanding of the place and importance of instructional media in the learning process, and the function and use of the instructional media centers (I.M.C.) in schools. **W**

Ed207 Seminar, Education Aide Orientation 3 0 3
Introduction to education and the occupation of education aide. Background of tasks, rewards, options, career ladders. Discussion of practicum experiences. **F**

Ed209 Practicum, Introductory Observation and Experience 3 0 3
Work experience in a school six hours a week. Designed to give students some basic exposure in classrooms to help them decide if they wish to choose education as a career. **F, W, Sp**

Ed210 Education, Practicum, Theory and Practice 1 15 6
Students assigned to school on a half-day basis to develop competencies in the social, psychological, cultural foundations of education. Teaching strategies, including the teaching of reading and operation of media equipment, classroom operation. Exchange of ideas, techniques and materials. **W, Sp**

Ed251 Introduction to Special Learner Problems 3 0 3
Review and survey of activities in special education. Students survey and study areas, visit facilities, and meet persons in service to the handicapped in order to make appropriate career choices in special education. **W**

Ed257 Second Language Teaching Techniques Paraprofessionals I 3 0 3
First course in a three-term sequence covering philosophy, techniques, activities, and materials used in bilingual/bicultural educational programs. Understanding the use of various techniques of second language teaching. **F**

Prerequisite: Admission to second year of educational aide program or consent of instructor.

Ed258 Multi-Cultural Children's Activities Literature 3 0 3
Second course in a three-term sequence covering philosophy, techniques, activities, and materials used in bilingual/bicultural educational programs. Selecting and using multi-cultural activities and literature for the bilingual/bicultural classroom. **W**
Prerequisite: Admission to second year of educational aide program or consent of instructor.

Ed259 Bilingual Methodology 3 0 3
Third course in a three-term sequence covering philosophy, techniques, activities and materials used in bilingual/bicultural education programs. Examines the philosophy, rationale and legal implications of bilingual/bicultural programs. Management and utilization of English and Spanish reading in a bilingual classroom. **Sp**
Prerequisite: Admission to second-year of educational aide program or consent of instructor.

Ed267 Introduction to the Education of the Mentally Retarded, Physically Handicapped, and Emotionally Disturbed Student 3 0 3
First in a three-term sequence covering the theory and techniques of working with physically handicapped, mentally retarded, and emotionally disturbed students. Theory, identification process, instructional services, assessment procedures, and rules and regulations concerning handicapped students. **F**
Prerequisite: Admission to second year of educational aide program or consent of instructor.

Ed268 Introduction to Classroom Management of the Mentally Retarded and Physically Handicapped 3 0 3
Second course in a three-term sequence covering the theory and techniques of working with physically handicapped, mentally retarded, and emotionally disturbed students. Specific management skills related to mentally retarded and physically handicapped. Curriculum materials for use with the mentally retarded and physically handicapped. **W**
Prerequisite: Admission to second year of educational aide program or consent of instructor.

Ed269 Introduction to Classroom Management of the Emotionally Disturbed 3 0 3
Third course in a three-term sequence covering the theory and techniques of working with physically handicapped, mentally retarded and emotionally disturbed students. Specific management skills relating to the emotionally disturbed. Focus on the learning characteristics of the emotionally disturbed student and appropriate curriculum materials. **Sp**
Prerequisite: Admission to second year of educational aide program or consent of instructor.

Eng101, 102, 103 + *Survey of English Literature 3 0 3

An examination of major literary documents and major authors. Lecture-discussion and individual study relate authors and genres to their historical, cultural, intellectual and aesthetic contexts. Emphasis on students' in-depth involvement in the issues of literature, with attention to aesthetic analysis and students' synthesis of literary issues with their own perceptions of contemporary life relationships. Study of interdisciplinary themes through supplementary reading and popular entertainment forms, exploring continuity and divergence of cultural currents. Eng101 covers Beowulf to the Renaissance in England, Eng102 from Milton to the romantic movement, and Eng103 from the last half of the romantics to modern British fiction. **Eng101: F; 102: W; 103: Sp**

Eng104 + Survey of Fiction 3 0 3
Analysis of fiction literature through the reading of works in English and in translation. Eng104 introduces the short story and novel, basic literary concepts and terminology.

Eng105 + Survey of Dramatic Literature 3 0 3
The study of dramatic literature with an international range of authors. Emphasis on students' perception of literary issues through discussion of basic dramatic conventions, characterization, theme, literary uses of language, and setting. **W**

Eng106 + Survey of Poetry 3 0 3
Analysis of poetry through the reading of works in English and in translation. Eng106 introduces literary concepts and terminology for poetry, and explores types, elements and structures of poetry. **Sp**

Eng107, 108, 109 + World Literature 3 0 3
A sequence to acquaint the student with outstanding works of ancient, medieval and modern literature that have had a permanent and wide appeal outside their own countries. **Eng 107: F; 108: W; 109: Sp**

Eng 110A English as a Second Language I 3 2 4
For foreign students learning how to listen and understand native speakers, to speak English fluently, to read and speak using correct intonation, to write using appropriate grammatical English patterns, and to improve study skills. **F**
Prerequisite: Level 5, Advanced ESL, in ABE Curriculum or consent of instructor.

Eng110B English as a Second Language II 3 2 4
For students whose first language is not English, with emphasis on essential structures of English. Includes reading and vocabulary development skills. **W**
Prerequisite: Michigan Test of English Language Proficiency.

Eng110C English as a Second Language III 3 2 4
For students of English as a second language with intermediate and advanced levels of proficiency. Emphasis on thinking in English and communicating in writing.

Stresses development of basic logical methods of organization required for Eng121. Each logical relationship is introduced first in isolation and then students combine methods of organization. **Sp**

Prerequisite: Michigan Test of English Language Proficiency.

Eng201, 202, 203 + *Shakespeare 3 0 3

A study of Shakespeare's works centering on the formal elements—structure, characterization, setting, movement and imagery—as well as the more illusive elements of the plays—their larger meaning and value systems. Analyzes the nature of Shakespeare's work in relation to the larger mode of tragedy, comedy and the genre of drama. Discussion of the plays and critical essays of them. Students must read carefully and be prepared to discuss the assigned materials. Eng201, tragedies; Eng202, comedies; and Eng203, important Shakespearean plays. **Eng201: F; 202: W; 203: Sp**

Eng253, 254, 255 + Survey of American Literature 3 0 3

Discussion of selected genres (poetry, fiction, drama and expository, religious and critical prose) and works, from the beginning of American literature to present day, in relation to the way they imitate, interpret and direct our personal and social lives. Reading and assessing interpretive literature for personal enjoyment. Special emphasis on written and oral discussion of assigned readings, encouraging all students to share ideas with fellow students and the instructor. **Eng253: F; 254: W; 255: Sp**

Eng256, 257, 258 + *Minority Literature 3 0 3

A three-term sequence in minority literature which studies major writers of a specific group. Explores the individual vision of each writer and how that vision relates to an ethnic group, as well as group identity. **Eng256, Indian: F; Eng257, Black: W; and Eng258, Chicano: Sp.**

Eng261 + Science Fiction 3 0 3

Study of science fiction including an international range of authors. Includes the study of character, setting, literary use of language, theme, history, and types of science fiction. **Sp**

FA250 + *Film & Video Arts 3 0 3

The technologic advances of electronic media require the development of additional literacy skills. Exposes students to the aesthetic considerations and production techniques necessary for effective use of new visual communications media, plus providing an opportunity to express this awareness in a media production. **F**

FA251 + *Film Production 3 0 3

Use of the camera, equipment and lighting to capture proper image, action, and illusions of motion. **W**

FA255 + Introduction to Film Styles 1 4 3

Examination of the history, technique, and art of film through in-class film viewing and discussion. Emphasis is on

acquiring background and basis for evaluating film as an art form and an appreciation for a variety of stylistic approaches in the cinema. **F**

FA256 Introduction to Film Directors 1 4 3

An analysis of films from the standpoint of the director—the creator. The term is devoted to the works of one or two directors in an effort to understand and critique the individual films as the works of film artists, especially within the context of a body of work expressing a particular and unique view of the world. **W**

FA257 Introduction to Film Themes 1 4 3

An examination of a number of films representing a single genre (westerns, comedies, etc.) or expressing common themes in an attempt to focus on the various directors involved and the diverse styles, techniques, and personal expression they bring to their subject. **Sp**

FE201A Field Exploratory Project 4 12 1

An exploration of a career area by means of on-site visits to specific companies, agencies or institutions to give students a more complete picture of career areas and gain an understanding of how various jobs interrelate. **Offered as needed.**

FE201B-L or 2.686-2.693 Cooperative Work Experience variable

Placement of students in a business, industry or agency for on-the-job training/experience related to on-campus instruction. Field experience supervised by college instructors and work experience coordinators. **Offered as needed.**

FE205 Job Search Techniques 1 0 1

Seminar designed to help students find and apply for jobs they want upon graduation. Preparing oneself for the job-search process, preparing and writing resumes, sources of information about jobs, preparing for interviews, job requirements, and what the employer is looking for in an employee. **F, W, Sp**

FL199 Personal Dynamics 3 0 3

Principles and techniques for establishing and maintaining effective human relationships, including fundamentals of relationships, listening skills, ways to communicate feelings, verbal and nonverbal communication, problem solving, handling conflicts, creating healthy emotional climates. **Offered as needed.**

FL222 + Partner Relationships 3 0 3

A practical, functional course for students interested in succeeding in marriage or close personal relationships. Exploration of the wide range of possibilities modern marriages offer, and options couples have in deciding on the kind of marital relationship that will fulfill both personal and mutual needs. **F, W, Sp**

FL223 + Family Living 2 0 2

Marriage and relationships in the beginning family. Open to men and women. **Offered as needed.**

FN225 + Nutrition 4 0 4

The relationship of food and its components to health with emphasis on the young adult. Considers current national and international concerns. **F, W, Sp**

G101 Geology of Western Oregon 3 2 4

An introduction to the evolution of the western Oregon landscape. **F, Su**

G102 Oregon Geology 3 2 4

Introduction to evaluation of Oregon's earth and mineral resources. Requires only elementary knowledge of basic earth science concepts. **W**

G103 Geology Eastern Oregon 3 2 4

Develops an awareness of the exceptional nature of the geology of eastern Oregon, including establishment of a physical and temporal framework essential to the geologic interpretation of the region. **Sp**

G199 Geological Field Studies 0 6 3

Geological formation, rocks, and minerals of various areas with emphasis on paleontology through field studies. **Offered as needed.**

G201, 202, 203 + Geology 3 0 3

Earth materials, processes and structures, and the history of earth and life. **G201: F; 202: W; 203: Sp**

G204, 205, 206 + Geology Laboratory Variable

Laboratory and field work to accompany G201, 202 and 203. **G204: F; 205: W; 206: Sp**

Geog105 + Introductory Geography 3 0 3

An introduction to the physical elements of geography and the environment in which man lives. Focus is on the planet earth's waters, landforms, atmosphere, vegetation and soils. Introduction to the problems of graphic representation of the earth and its significance to humankind. **F, W, Su**

Geog106 + The Cultural Environment 3 0 3

An introduction to man's cultural landscapes, cultural areas and integrative systems. Focus is on the study of the urban mosaic, political patterns, language, population, religion, agriculture and industry. Study of ecologically oriented issues as related to the above topics. **W, Sp, Su**

Geog107 + Historical Geography 3 0 3

An introduction to the historical evolution of cultures in the context of man-land relations. Focus is on culture areas, culture diffusion, and cultural ecology in past times. Special emphasis on cultural landscapes in South Asia, the Middle East, Mediterranean Europe, Northwest Europe, and the United States. **F, Sp, Su**

Geog199 The Urban Environment 3 0 3

The development, evolution, and problems of cities, with special emphasis upon the cities of Portland and Salem and

their metropolitan areas. The focus is upon the spatial and functional characteristics of cities, and upon the various problems of human adjustment in both their present and historic aspects. **F, Su**

Geog200 Environment and Man 3 0 3
Man's alteration of natural systems and environmental problems created by natural resources and energy development programs. Human activity at different times and places in regard to soils, climate, vegetation, land forms, and water. **W, Su**

GS104, 105, 106 + Physical Science 3 2 4
Fundamental principles of physics, chemistry, astronomy and geology, and man's relation to them. Development and application of the scientific method. Students are advised to complete one year of high school algebra, or equivalent, as prerequisite. May not be taken for credit if a student has completed six or more hours in a college-level course in chemistry or physics. **GS104: F, W; 105: W, Sp; 106: F, Sp**

GS199 You and Your Environment 3 0 3
An inquiring course for everyone interested in studying the effects of pollution on the environment. Attempts to identify and study the sources, causes, and effects of the problems of the pollution of our environment and possible ways to eliminate environmental pollution. **Offered as needed.**

GS207 Astronomy 3 0 3
A descriptive treatment of historical astronomy, the earth coordinate system, the moon and solar system. **F**

GS208 Astronomy 3 0 3
Understanding the nature of stars, including the sun, by examining the classification system for stars used by astronomers. Study of the great variety of telescopes, both optical and radio, so that students will understand how astronomers have gathered so much information about objects far removed from earth in space. **W**
Prerequisite: GS207 or consent of instructor.

GS209 Astronomy 3 0 3
A descriptive treatment of stellar evolution, the Milky Way galaxy, galactic and exgalactic systems, and current theories on the nature of the universe. **Sp**
Prerequisite: GS208 or consent of instructor.

He199A Seminar in Health Studies—Narcotics, Alcohol 3 0 3
Multidisciplinary study of the detrimental factors of our social environment and their effect on the body. **F, W, Sp, Su**

He199B Personal Health and Human Sexuality 3 0 3
A study of an individual's personal health attitude and behavior in relation to sexuality. Two major areas covered are (1) environmental conditioning and its relationship to identity, self-esteem, love, and role definition; and (2) physiology in relationship to environmental conditioning and human sexual response. **F, W, Sp, Su**

He199D Consumer's Guide to His Health 3 0 3
A look at the health resources available to the consumer: doctors, nurses, hospitals, drugs, insurance, welfare, the law, alternatives, psychologists. How to best choose and use them when necessary, and stay healthy when possible. Questions posed and answers sought. **F**

He250 + Personal Health 3 0 3
A study of personal health with emphasis on implications of family life, mental health, communicable diseases, degenerative diseases, nutrition, mood modifiers, and consumer health. **F, W, Sp, Su**

He251 Community Health 3² 0 3
A study of community health problems and related agencies. An overview of community health programs, health resources and the relationship of personal health to community health. **W**

He252 First Aid 2 2 3
Theory and procedures for accident prevention and for providing first aid for a wide variety of illnesses and injuries in home, recreational, school, and civil defense settings. Leads to American National Red Cross standard or advanced first aid certification. **F, W, Sp, Su**

He260 Crash Injury Management 2 2 3
A 40-hour training program designed specifically for the law enforcement officer, usually the first person at the scene of a traffic accident. 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.* **F, W, Sp, Su**

He261 Cardiopulmonary Resuscitation 1 0 1
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. **F, W, Sp, Su**

He262 Cardiopulmonary Resuscitation Instruction 0 1 1
Reviews basic life support, both theory and its application. Instructional materials and methods of use in CPR courses are discussed. Successful completion provides instructor certification/recertification by the Oregon Heart Association. **W**
Prerequisite: Valid CPR card and consent of instructor.

He264 Childhood Emergencies 1 0 1
First aid procedures for children and infants. Safety, accident prevention, medico-legal, and public health aspects of day care centers. **Sp**
Prerequisite: He252 or consent of allied health department director.

He268 Pharmacodynamics in Health Care 3 0 3
Study of facts and principles required for safe administration of medicines in patient care situations. Study provides comprehensive base for clinical application. **F, Sp**

HM250 + Home Management and Decision Making 3 0 3
Concepts of home management in various situations including values, goals, standards, decision making, management processes, and the use of human and material resources to meet individual and family needs. **Offered as needed.**

Hst107, 108, 109 History of World Civilization 3 0 3
A survey of human cultural, social, economic and political development of the world's civilizations. Includes: Hst107—from ancient times to 1500 A.D., Hst108—from 1500 to 1914, Hst109—the twentieth century. **Hst107: F, W, Su; 108: W, Sp, Su; 109: F, Sp, Su**

Hst157 History of the Middle East and Africa 3 0 3
A survey of the cultural, social, economic, and political development in the Middle East and Africa. **F**

Hst158 History of Latin America 3 0 3
A survey of cultural, social, economic, and political development in Latin America. **W**

Hst159 History of Asia 3 0 3
A survey of cultural, social, economic, and political development in Asia. **Sp**

Hst201, 202, 203 + History of the United States 3 0 3
A study of the cultural, economic, social and political development of the United States. **Hst201—1492 to 1865: F, W; Hst202—1865 to 1920: W, Sp; Hst203—1920 to 1970: Sp, Su, F**

Hst210 Futurism, Alternatives for the Future 3 0 3
Examines trends of the past and present to examine alternative futures. Demographic trends, technical innovations, cultural shifts and what cannot happen and what will happen if people behave in a number of specific ways. **Sp or Su**

Hst257 Introduction to Ethnic History, American Indian 3 0 3
The native American as a minority group with a culture, heritage, humor, self-consciousness, and outlook. The history of the American Indian and his role in American history. **F**

Hst258 Introduction to Ethnic History, Black American 3 0 3
The role of blacks in American history. Recounts and explains the experiences of America's largest minority group in its attempt to secure meaningful first-class citizenship. **W**

Hst259 Introduction to Ethnic History, Chicano 3 0 3
Tracing and analyzing the various aspects of life and society of the Chicano. Focuses on the racial, cultural, educational, economic, and political development of the Chicano in the United States. **Sp**

J215 Publication Lab 0 4 2
Practical application of reporting skills, photojournalism, and production principles through work on the student newspaper. **F, W, Sp**
Prerequisite: J224 or consent of instructor.

J216 Newswriting 3 0 3
Exposure to gathering and processing news includes lead format, straight news style, editorials, and some feature writing. Considerable time devoted to writing. **W**
Prerequisite: Knowledge of typing.

J224 Introduction to Journalism 3 0 3
A survey of the press with emphasis on newspaper operation in the United States. Discussion includes historical base, reporting responsibilities, journalism ethics, and law. **F**

J225 Advertising/Public Relations 3 0 3
An overview of communications and production aspects of advertising and public relations. Criticism and analysis of the fields combined with actual preparation of materials and campaigns. **W**

J226 Layout/Production 3 0 3
Newspaper management in relation to production and editing procedures. Includes printing processes, page layout, style, and headline writing. **Sp**

MS199 + Oceans—Our Continuing Frontier 3 0 3
A multi-disciplinary course focused on the sea. The relationship of the sea to art and literature, science, myth, resources, politics, war, and people. A practical application emphasizing the relationship of Oregonians and the sea. **W**

MS199D Personal Journal Writing 2 2 3
A structured experience in personal journal construction to aid students in investigating, analyzing, understanding, and relating to their past life so that their future decisions will be made more easily. An active writing course with minimum emphasis on group interaction. **Sp**

MS199E Taxation—Myths and Realities 3 0 3
Explores the complexities of the United States tax system—federal, state, and local and options for reform. **Offered as needed.**

MS199F English Tradition & Society 3 0 3
Links the traditions of the English people and contemporary English cultural patterns. Covers all areas of the experience of the English people including technology, politics, the arts, sociology, education, and geography. Focuses on the integration of many viewpoints to create an overall perspective of modern English society. **Offered as needed.**

MS251, 252, 253 The Art of Discovery, Science, Philosophy and Society 3 0 3
An interdisciplinary sequence focusing on discoveries which have had special impact on world views, values and behavior. Shows how scientific, philosophic, and social enterprises relate. Integrates disciplinary insights. Students are expected to see patterns which will help integrate their studies. **MS251: F; 252: W; 253: Sp**

Mth010 Beginning Algebra 5 0 4
A basic course in algebra for students who have not had high school algebra and who need a review of algebra before enrolling in Mth095 Intermediate Algebra. A review of arithmetic operations and properties of real numbers. Introduction to linear equations, factoring, inequalities, algebraic fractions, exponents and graphs. **F, W, Sp, Su**

Mth020 Applied Geometry 1 0 1
An individualized course which may be started and completed at any time during the term. The basic concepts of points, lines, planes, angles, triangles, congruence of triangles, different polygons, and similarity from an intuitive point of view. Includes applied problems involving these concepts. **F, W, Sp**
Prerequisite: Completion with 'C' or higher of one year high school algebra or Mth010 or consent of instructor.

Mth021 Applied Geometry 1 0 1
An individualized course which may be started and completed any time during the term. The basic concepts of perimeter, circumference, arc length, areas of polygons and circles, surface area of solids, and volume of various solids. Includes applied problems involving these figures. **F, W, Sp**
Prerequisite: Completion with 'C' or higher of one year high school algebra or Mth010 or consent of instructor.

Mth022 Applied Geometry 1 0 1
An individualized course which may be started and completed at any time during the term. Use of protractor, straight edge, and compass to construct and copy various figures while learning the terms and techniques of constructions. Includes introduction to the basic concepts of analytic geometry using applied problems. **F, W, Sp**
Prerequisite: Completion with 'C' or higher of one year high school algebra or Mth010 or consent of instructor.

Mth095 + Intermediate Algebra 5 0 4
The fundamental laws of algebra with the 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 word problems. **F, W, Sp, Su**
Prerequisite: Completion with 'C' or higher of one year of high school algebra and one year of geometry or Mth010 or consent of instructor.

Mth101 + College Algebra 4 0 4
The study of 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. Polynomial, rational, exponential and logarithmic functions are studied along with an introduction to complex numbers, matrices, determinates, sequences, and series. **F, W, Sp, Su**
Prerequisite: Completion with 'C' or higher of two years of high school algebra and one year of geometry or Mth095 or consent of instructor.

Mth102 + Trigonometry 4 0 4
A continuation of the study of functions. Circular, trigonometric and inverse functions. Complex numbers are studied with vectors and graphing with polar coordinates. **W, Sp, Su**
Prerequisite: Mth101 with 'C' or higher or consent of instructor.

Mth103 + Probability and Statistics 4 0 4
A one-term course designed as an introductory survey in the basic concepts of statistics and probability. A study of inferential methods and assessing reliabilities of numerical information related to all occupational fields. Application of formulas to problem solving is stressed over the mathematical theory. **F, Sp**
Prerequisite: Mth101 with 'C' or higher or consent of instructor.

Mth106 + Elementary Calculus 4 0 4
A one-term course with an intuitive approach to differential and integral calculus. Emphasizes the techniques of calculus in applied problem solving. Designed primarily for students who are business, social science, life science or liberal arts majors. **W, Sp, Su**
Prerequisite: Mth101 with 'C' or higher or consent of instructor.

Mth151 Introduction to Programming, BASIC 2 2 3
An introduction to computer programming using the BASIC language. Included in each program are analyzing problem, writing and entering program, locating and correcting errors, and completing a successful run. Each student submits programs to cover each programming concept, but specific application may be chosen from his/her own interest area. No previous knowledge of computers expected. **F, W, Sp**
Prerequisite: Mth010 or 4.202 or consent of instructor.

Mth191, 192, 193 + Mathematics for Elementary Teachers 3 0 3
A three-term sequence in mathematics for prospective elementary teachers. Partially fulfills the mathematical requirements for students majoring in elementary education. Emphasizes the concepts, terminology, and skills encountered in the K through 9 elementary school mathematics curriculum. Although the course is primarily a study of subject matter, several concepts are presented through concrete examples using manipulative materials, games, and activities. Mth193 includes field experience. Must be taken in sequence or obtain consent of instructor. **Mth191: F; 192: W; 193: Sp**
Prerequisite: Proficiency with whole numbers.

Mth199 Math with Pocket Calculator 2 0 2
Aids the student in the selection and purchase of a pocket calculator that best fits his/her individual needs. Includes how to use the calculator as an effective educational tool for basic mathematical operations, exponentials, logarithms, and trigonometry. Applications of practical mathematics using the pocket calculator skills appropriate to everyday living, vocational occupations, and developing concepts for further study in mathematics. **W, Sp**
Prerequisite: Mth010 with 'C' or higher or consent of instructor.

Mth200 Calculus with Analytic Geometry 4 0 4
First term undergraduate calculus covering limits, continuity, the derivative, applications of the derivative, and integration. **F, Sp**
Prerequisite: Mth101 and Mth102 with 'C' or higher or consent of instructor.

Mth201 + Calculus with Analytic Geometry 4 0 4
Second term undergraduate calculus covering applications of the definite integral, exponential and logarithmic functions, trigonometric and hyperbolic functions, techniques of integration. **F, W**
Prerequisite: Mth200 with 'C' or higher or consent of instructor.

Mth202 + Calculus with Analytic Geometry 4 0 4
Third term undergraduate calculus covering polar form of equations, conic sections, indeterminate forms, infinite series. **W, Sp**
Prerequisite: Mth201 with 'C' or higher or consent of instructor.

Mth203 + Calculus with Analytical Geometry 4 0 4
Undergraduate course in multivariable calculus including vectors, partial derivatives, multiple integrals, and their applications. **Sp**
Prerequisite: Mth202 with 'C' or higher or consent of instructor.

Mus195 Band 1 0 1
No more than six hours credit may be earned in Mus195 and 197, singly or combined. **Offered as needed.**

Mus197 Chorus 1 0 1
Classroom instruction for students in voice. Class activity is centered around choir practice and performance. No more than six hours credit may be earned in Mus195 and 197, singly or combined. **F, W, Sp**

Mus201,202,203 Introduction to Music and Its Literature 3 0 3
Cultivation of understanding and intelligent enjoyment of music through a study of its elements, forms, and historical styles. **Mus201: F; 202: W; 203: Sp**

Mus50 + Basic Piano 0 2 1
Classroom instruction in basic keyboard techniques. **F, W, Sp**

Mus51 + Basic Voice 0 2 1
Classroom instruction in basic voice. **F, W, Sp**

Nur101 Nursing 5 15 10
A study of concepts, skills and values basic to contemporary nursing. Emphasizes meeting physio-psycho-social needs of people for health, including nursing skills, communications, nursing as an interpersonal helping process, growth and development, and beginning skills in problem solving in a variety of nursing situations. Brings beginning roles in nursing careers into focus. Correlates theory, skills development, and clinical experiences in nursing, including care of all age groups. **F**
Prerequisite: Enrollment in the nursing program.

Nur102 Nursing 5 15 10
A continuation of the study of concepts, skills, and values basic to nursing practice. Emphasizes problem solving in a variety of nursing situations including growth and developmental patterns in maternal-child-family health and the effects of hospitalization on people through the life cycle with physical and mental illness. Brings nursing role differentiations into focus. **W**
Prerequisite: Nur101 or equivalent.

Nur103 Nursing 5 15 10
Further study of the concepts, skills, and values basic to nursing practice. Emphasizes problem solving in nursing situations in common conditions of illness and the assisting role of nursing personnel in complex nursing situations, including integration of mental health concepts. **Sp**
Prerequisite: Nur101, 102 or equivalent.

Nur113 LPN Reentry 6 18 12
For the inactive LPN returning to practice. Reviews concepts, skills, and values basic to contemporary nursing. Use of problem solving skills to meet needs of clients in a variety of nursing situations. Emphasizes independent study. **Offered as needed.**
Prerequisite: Eligibility for practical nurse licensure and proof of application for, or possession of, a limited license from the Oregon State Board of Nursing.

Nur201 Nursing 4 12 8
Continued study of the concepts, skills, and values basic to nursing. Focuses on the role and responsibilities of the registered nurse in the nursing process and the management of the patient care with priority setting of nursing needs of children and adults. Uses problem solving approach and increases understanding of the nursing process through the sequence of study. Compares chronicity and acuity of illness, stress and adaptation, and a holistic approach to basic needs of people in illness. **F**
Prerequisite: Nur101, 102, 103, 224 or equivalent.

Nur202 Nursing 5 15 10
A continuation of the nursing sequence. Focuses on increasingly more complex nursing situations and the complexity of the RN role. **W**
Prerequisite: Nursing 101, 102, 103, 201, 224 or equivalent.

Nur203 Nursing 5 18 11
A continuation of the nursing sequence. Emphasizes the care of groups of children and adults with multiple problems in crises and emergency situations and the leadership responsibilities of the RN in the management of patient care. **Sp**
Prerequisite: Nursing 101, 102, 103, 201, 202, 224 or equivalent.

Nur207 The Nurse at Work 3 0 3
A study of trends and practice in the nursing profession including organizational and structural elements and the social-cultural factors influencing the role of the new graduate as a member of a nursing and health team. **Sp**

Nur224 Nursing 3 9 6
Further study of the concepts, skills, and values basic to nursing practice with focus on pathophysiology in psychiatric and obstetric patient situations. **Su**
Prerequisites: Nur101, 102, 103 or equivalent.

Nur228 R.N. Reentry Program 6 18 12
For the inactive R.N. returning to practice. Students review concepts, skills, and values of contemporary nursing as an R.N. Uses problem solving approach in the management of nursing care in a variety of nursing situations as a returning R.N. practitioner. **Offered as needed.**
Prerequisite: Eligibility for registered nurse licensure and proof of application for, or possession of, a limited license from the Oregon State Board of Nursing.

PA250 Introduction to Public Administration 3 0 3
A survey of administrative practices of public agencies, with special emphasis on policy making in governmental organization. Includes public management, organizational theory, and behavior. **F, W, Sp**

PA255 Public Personnel Administration 3 0 3
An introductory examination of the principles, concepts, and decisions that govern the determination of public personnel policy. Special emphasis on compensation plans, position classification, staffing, staff reductions, tenure, affirmative action, and collective bargaining in the public sector. **F, W, Sp**

PA256 Affirmative Action/Equal Opportunity 3 0 3
Acquaints management trainees and related personnel with federal, state, and institutional equal opportunity requirements. Includes history of equal employment opportunity, rationale for EEO programs, descriptions of EEO laws and executive orders and their amendments, affirmative action and its legal basis, advantages of having EEO/AA programs, and agencies established to assist federal and state EEO/AA programs. Allows student participation with statistics and analysis of various kinds of work forces. **Offered as needed.**

PA260	Public Finance	3 0 3			
A course in public finance and fiscal management designed to acquaint students with all aspects of financing state and local governments in Oregon. Covers the practical aspects of public finance in Oregon. Class discussion and projects are directed toward finance policy and public issues as expressed in budgetary terms. F, W, Sp					
PA266	Public Personnel Supervision	3 0 3			
An examination of the supervisor's role in a public service environment. Special emphasis on human relations, decision-making, leadership, communications, and discipline for the first line supervisor. F, W, Sp					
PE131	+ Introduction to Health, Physical Education And Recreation	3 0 3			
Professional orientation, basic philosophy and objectives, professional opportunities, and qualifications.					
PE180	Physical Education— Women	0 1 1			
A variety of activities taught for physiological and recreational values.					
PE180BN	+ Basketball— Women's Varsity	0 3 1			
PE180CL	+ Women's Cross Country— Varsity	0 3 1			
PE180SB	Softball— Women's Varsity	0 3 1			
PE180TK	Tennis— Women's Varsity	0 3 1			
PE180TQ	Track and Field— Women's Varsity	0 3 1			
PE180VN	+ Women's Volleyball— Varsity	0 3 1			
PE185AJ	+ Archery— Beginning	0 3 1			
Fundamentals of archery including safety, history, care and use of equipment, basic rules and skills technique. Application of fundamentals to target shooting with emphasis on self-testing and improvement. Class competition in regulation and novelty shoots. Intermediate and advanced courses include more emphasis on shooting perfection, self-improvement, and analysis of errors.					
PE185AK	+ Archery— Intermediate	0 3 1			
See PE185AJ.					
PE185AL	+ Archery— Advanced	0 3 1			
See PE185AJ.					
PE185BA	Badminton— Beginning	0 3 1			
Beginning instruction in 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.					
PE185BB	+ Badminton— Intermediate	0 3 1			
See PE185BA.					
PE185BC	+ Badminton— Advanced	0 3 1			
See PE185BA.					
PE185BE	+ Baseball— Beginning	0 3 1			
Fundamental techniques of offensive and defensive play, rules, strategy, and team play.					
PE185BF	+ Baseball— Intermediate	0 3 1			
See PE185BE.					
PE185BG	+ Baseball— Advanced	0 3 1			
See PE185BE.					
PE185BJ	+ Basketball— Beginning	0 3 1			
Fundamental skills, and techniques of offensive and defensive play, rules, team play, and competition. Increased skills and strategy levels in intermediate and advanced.					
PE185BK	+ Basketball— Intermediate	0 3 1			
See PE185BJ.					
PE185BL	Basketball— Advanced	0 3 1			
See PE185BJ.					
PE185BP	+ Billiards— Beginning	0 3 1			
Fundamental skills, strategy, application of rules, etiquette, and competitive play.					
PE185BQ	+ Billiards— Intermediate	0 3 1			
See PE185BP.					
PE185BR	+ Billiards— Advanced	0 3 1			
See PE185BP.					
PE185BS	+ Body Building— Beginning	0 3 1			
Exercises to increase muscularity, muscular definition, and muscular power. Primary objective is to develop the physique.					
PE185BT	+ Body Building— Intermediate	0 3 1			
See PE185BS.					
PE185BU	+ Body Building— Advanced	0 3 1			
See PE185BS.					
PE185BV	+ Bowling— Beginning	0 3 1			
Beginning—basic fundamentals, techniques, rules, scoring, and social etiquette of bowling. Intermediate—perfection of straight ball delivery, introduction to hook and curve ball delivery, and tournament plan.					
PE185BW	+ Bowling— Intermediate	0 3 1			
See PE185BV.					
PE185BX	+ Bowling— Advanced	0 3 1			
See PE185BV.					
PE185CA	+ Conditioning— Beginning	0 3 1			
Designed to meet individual needs. Includes circuit training and use of apparatus. Concern given to cardiovascular development and special programs of exercise for all ages.					
PE185CB	+ Conditioning— Intermediate	0 3 1			
See PE185CA.					
PE185CC	+ Conditioning— Advanced	0 3 1			
See PE185CA.					
PE185CD	+ Correctives— Beginning	0 3 1			
Exercise programs of fitness or physical therapy for student with physical injuries, disabilities or handicaps. Class is offered many times each day to accommodate students.					
PE185CE	+ Correctives— Intermediate	0 3 1			
See PE185CD.					
PE185CF	+ Correctives— Advanced	0 3 1			
See PE185CD.					
PE185CM	+ Cross Country Skiing— Beginning	0 3 1			
Fundamental skills and techniques, types of equipment, first aid, orienteering, survival, leadership, and route finding.					
PE185CN	+ Cross Country Skiing— Intermediate	0 3 1			
See PE185CM.					
PE185CP	Cross Country Skiing— Advanced	0 3 1			
See PE185CM.					
PE185CW	+ Cycling— Beginning	0 3 1			
Cycling techniques including fitting bicycle to the individual, pedaling correctly, safety, maintenance, and touring. Special emphasis on physical fitness through cycling.					
PE185CX	+ Cycling— Intermediate	0 3 1			
See PE185CW.					
PE185CY	+ Cycling— Advanced	0 3 1			
See PE185CW.					
PE185DE	+ Dance, Folk— Beginning	0 3 1			
Basic steps, skills and training in dances reflecting cultural traditions. Schottische, polka, etc.					
PE185DF	+ Dance, Folk— Intermediate	0 3 1			
See PE185DE.					
PE185DG	+ Dance, Folk— Advanced	0 3 1			
See PE185DE.					
PE185DH	+ Mexican Folk Dance— Beginning	0 3 1			
Basic steps, skills, and training in dances reflecting cultural traditions of Mexico.					
PE185DI	+ Mexican Folk Dance— Intermediate	0 3 1			
See PE185DH.					
PE185DJ	+ Dance, Modern— Beginning	0 3 1			
Fundamentals of movement, techniques, and use of axial and motor movements. Experience in dance composition to various media.					
PE185DK	+ Dance, Modern— Intermediate	0 3 1			
See PE185DJ.					

PE185DL	+ Dance, Modern— Advanced	0 3 1	PE185GJ	+ Golf— Beginning	0 3 1	PE185KA	+ Karate— Beginning	0 3 1
See PE185DJ.			Basic fundamentals of golf such as grip, stance, and mechanics of the swing. Use of irons, long irons, woods, and putting. Rules of the game, social etiquette, and actual playing of the game.			Fundamentals of karate including basic stances, 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 subject.		
PE185DR	+ Dance, Social— Beginning	0 3 1	PE185GK	+ Golf— Intermediate	0 3 1	PE185KB	+ Karate— Intermediate	0 3 1
Basic dance steps of the fox trot, tango, rumba, mambo, and current popular 'fad' dances.			See PE185GJ.			See PE185KA.		
PE185DS	+ Dance, Social— Intermediate	0 3 1	PE185GL	+ Golf— Advanced	0 3 1	PE185KC	+ Karate— Advanced	0 3 1
See PE185DR.			See PE185GJ.			See PE185KA.		
PE185DT	+ Dance, Social— Advanced	0 3 1	PE185GN	+ Golf— Men's and Women's Varsity	0 3 1	PE185LJ	+ Lifesaving	0 3 1
See PE185DR.						A wide range of elementary and advanced life-saving skills based on a high level of correct swimming techniques and physical conditioning. Based on Red Cross senior lifesaving.		
PE185DV	+ Dance, Square— Beginning	0 3 1	PE185GP	+ Gymnastics— Beginning	0 3 1	PE185PA	+ Personal Defense— Beginning	0 3 1
Basic square dance formation, singing calls, simple figures, and invigorating activity.			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.			Instruction in fundamental personal defense skills, precautionary measures to insure one's safety, countering attacks whereby various types of weapons are employed, and development of a skill level that promotes self-assurance to reduce panic.		
PE185DW	+ Dance, Square— Intermediate	0 3 1	PE185GQ	+ Gymnastics— Intermediate	0 3 1	PE185PB	+ Personal Defense— Intermediate	0 3 1
See PE185DV.			See PE185GP.			See PE185PA.		
PE185DX	+ Dance, Square— Advanced	0 3 1	PE185GR	+ Gymnastics— Advanced	0 3 1	PE185PC	+ Personal Defense— Advanced	0 3 1
See PE185DV.			See PE185GP.			See PE185PA.		
PE185FA	+ Fencing— Beginning	0 3 1	PE185HA	+ Handball— Beginning	0 3 1	PE185PD	+ Pistol/Semiautomatic— Beginning	0 3 1
Initial position, en garde, salute, lunge and recovery, basic parries, basic attack and defense movements, fencing bouts and scoring.			Basic fundamental techniques and rules, etiquette, and singles and doubles play. Perfection of techniques, strategy, singles and doubles competition.			Basic indoor small bore shooting. Safety procedures, equipment and rules. Introduction to national and range shooting. Start of a shooting record. Target and silhouette hitting. Right and left barricades.		
PE185FB	+ Fencing— Intermediate	0 3 1	PE185HB	+ Handball— Intermediate	0 3 1	PE185PE	+ Pistol/Semiautomatic— Intermediate	0 3 1
See PE185FA.			See PE185HA.			See PE185PD.		
PE185FC	+ Fencing— Advanced	0 3 1	PE185HC	+ Handball— Advanced	0 3 1	PE185PF	+ Pistol/Semiautomatic— Advanced	0 3 1
See PE185FA.			See PE185HA.			See PE185PD.		
PE185FD	+ Soccer— Beginning	0 3 1	PE185JJ	+ Jogging— Beginning	0 3 1	PE185PG	+ Pistol/Smallbore— Beginning	0 3 1
Fundamental soccer skills, position play, team formations, offensive and defensive team play, and rules of the game.			Instruction and practice in the techniques of jogging. Stresses development of cardiovascular endurance. Includes various systems of training. Students work according to their own abilities and physical condition.			See PE185PD.		
PE185FE	+ Soccer— Intermediate	0 3 1	PE185JK	+ Jogging— Intermediate	0 3 1	PE185PH	+ Pistol/Smallbore— Intermediate	0 3 1
See PE185FD.			See PE185JJ.			See PE185PD.		
PE185FF	+ Soccer— Advanced	0 3 1	PE185JL	+ Jogging— Advanced	0 3 1	PE185PH	+ Pistol/Smallbore— Intermediate	0 3 1
See PE185FD.			See PE185JJ.			See PE185PD.		
PE185FM	+ Fitness Appreciation— Beginning	0 3 1	PE185JQ	+ Judo— Beginning	0 3 1	PE185PK	+ Pistol/Smallbore— Advanced	0 3 1
Circuit training, jogging, running, and exercise programs designed for lifetime activity with regard to fitness. Basic instruction in diet and nutrition as aids to physical and mental fitness.			Instruction in fundamental personal defense skills, precautionary measures to insure one's safety, countering attacks, etc.			See PE185PD.		
PE185FN	+ Fitness Appreciation— Intermediate	0 3 1	PE185JR	+ Judo— Intermediate	0 3 1	PE185PM	+ Pistol Marksmanship— Beginning	0 3 1
See PE185FM.			See PE185JQ.			See PE185PD.		
PE185FP	+ Fitness Appreciation— Advanced	0 3 1	PE185JS	+ Judo— Advanced	0 3 1	PE185PN	+ Pistol Marksmanship— Intermediate	0 3 1
See PE185FM.			See PE185JQ.			See PE185PD.		
PE185FQ	+ Football— Beginning	0 3 1						
Fundamentals, rules, strategy, and team play.								
PE185FR	+ Football— Intermediate	0 3 1						
See PE185FQ.								
PE185FS	+ Football— Advanced	0 3 1						
See PE185FQ.								

PE185PO	+ Pistol Marksmanship— Advanced	0 3 1		PE185SD	+ Swim for Fitness— Beginning	0 3 1		PE185ST	+ Swimming— Intermediate	0 3 1
See PE185PD.				Open to students who have mastered the front and back crawl, sidestroke, breaststroke, and elementary backstroke. The student works to develop endurance and strength and to swim for aerobic fitness.				Follows the Red Cross intermediate swimming program. Students should master beginner skills before enrolling. Skills to be mastered by the end of this course include front crawl, back crawl, side stroke, breast stroke, surface dive, underwater swim, and standing front dive. Encourages swimming for fitness.		
PE185RA	+ Racquetball— Beginning	0 3 1		PE185SE	+ Swim for Fitness— Intermediate	0 3 1		PE185SU	+ Swimming— Advanced	0 3 1
Racquetball or paddleball is similar to handball or squash but requires less skill to master. The game is played on handball courts with a racket and a rubber ball about the size of a tennis ball.				See PE185SD.				Students should master intermediate skills before enrolling. Emphasis placed on swimming for fitness and improving basic skills. At the completion of this course, students should have the skills necessary to progress to senior lifesaving.		
PE185RB	+ Racquetball— Intermediate	0 3 1		PE185SF	+ Swim for Fitness— Advanced	0 3 1		PE185SW	+ Skiing Conditioning— Intermediate	0 3 1
See PE185RA.				See PE185SD.				See PE185SG.		
PE185RC	+ Racquetball— Advanced	0 3 1		PE185SG	+ Skiing Conditioning— Beginning	0 3 1		PE185SX	+ Skiing Conditioning— Advanced	0 3 1
See PE185RA.				Designed to prepare students for winter skiing. Includes the use of the universal gym machine, running, soccer skills, volleyball, and coordination exercises.				See PE185SG.		
PE185RD	+ Rifle Marksmanship— Beginning	0 3 1		PE185SH	+ Skiing— Beginning	0 3 1		PE185TA	+ Table Tennis— Beginning	0 3 1
See PE185PD.				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.				Beginning—fundamental skills including serve and practice strategy and application of rules and etiquette. Intermediate—perfection of table tennis skills and strategy in singles and doubles play. Advanced—continued practice in skills and strategy with emphasis on competitive play.		
PE185RE	+ Rifle Marksmanship— Intermediate	0 3 1		PE185SJ	+ Skiing— Intermediate	0 3 1		PE185TB	+ Table Tennis— Intermediate	0 3 1
See PE185PD.				See PE185SH.				See PE185TA.		
PE185RF	+ Rifle Marksmanship— Advanced	0 3 1		PE185SK	+ Skiing— Advanced	0 3 1		PE185TC	+ Table Tennis— Advanced	0 3 1
See PE185PD.				See PE185SH.				See PE185TA.		
PE185RG	+ Roller Skating— Beginning	0 3 1		PE185SL	+ Slimnastics— Beginning	0 3 1		PE185TF	+ Tennis— Beginning	0 3 1
Fundamental skills and techniques including forward skating, backward skating, and two-foot turns.				Calisthenics and jogging to achieve toning and total fitness. These exercises, when combined with a reduction in intake, result in loss of inches and pounds. Nutritional information also is included.				Beginning—fundamental skills including forehand, backhand, serve, strategy, applications 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.		
PE185RH	+ Roller Skating— Intermediate	0 3 1		PE185SM	+ Slimnastics— Intermediate	0 3 1		PE185TG	+ Tennis— Intermediate	0 3 1
See PE185RG.				See PE185SL.				See PE185TF.		
PE185RJ	+ Roller Skating— Advanced	0 3 1		PE185SN	+ Slimnastics— Advanced	0 3 1		PE185TH	+ Tennis— Advanced	0 3 1
See PE185RG.				See PE185SL.				See PE185TF.		
PE185RW	+ Running for Fitness— Beginning	0 3 1		PE185SP	+ Softball— Beginning	0 3 1		PE185TL	+ Track and Field— Beginning	0 3 1
Running and circuit training techniques designed to improve the overall physical condition of the body.				Fundamental skills and rules taught through participation in team play.				Fundamentals, rules, theories, and training in track and field events.		
PE185RX	+ Running for Fitness— Intermediate	0 3 1		PE185SQ	+ Softball— Intermediate	0 3 1		PE185TM	+ Track and Field— Intermediate	0 3 1
See PE185RW.				See PE185SL.				See PE185TL.		
PE185RY	+ Running for Fitness— Advanced	0 3 1		PE185SR	+ Softball— Advanced	0 3 1		PE185TN	+ Track and Field— Advanced	0 3 1
See PE185RW.				See PE185SL.				See PE185TL.		
PE185SA	+ Scuba Diving— Beginning	0 3 1		PE185SS	+ Swimming— Beginning	0 3 1				
Skills and techniques necessary for proper and safe performance of underwater swimming and diving. Acquaints the student with diving equipment and its proper use and care. Dangers involved in underwater swimming and diving and procedures to avoid these dangers.				Follows the Red Cross beginner and advanced beginner programs. Students should master floating, back and prone glides, survival floating, human stroke, front crawl, elementary backstroke, jumping and diving into deep water.						
PE185SB	+ Scuba Diving— Intermediate	0 3 1								
See PE185SA.										
PE185SC	+ Scuba Diving— Advanced	0 3 1								
See PE185SA.										

PE185TS	+ Trap Shooting—Beginning	0 3 1	PE190BN	+ Basketball—Men's Varsity	0 3 1	Ph201,202,203	+ General Physics	3 3 4
Safety procedures, rules, clay shooting, and advancement on qualifications.			PE190CL			Mechanics, sound, heat, light, electricity, magnetism and modern physics. Three lectures, one one-hour discussion session, one two-hour laboratory period with outside assignments. Ph201: F; 202: W; 203: Sp		
PE185TU	+ Trap Shooting—Intermediate	0 3 1	PE190TK			Prerequisite: Mth101 previously or concurrent with Ph201.		
See PE185TS.			PE190TQ			Ph211, 212		
PE185TV	+ Trap Shooting—Advanced	0 3 1	PE190WS			+ General Physics for Engineers and Scientists		
See PE185TS.			PE194			3 2 4		
PE185VJ	+ Volleyball—Beginning	0 3 1	PE194BY			An introduction to the fundamentals of physics for students in the engineering and natural sciences. Uses the rudiments of calculus. W, Sp		
Instruction and practice in skills, rules, and strategy through individual and team play.			PE194FW			Prerequisite: Mth200 and 201.		
PE185VK	+ Volleyball—Intermediate	0 3 1	PE194GR			PS199		
See PE185VJ.			PE194TR			Political Power and Political Action		
PE185VL	+ Volleyball—Advanced	0 3 1	PE195			3 0 3		
See PE185VJ.			PE294			A survey of political processes with specific emphasis on the government and politics of Oregon. Identifies strategies, laws, and concerns of groups attempting to affect the political process. Sp		
PE185WA	+ Water Safety Instruction	0 3 1	PE294BD			PS201		
Covers all phases of water safety, basic swimming strokes, related aquatic skills, diving, lifesaving skills, water safety, and teaching guidelines.			PE294BO			American Government		
PE185WD	+ Weight Training—Beginning	0 3 1	PE294FH			3 0 3		
Instruction in fundamental safety procedures, preconditioning for weight training, and progressive resistance for lifetime physical fitness. For students of all ages.			PE294VM			An examination of the American political system, the aims of the founding fathers as expressed in the Constitution, the growth of government, political philosophy, democratic ideology, capitalism, the mass media, and voter participation. Focuses on the politics of involvement—citizens and special interest—and looks at the issues of today including inflation, unemployment, poverty, job scarcity, and the rising cost of living. Discusses the problem—how the individual affects the system. F, Su, W		
PE185WE	+ Weight Training—Intermediate	0 3 1	PE295			PS202		
See PE185WD.			Ph201			+ American Government		
PE185WF	+ Weight Training—Advanced	0 3 1	Ph202			3 0 3		
See PE185WD.			Ph203			A survey of the American political process in terms of who governs. Examines Congress, the Presidency, the judiciary, the Pentagon, a military economy, the C.I.A. and foreign policy, the role of corporations, bureaucracies, and the growth of government. Focuses on the politics of health care, taxes, and the federal budget. Discusses democratic responsibility and the effect of institutions on our daily lives. W, Sp		
PE185WJ	+ Figure Control—Beginning	0 3 1	Ph201			Prerequisite: PS201 recommended but not required.		
Activities designed to improve human body form and function through the universal gym machine and calisthenics. Emphasis on cardiovascular fitness through aerobic exercise.			Ph202			PS203		
PE185WK	+ Figure Control—Intermediate	0 3 1	Ph203			+ State and Local Governments		
See PE185WJ.			Ph201			3 0 3		
PE185WL	+ Figure Control—Advanced	0 3 1	Ph202			Examines the roles of regional, state, and local governments. Special attention given to the nature of federalism. F, Sp, Su		
See PE185WJ.			Ph203			Either PS203 or PS205 will complete the American Government sequence following PS201 and PS202.		
PE185YA	+ Yoga—Beginning	0 3 1	Ph201			PS205		
Background, safety precautions, and values of Yoga. Stretching and limbering up exercises. Proper breathing techniques and exercise positions.			Ph202			+ International Relations		
PE185YB	+ Yoga—Intermediate	0 3 1	Ph203			3 0 3		
See PE185YA.			Ph201			An introduction to international politics, detente, foreign policy, multi-national corporations and imperialism, revolution and counterrevolution, the arms race, and mechanisms for conflict resolution. Examines current global crises and the future of world order. Either PS203 or PS205 will complete the American Government sequence following PS201 and PS202.		
PE185YC	+ Yoga—Advanced	0 3 1	Ph202					
See PE185YA.			Ph203					
PE190	+ Physical Education—Men	0 3 1	Ph201					
A variety of activities taught for physiological and recreational values.			Ph202					
PE190BI	+ Baseball—Varsity	0 3 1	Ph203					

Psy100 Introduction to Psychology 3 0 3
An introductory course with emphasis on the application of the 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, Su**

Psy101 Psychology of Human Relations 3 0 3
An introductory course to assist in understanding interpersonal relations on the job and in everyday activity. Includes self-actualization, marriage and family relationships, social interaction, job satisfaction, and relations with supervisors and subordinates. **F, W, Sp, Su**

Psy111 Processes in Living 3 0 3
Self-understanding through an exploration of values, attitudes, interests, beliefs, and abilities and how these personal factors influence learning, educational and vocational decision making, and interpersonal relationships. **F, W, Sp, Su**

Psy114 Career Development, Personal Perspective 3 0 3
A comprehensive developmental program that provides exploratory opportunities to integrate the personal, educational and occupational elements of career development. Encourages career planning and decision making based on realistic self-knowledge and self-assessment. **F, W, Sp, Su**

Psy201 + General Psychology 3 0 3
The 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, Su**

Psy202 + General Psychology 3 0 3
The second of three introductory psychology courses. Includes principles of learning, memory, cognitive man, and problem solving. **W, Sp, Su**
Prerequisite: Psy201.

Psy203 + General Psychology 3 0 3
The third of three introductory courses in psychology. Includes personality theory, psychopathology and psychotherapy, development and socialization, and social psychology. **F, Sp, Su**
Prerequisite: Psy201.

Psy206 Introduction to Social Psychology 3 0 3
Presents some of the problems, theories, and methods of social psychology. Includes interrelationships between the individual and his/her social environment, social influences upon motivation, perception and behavior, and the development and change of attitudes and opinions. Includes small groups, social stratification and mass phenomena. **Sp, Su**

Psy299 Growth and Development 3 0 3
An introductory course in human growth and development

from conception through death. In-depth study of birth through middle adulthood. **F, W, Sp**

R201 + Primitive and Far Eastern Religion 3 0 3
A study of religion, religious practices in pre-history, and the 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 0 3
The second course in sequence adds a survey of the thought, scriptures, and practices of Judaism, Christianity, and Islam. Discussions, papers, and film will stimulate a critical appreciative approach to these religions. **W**
Prerequisite: R201 and/or instructor's consent.

R203 + American Religions 3 0 3
A survey of the richness and diversity of American religious thought and practice. Emphasis on useful information for the believer and/or questioner. Discussion and individualized research projects aid students in interpreting religious practices. **Sp**

RL101, 102, 103 + First-Year French 4 0 4
An introduction to the grammar and vocabulary of the French language. Emphasizes learning common verbal expressions with a basic understanding of grammatical principles. **RL101: F; 102: W; 103: Sp**
Prerequisites: For RL102—RL101 or one year high school French or instructor's permission. For RL103—RL102 or one year high school French or instructor's permission.

RL107, 108, 109 + First-Year Spanish 4 0 4
An introduction to speaking, reading, writing, and oral comprehension of the Spanish language. **RL107: F; 108: W; 109: Sp**
Prerequisites: For RL108—RL107 or one year of high school Spanish. For RL109—RL108.

RL201, 202, 203 Second Year French 4 0 4
A continuation of the study and application of the grammar, vocabulary, and syntax of the French language. Emphasizes self-expression in the language. Includes some study of French literature and culture. **RL201: F; 202: W; 203: Sp**
Prerequisites: For RL201, one year of college French or two years of high school French. May be waived.

RL207, 208, 209 + Second Year Spanish 4 0 4
A continuation of the study and application of the grammar, vocabulary, and syntax of the Spanish language. Emphasizes self-expression. Includes some study of Spanish literature and culture. **RL207: F; 208: W; 209: Sp**
Prerequisite: For RL207, one year of college level Spanish, or two years of high school level Spanish. Prerequisites may be waived with instructor's permission.

Soc204 + General Sociology—Introduction 3 0 3
Basic issues and findings regarding the biological, symbolic, and social nature of man. Discusses foundations for social interaction including patterns of social structure, culture, socialization, primary relationships, social differentiation, organizations, deviance, and collective behavior. Includes principles of the scientific method and major sociological theorists. **F, W, Sp, Su**

Soc205 + General Sociology—Institutions 3 0 3
An analysis of social institutions with special emphasis on family, religion, education, economy, and politics. Also factors contributing to institutional stability and change. **F, W, Sp, Su**
Prerequisite: Soc204 or consent of instructor.

Soc206 + General Sociology 3 0 3
A sociological approach to major social problems in contemporary American society. Organizational theme emphasizes such concepts as aging, health care, law, leisure, minorities, pollution, poverty, technology, urbanization, work, and youth. **F, W, Sp, Su**
Prerequisite: Soc204 or consent of instructor.

Soc208 Social Change and Earth's Resources 3 0 3
An introduction to the direction and form social change will take in consequence 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.**

Soc221 Juvenile Delinquency 3 0 3
The nature, extent, causes, control, reactions, treatment, and rehabilitation of juvenile delinquency in contemporary American society from a sociological perspective. **W**

Soc222 Marriage Relationships 3 0 3
A sociological approach to the institution of marriage including preparation for marriage, mate selection, adjustment to marriage, marital problems to expect and solve, and the changing styles of family relationships. **F**

Soc291 Introduction to Data Collection and Interpretation 3 0 3
A basic survey of concepts, techniques, and approaches used in collecting information from a scientific perspective. Includes the varieties of procedures and strategies used in decision making and the reporting of information. Gives some emphasis to the analysis of data. **Sp**

Soc295 Seminar: Grant Writing 3 0 3
Explores the availability of private and public grants. How to expand basic skills in grant writing. **F, W, Sp, Su**

Soc296 Problem Solving II 3 0 3
Applies basic social science methodology to a local problem using Salem and outlying areas as the framework for problem identification. Problem formation and problem solution. **Su, Sp**

Sp111,112,113 + Fundamentals of Speech 3 0 3
 Extemporaneous speaking. Primary emphasis on content and organization plus the student's adjustment to a speaking situation, effective delivery, audience motivation and language of speech. Must be taken in sequence. **F, W, Sp**

Sp125 Interpersonal Communication 3 0 3
 An orientation to the dynamics of speech communication including verbal and non-verbal elements which influence effective speaking and listening. Includes theory through oral communication activities in face-to-face and small group activities. **F, W, Sp**

Sp220 Business and Professional Speaking 3 0 3
 Stresses improved speech efficiency, self-confidence, and skill in organization and delivery of the types of speeches given in business and social activities. Practical application of actual situations. **F, W**

Sp222 Persuasion 3 0 3
 Concepts, principles, and theories related to people. Studies speaker credibility, reference groups, and other major variables in the progress of persuasion. Individual projects provide opportunities to apply principles. **Sp**

SS101 Office Careers Survey 1 0 1
 An overview of the organization and climate of business and professional offices, including investigation of the 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, Sp**

SS110A Shorthand Refresher 2 0 2
 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**

SS110B Shorthand Refresher II 2 0 2
 A refresher course in Gregg shorthand for persons with a knowledge of theory and some ability to take dictation. Students progress at their own rate. Grades based on progress. **F, W, Sp, Su**

SS111 + Shorthand I 2 3 3
 A beginning course in Gregg diamond jubilee shorthand. A study of simplified principles to enable the student to take simple dictation and transcribe in longhand early in the course. Students with previous training may complete these requirements in a short period of time. Also includes proper recording habits, spelling, vocabulary, and punctuation. **F, Sp**
Prerequisite: Enrollment in SS121 or typing skill.

SS112 + Stenography II 2 3 3
 A continuation and review of shorthand theory plus transcription, including special forms, abbreviated forms,

punctuation, and expanded vocabulary. Emphasizes shorthand writing from dictation to build speed and skill, and transcribing from shorthand notes on a typewriter. **W**
Prerequisite: SS111 or equivalent.

SS113 + Stenography III 2 3 3
 Advanced vocabulary, phrase-building, and word building principles based on basic Gregg shorthand principles learned in SS111 and 112. **Sp**
Prerequisite: SS112 or equivalent or consent of instructor.

SS114 Briefhand I 2 3 3
 A simplified note-taking system. Beneficial for students for vocational application, for taking lecture notes, and for personal use. **F, W, Sp**

SS121 + Typing I 1 4 3
 Includes basic parts of the IBM selectric typewriter, typewriter keyboard touch system, and basic centering techniques. The student should attain a typing speed of at least 30 words per minute. Studies basic letter, table, memo, and manuscript format. Students with previous typing experience may complete this course in a minimum period of time or take the challenge examination. **F, W, Sp, Su**

SS121A Typing 1, Beginning A 0 2 1
 Presentation of alphabetic keys. Goal: 25 net words per minute for one minute with two errors = A. Identification and operation of major typewriter parts. **F, W, Sp, Su**

SS121B Typing I, Beginning B 0 2 1
 Presentation of number and symbol keys. Goal: 30 net words per minute for two minutes with three errors = A. Centering vertically and horizontally, typing tables, and memoranda. **F, W, Sp, Su**
Prerequisite: SS121A or consent of instructor.

SS121C Typing I, Beginning C 0 2 1
 Goal: 40 net words per minute for three minutes with five errors = A. Includes typing letters, envelopes, manuscripts, making corrections, and carbons. **F, W, Sp, Su**
Prerequisite: SS121B or consent of instructor.

SS122 + Typing II 1 4 3
 A continuation of typing SS121 with emphasis on increasing typing speed and accuracy to at least 40 words per minute for a grade of 'C'. Typing letters in several styles, paper sizes, printed forms, and tables. **F, W, Sp, Su**
Prerequisite: SS121 or equivalent plus entry speed of 30 words per minute.

SS122A Typing II, Intermediate A 0 2 1
 Presentation of three styles of tables and two letter styles and their variations. A = 40 net words per minute for three minutes with four errors allowed. **F, W, Sp, Su**
Prerequisite: SS121 or SS121C or consent of instructor.

SS122B Typing II, Intermediate B 0 2 1
 Presentation of book manuscripts, itineraries, and reports.

A = 40 net words per minute for three minutes with four errors allowed. **F, W, Sp, Su**
Prerequisite: SS122A or consent of instructor.

SS122C Typing II, Intermediate C 0 2 1
 Presentation of four new letter styles, three stationery styles, and typing on printed forms. A = 50 net words per minute for three minutes with three errors allowed. **F, W, Sp, Su**
Prerequisite: SS122B.

SS123 + Typing III 1 4 3
 Corrective and acceleration drills to develop a minimum typing speed of 50 words per minute. Emphasis on production of various papers used in a business office. **F, W, Sp**
Prerequisite: SS122 or equivalent or consent of instructor.

SS199A Office Update 1 0 1
 A series of one-hour training sessions on basic clerical topics and current trends in office tasks. Students may learn ways to improve job performances and to review office procedures. **F, W**
Prerequisite: Background of employment in office occupations or consent of instructor.

SS211 + Applied Stenography I 2 3 3
 Review of shorthand including advanced principles, phrases, and shortcuts. Further development of shorthand, typewriting, and English into effective skills with emphasis on vocabulary of different business areas. **F**
Prerequisite: SS113, SS123 or equivalent.

SS212 + Applied Stenography II 2 3 3
 See SS211. **W**
Prerequisite: SS211.

SS213 + Speedbuilding 2 3 3
 A continuation of shorthand development. Emphasis on dictation speedbuilding with improvement of shorthand vocabulary and transcription skills. **Sp**
Prerequisite: SS212 or equivalent, SS123 or consent of instructor.

TA111 Fundamentals of Acting 0 6 3
 Introduction to the principles of acting, development of body control, investigation of body skills, and use of improvisation in dramatic expression. **F**

TA112 Fundamentals of Acting 0 6 3
 The use of the voice in dramatic roles, its production, and control. An introduction to dialects and accents. **W**

TA113 Fundamentals of Acting 0 6 3
 Study of the problems in the analysis and presentation of characters in dramatic literature. **Sp**

TA249 Stagecraft 2 3 3
 Construction, painting, and shifting techniques for stage scenery and properties. Study of backstage procedures and stage management. **W**

TA250A,B,C Theater Workshop Variable
Principles of dramatic production demonstrated through practical production experiences or special laboratory projects. **F, W, Sp**

TA252 Makeup 1 2 1
Theory and practical applications of theatrical makeup. The use of makeup in various theatrical media, and the use of different types of makeup. **Offered as needed.**

Wr20A,B,C Basic Spelling Skills 1 0 1
Instruction in spelling improvement. Includes instruction in basic word attack skills, pronunciation, and spelling generalizations. **F, W, Sp**

Wr21A,B,C Intermediate Spelling Skills 1 0 1
Instruction in spelling improvement. Includes instruction in basic word attack skills, pronunciation, and spelling generalizations. **F, W, Sp**

Wr30A, B, C; Wr31A, B, C Vocabulary Building 1 0 1
Mini-courses (3 weeks=1 credit each) designed to help students improve their vocabulary, both general and technical, and develop a better sense of correct English usage. May be taken concurrently with any writing course or with any course involving the designated skills. **F, W, Sp**

Wr40 Writing Skills 3 0 3
Concentrates on basic grammar, sentence construction, and paragraph development in that order ending in the writing of a short essay. Combines lecture, discussion, and writing workshop. Credit not granted if students have received credit for Wr40A, Wr40B or Wr40C. **F, W, Sp**

Wr40A Writing Skills, Basic 1 0 1
A mini-course to familiarize students with basic elements of English grammar as a foundation for competent writing. Includes definitions of parts of speech and use in English sentences. Credit will not be granted if students have received credit for Wr40. **Offered as needed.**

Wr40B Writing Skills, Sentences 1 0 1
How to construct clear, coherent sentences. Includes analysis of typical English sentences, and writing effective and correct sentences based upon that analysis. Credit will not be granted if students have received credit for Wr40. **Offered as needed.**

Wr40C Writing Skills, Paragraphs 1 0 1
How to construct clear, complete, and coherent paragraphs. Analysis of English paragraphs and writing of expository paragraphs, definition, analysis, comparison/contrast, etc. Competence demonstrated in a short final essay. Credit will not be granted if students have received credit for Wr40. **Offered as needed.**

Wr121 + English Composition—Exposition 3 0 3
First term college level English composition course. Emphasizes clear, detailed expository prose, clear thinking, and intelligent reading. **F, W, Sp**

Prerequisite: Demonstrate mastery of the ability to:
1. Write complete, correct sentences.
2. Use punctuation correctly.
3. Follow the generally accepted conventions of standard English usage.
4. Spell correctly and know the meanings of the words commonly used in one's own writing.

Wr122 + English Composition, Logic and Style 3 0 3
Second term college level English composition course. Includes logical, effective argumentative prose, awareness of stylistic elements, and critical reading. **W, Sp**
Prerequisite: Wr121.

Wr123 + English Composition—Research Writing 3 0 3
Third term college level English composition course. Includes the acquisition and evaluation of evidence, integration of opinion, and process and forms for developing the research paper. **Sp**
Prerequisite: Wr122.

Wr227 + Technical Writing 3 0 3
Principles of composition and basic forms of writing reports. Emphasizes correct grammatical usage, types and makeup of reports, effective writing styles, gathering and planning of facts for a report, and general improvement of report writing ability. **W, Sp**
Prerequisite: Wr121, 122 or consent of humanities and social science department director.

Wr241, 242, 243 + Imaginative Writing 3 0 3
Workshop in the writing of fiction, drama, and poetry. Daily discussion of student writings. Includes some textual explorations with student and instructor presentations. Some assigned individual and group projects, but for most of the term students choose their own projects, turning in at least one new or revised piece or portion of work each week.
Wr241: F; 242: W; 243: Sp

WS101 Introduction to Women's Studies 3 0 3
A survey of women as a minority group, examining the role of women from a variety of social science perspectives. The position of women in the family, participation in the labor force, and the political psychology of women. A look at women cross-culturally and in history and literature. Classical and contemporary materials on women's role in society. **F**

WS102 Introduction to Women's Studies 3 0 3
The historical development of women from the 1920's through the 1960's with major emphasis on women cross-culturally—women in the developing third world countries as well as in modern industrial societies. Looks at where women are today. **W**
Prerequisite: WS101.

WS103 Introduction to Women's Studies 3 0 3
Women as social beings moving toward the year 2000 A.D.

Emphasis on the 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**

WS150 Psychology of Women 3 0 3
A study of women's behavior with focus on sex-role development, biological bases of behavior, and both interpersonal and intrapsychic bases of female behavior.

Zoo201, 202, 203 General Zoology 3 3 4
An introductory study of animal life dealing with the principles and theories and applications of animal biology. Includes comparative study of the morphology, anatomy, life history, physiology, development, and ecology of both vertebrates and invertebrates. Zoo202 emphasizes invertebrates, Zoo203 emphasizes vertebrates. **Zoo201: F; 202: W; 203: Sp**
Prerequisite: High school chemistry and biology or one quarter college biology.

OCCUPATIONAL PREPARATORY COURSES

1.101 Communication Skills I 3 0 3
Stresses improvement of communicative skills through reading, listening, writing and speaking, with emphasis on research and writing. Emphasizes practical phase of communication problems. Covers problems in reading, note-taking, gathering information, report writing, and conventional usages of mechanics and grammar. **F, W, Sp**

1.104 Communication Skills II 3 0 3
A continuation of Communication Skills I. Provides practical applications to develop effective habits of communication through speaking, participating in conferences, presentation of reports, gathering information, listening, observing, and evaluating sources. **W, Sp**

1.106 Technical Report Writing 3 0 3
The principles of writing reports. Covers the why of reports, types of reports, makeup, effectiveness of writing styles, gathering facts, planning reports, documentation, methods of writing, layout and typing, and visual aids. **W, Sp**
Prerequisite: 1.101 or consent of instructor.

1.110 Basic Reading Tactics 3 0 3
Basic reading skills. Emphasizes an orderly mastery of habits and skills with application of appropriate techniques and materials. **F, W, Sp**

1.112 Accelerated Reading I 3 0 3
Efficient methods of reading, including information and skills to improve reading through practice, training and application. For the average or the above average community college reader. **F, W, Sp**

1.113 Accelerated Reading II 3 0 3
Advanced methods of reading process and training in

critical and analytical thinking. Skill training and lab sessions to develop reading ability. Emphasizes reading rate, comprehension, and flexibility. **F, W, Sp**

1.115 Language Development for the Deaf and Hearing Impaired 3 0 3

For deaf students. Emphasizes expanding vocabulary, a better understanding of the language used in classes, and improving reading and writing skills. Teachers are skilled in American sign language and communicate with the students at their individual language levels. **F, W, Sp**

1.116 Manual Communication with the Deaf I 3 0 3

Development and practice of manual communication skills used by deaf people. Specific skill training by experienced teachers and deaf adults. Emphasizes fingerspelling and expressive and receptive manual communication skills. **F, W, Sp, Su**

1.121 Basic Writing Skills for Deaf and Hearing Impaired 3 0 3

A remedial course for improving writing skills of deaf and hearing impaired students. Involves lessons on sentence structure and paragraph, report and creative writing. **F**

1.122 Basic Reading Skills for Deaf and Hearing Impaired 3 0 3

Remedial reading 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 speed. **Offered as needed.**

1.123 Basic Communication Skills for Deaf and Hearing Impaired 3 0 3

Expressive and receptive communication skills. Stresses organizing written and oral reports, developing better listening skills, and learning to communicate effectively in group situations. **Offered as needed.**

1.125 Manual Communication with the Deaf II 3 0 3

Continuation of 1.116. Involves increasing manual communication vocabulary and introduction to physical aspects related to deafness. Reviews and reinforces expressive and receptive fingerspelling, and the basic sign vocabulary. Introduces an additional 400-word vocabulary. Emphasizes improvement of both receptive and expressive skills. **F, W, Sp, Su**

1.126 Manual Communication with the Deaf III 3 0 3

Continuation of 1.116 and 1.125. Increases manual communication vocabulary and introduces various aspects of the education of the deaf. Reinforces basic skills of fingerspelling and manual communication with an emphasis on developing skills in the simultaneous method of

communication. Introduces additional vocabulary and idiomatic signs. **F, W, Sp, Su**

1.127 Manual Communication with the Deaf IV 3 0 3

A continuation of vocabulary introduction. Emphasizes the comprehensive study of translating English with American sign language using both English and deaf idioms. **F, W, Sp, Su**

1.128 Beginning Interpreting for the Deaf 3 0 3

An introduction to the field of interpreting for students using manual communication. Includes basic theories, principles, and practices of interpreting for deaf people. An overview of the roles of an interpreter. **W**

1.129 Studies in Deafness 3 0 3

Survey of the historical and present aspects of deafness. Discusses notable deaf persons. Explores the role of deafness in today's world, to help students develop a sense of personal pride in their own deafness. Open to hearing students. **Sp**

1.130 Vocational Studies—Bilingual 2 1 2

Assists bilingual and limited English speaking students in the development of basic college study skills. An orientation to the practical realities of the work world by examining self-awareness and occupational choice, looking for jobs, factors affecting upward mobility. Integrates study skills with career/vocational aspects during the second half of the term. Includes lectures, guest speakers, and role playing by students. Bilingual student classroom tutors available. **F, W, Sp**

1.131 Effective Learning 1 0 1

Development of efficient management of learning techniques for the community college student. **F, W, Sp**

1.205 Literature for Technicians 3 0 3

An introduction to the essay, short story, novel, poem, and play through discussion and individual study. Non-fiction works coupled with the modern novel. Emphasizes vicariously experiencing events affecting characters in literature and relating these experiences to the modern technological world. **W**

1.206 Experience and Expression in Literature 3 0 3

The many images of the American in literature. Included are readings by American writers that explore socially alienated, disadvantaged, and socially elite aspects of America. How these images relate to personal experiences, observations, and insights of the reader. Deals with the real American vs. the ideal or mythical American. **F**

1.700, 1.701, 1.702 Conversational Spanish I, II, III 2 2 3

Practices and exercises in the basic vocabulary and structural patterns to help students understand and speak Spanish. **1.700: F, W, Sp; 1.701 and 1.702 offered as needed.**

2.105 Merchandising 3 2 4

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 courses of retailing and marketing. **Sp**
Prerequisite: BA223.

2.119 Insurance—Property and Casualty 3 0 3

An introduction to property, casualty, and liability insurance coverages and the general limitations of insurance. Successful completion of this course provides basic knowledge needed for 2.342, 2.120, and 2.121. **W**
Prerequisite: BA241 or consent of instructor.

2.120 Insurance—HA 22 4 0 4

Understanding coverages, policy provisions, and concepts common to property insurance. Includes standard fire policies, extended coverage endorsements, dwelling and contents forms, building and contents forms, crime policies, business interruption forms, bailees' customers policies, and property coverages provided by multiple-line contracts. **Offered as needed**
Prerequisite: 2.342 or consent of instructor.

2.121 Insurance—IIA 23 4 0 4

Coverages, policy provision, and concepts peculiar to casualty, surety and multiple-line contracts. Includes family automobile policies, workers' compensation and employers' liability policies, owners' and tenants' liability policies, comprehensive general liability policies, comprehensive personal liability coverages, life and health insurance coverages, and liability insurance aspects of multiple-line contracts. **Offered as needed**
Prerequisite: 2.342 or consent of instructor.

2.124 Property Loss Adjusting ADJ31 4 0 4

An introduction to the fundamental areas in property loss adjusting, indemnity, insurable interest, co-insurance, subrogation, proximate cause, requisites of insurable risks, deductibles, valued policies, probability. Emphasizes adjustment procedures, claim analyses, reporting areas, estimations of building losses, construction costs, and adjustments of personal property losses. **Offered as needed**
Prerequisite: 2.342 or consent of instructor.

2.222 Underwriting—Life and Health 3 0 3

A continuation of the underwriting and actuarial studies of life and health insurance begun in Policies and Forms II, with in-depth study of the basic practices and decisions made by an insurance company. Includes use of rate books, applications and company materials. **Offered as needed**
Prerequisite: 2.228 or consent of instructor.

2.223 Rating and Underwriting—Property and Casualty 3 0 3

A continuation of the underwriting and actuarial studies of property and casualty insurance begun in 2.342, with in-

depth study of the basic practices and decisions made by an insurance company, including rating using company rate materials. **Offered as needed**

Prerequisite: 2.342 or consent of instructor.

2.225 Group Insurance and Social Insurance 3 0 3

Analysis of group life and group health insurance, including products, marketing, underwriting, reinsurance, premiums, and reserves. Socio-economic problems related to old age, unemployment, and disability and various public plans that have been developed to meet these problems. **Offered as needed**

Prerequisite: 2.343, 2.222 or consent of instructor.

2.226 Regulations/Law (Oregon Insurance Code) 2 0 2

A study of the Oregon revised statutes pertaining to insurance in Oregon, with special emphasis on agents and adjuster practices, fair trade practices, and consumer protection. **Sp**

Prerequisite: One course in life and health and property and casualty.

2.228 Policies and Forms— Life and Health 3 0 3

A study of the various basic forms and amendments used in riders and life and health insurance, including all forms of life, health, and hospital coverages as well as variable life and variable annuity contracts. Includes underwriting and actuarial assumptions which relate to various contracts. **Offered as needed**

Prerequisite: 2.343.

2.230 Investments 3 0 3

An opportunity for students to consolidate and coordinate their previous experiences with the basic information and data investors need to survive the alternatives in the marketplace. Includes an explanation of investments as viewed by insurance companies and insurance as a part of the investor's portfolio. **Offered as needed**

Prerequisite: BA101 and BA211 or consent of instructor.

2.231 Risk Management Analysis 3 0 3

A study of the operations of various types of businesses to determine what hazards exist and how to treat them best. Includes a case study of a small business risk management as a term project. **Sp**

Prerequisite: 2.228 and 2.342

2.242 Life Insurance Law CLU 302 4 0 4

The legal aspects of contract formation, policy provisions, assignments, ownership rights, beneficiary designations, and disposition of life insurance proceeds. Covers probability, gross and net premiums, reserves, non-forfeiture values, surplus, and dividends. **W**

2.275 Electronic Management 2 0 2

A practical course for the service technician covering the areas of customer relations, business costs, inventories,

shop planning, and advertising methods. Discussions of the state licensing law. **W**

2.342 Insurance— IIA 21 4 0 4

Covers the general principles of insurance. Includes the concept of risk, its place in economics, methods of treating risk, and the essentials of an insurable risk. Introduction to insurance contracts and legal concepts which underlie them. **Offered as needed**

Prerequisite: BA241 or consent of instructor.

2.343 Insurance Principles— Life and Health 3 0 3

Studies of basic theory, policy structure, pricing structure, and applications of life and health insurance to prepare students for entry into the insurance industry or to educate students as consumers. Covers rate making, cost analysis, and uses of various life and health contracts. **Sp**

Prerequisite: BA241 or approval of instructor.

2.344 Insurance Occupational Survey Seminar 1 0 1

A seminar exploring specific insurance occupations. Practicing professionals in the field are guest speakers. Includes field trips. **F**

2.401 Real Estate— A Consumer Approach 3 0 3

What do you need to survive a real estate transaction? Deals with developing a basic understanding of real property and of transactions involving real property. Develops the concepts of real and personal property, ownership rights and responsibilities, conveyances of realty financing, leasing, and taxation of real property. Emphasizes application of concepts to the acquisition and disposal of real property rights. **F, W, Sp**

2.405 Applied Mathematics in Real Estate 3 0 3

Fundamental mathematics necessary for performing real estate transactions, computing taxation, real property assessments, percentage relationship and ratios of values, finance, leverage, appreciation, depreciation, and equity ownership. **W**

2.408 Real Estate Appraisal I 3 0 3

Theories, functions, and purposes of appraisal. Principles of valuation, including cost, market and income approach. Techniques for determining condemnation, insurance, loan, purchase, and sales values. **Sp**

Prerequisite: BA264 or consent of instructor.

2.409 Real Estate Appraisal II 3 0 3

A continuation of real estate appraisal emphasizing commercial appraisals, farm appraisals and industrial appraisals. **F**

Prerequisite: 2.408.

2.411 Real Estate Appraisal III 3 0 3

Continuation of real estate appraisal emphasizing real estate assessment and the ad valorem tax. Techniques for

county assessment, tax computation and ratios used in government computation. **W**

Prerequisite: 2.409.

2.415 Real Estate Investment Analysis I— Principles 3 0 3

Emphasizes traditional analysis commonly employed by most investors. Designed to assist students to become more knowledgeable and potentially more successful as investors. Features important real estate concepts as leverage, cash flow, real estate investment trusts, syndication, subordination, and annual constants. **F**

Prerequisite: BA264 or consent of instructor.

2.416 Real Estate Investment Analysis II— Taxation 3 0 3

An advanced and intensive study of tax principles governing real property. Emphasizes tax planning and integration of tax concepts with procedural aspects. **W**

Prerequisite: 2.415 or consent of instructor.

2.417 Real Estate Investment Analysis III— Sales and Exchange 3 0 3

Alternative methods of property disposal including contract sales and exchanging and the tax implications of each. **Sp**

Prerequisite: 2.416.

2.418 Elements of Design and Construction 2 3 3

Introduces design and construction terminology to real estate majors. Includes architectural styles and building designs, material and labor requirements, building codes, and cost estimating. As a term project, each student selects a house plan and adapts it to a given site. Includes estimates of materials and labor quantities and costs for representative types of construction and site preparation. Emphasizes the unit-in-place method of estimating. **W**

2.422 Property Management 2 0 2

An intensive study of real property management factors. Emphasizes investment analysis from the management standpoint—analysis of hotels, multiple units, shopping centers and businesses. **Offered as needed**

Prerequisite: BA263

2.423 Escrow Procedures I 3 0 3

The use of ordinary work sheets of the escrow agent to learn his function. Emphasizes significance of the third party to real estate transactions. Includes types of documents required to be held on deposit between the seller and buyer until the terms of the contract are completed. **F**

Prerequisite: Fourth-term standing and BA260 and BA262.

2.424 Escrow Procedures II 3 0 3

The obligations of the escrow department and title insurance company real estate transactions. Deals with defects of title and abstract of title as a chain of statements to indicate the value of title insurance. Emphasizes the ramifications of title insurance. **W**

Prerequisite: 2.423.

2.425 Subdividing and Community Planning 3 0 3

A practical study emphasizing the aspects of subdivisions, zoning ordinances, tax aspects, use, ownership, and transferability as encountered by developers and brokers. Includes comprehensive planning, steps necessary to file a subdivision, and current zoning laws. **Sp**
Prerequisite: 2.423.

2.426 Escrow Procedures III 3 0 3

The theory and practice of real estate exchanges and sales of businesses, including the 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 of this phase of the escrow business. Includes review of theory and practices of Escrow Procedures I and II. **Sp**
Prerequisite: 2.424.

2.428 Real Estate Seminar 3 0 3

Defines, explores, and analyzes contemporary real estate problems from various viewpoints within the real estate industry. Offered as needed
Prerequisite: Second-year standing in real estate.

2.429 Public Relations in Business 3 0 3

Problems of balancing organizational operations within the goals of the consuming public. The problems of customer apprehensiveness, indecision, unrest, and dissatisfaction of personnel relating to the consuming public. Research and class activities involving communication via letters, telephone, and face-to-face situations. **Sp**

2.437 Legal Descriptions, Platting and Map Reading 1 2 2

Locating properties, sites and points, and mastering the reading and writing of legal descriptions using metes and bounds, lot and block and governmental rectangular survey systems. Showing such descriptions graphically by drafting plats, plot plans, and maps. Study of land measurements, areas, and dimensions. Emphasizes functional skills rather than cartographic methods. **W**
Prerequisite: BA260 suggested.

2.515 Filing 3 0 3

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, W**

2.551 Intermediate Financial Accounting I 4 0 4

The comprehensive study of the 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. **F**
Prerequisite: BA213, concurrent enrollment in BA213 or consent of instructor.

2.552 Intermediate Financial Accounting II 4 0 4

The comprehensive study of plant assets, depreciation, depletion, intangible assets, long-term liabilities, stockholders equity, earnings per share, and long-term investments. **W**
Prerequisite: 2.551 or consent of instructor.

2.553 Intermediate Financial Accounting III 4 0 4

The 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. **Sp**
Prerequisite: 2.552 or consent of instructor.

2.555 Auditing 3 0 3

The comprehensive study of professional auditing and audit reports, internal control, audit work papers, evidence, original record examination, statistical sampling, cash, receivables, related revenues and credit losses, investments, and related revenues. Inventories and cost of sales, prepaid items and related expenses, fixed assets and related expenses, intangible assets, current liabilities and related costs and expenses, long-term liabilities, owners' equities, completing audits, post statement disclosure, and legal responsibilities of professional accountants. **Sp**
Prerequisite: 2.552 or consent of instructor.

2.559 Governmental Accounting 3 0 3

The 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. **Sp**
Prerequisite: BA212 or consent of instructor.

2.566 Medical Secretary Practicum 2 2 3

Techniques, methods, and procedures used in the medical office. Reception of patients, appointment making, filing and processing medical and health insurance records and forms. **W**
Prerequisite: 2.641 or consent of instructor.

2.569 Medical Machine Transcription 1 4 3

Typing from a transcribing machine to build speed, accuracy, and understanding of medical case histories, clinical reports, and medical correspondence. **F**
Prerequisite: 2.663 and typing speed of 40 words per minute.

2.570 Medical Machine Transcription II 3 0 3

A continuation of 2.569 in the study and production of medical communication materials. **W**
Prerequisite: 2.569 or consent of instructor.

2.580 The Receptionist 3 0 3

Provides an awareness of the significance of the role of the receptionist and his/her vital place within a company. Instruction and training opportunities to prepare students to be competent office receptionists. Recommended as a first-year course only. **F, Sp**

2.590 CPS Examination Review 2 0 2

A series of review sessions on secretarial work with emphasis on judgment, understanding, and administrative ability. Includes updating skills, knowledge, and techniques covered in the six portions of the qualifying examination for certification as a Professional Secretary. **Sp**
Prerequisite: Completion of minimum of 75 college credits of secretarial training, or three years secretarial office experience, or consent of instructor.

2.641 Office Procedures 2 2 3

An introduction to administrative support activities including 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**
Prerequisite: SS121 or consent of instructor.

2.642 Records Management 3 0 3

Principles of efficient control of business records including criteria for determining storage, disposition or retention. Includes guidelines for selection of equipment and supplies. Presents instruction in records management systems through lecture, reading, and practical application. **F, Sp**

2.648 Payroll Procedures 3 0 3

An examination of the 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 the procedure of computing the amounts of wages and salaries, paying these amounts, classifying payments charging the amounts to appropriate expense accounts. **Sp**

2.652 Bookkeeping 3 0 3

A study of basic accounting principles and procedures to provide a familiarity with financial records and accounting terminology used in business today. Training in processing techniques for handling information, special journals, controlling accounts and work sheets used in preparation of account statements. **W**

2.658 Introduction to Calculators 1 2 2

An introduction to the use of electronic display and electronic printing calculators in the solution of simple business and mathematical problems. **F, W, Sp, Su**

2.658A Introduction to Calculators 1 0 1

An introductory course in the use of electronic display and electronic printing calculators to solve mathematical problems. **F, W, Sp, Su**

2.658B Introduction to Calculators 1 0 1
A continuation of 2.658A to increase speed and accuracy on calculators, and to develop the ability to use calculators to solve mathematical problems in business offices. **F, W, Sp, Su**

2.661 Reprographics 3 0 3
A study of copy duplication methods used in business offices and small organizations. Emphasis on preparing layout, running equipment, and comparing methods and machines. **W, Sp**

2.662A Introduction to Machine Transcription 0 2 1
Introduction to the operation of a transcribing machine. Techniques of transcribing from recorded dictation. Stresses development of accuracy. **W, Sp**
Prerequisite: SS121A and SS121B.

2.662B Introduction to Machine Transcription 0 2 1
Transcription of letters, memos, and reports from recorded dictation. Stresses accuracy. Student progresses at individual rate. **W, Sp**

2.663 Machine Transcription I 1 4 3
For students with no previous experience in transcribing letters and memos from dictated belts. Covers parts and functions of the dictating machine and care of belts. Develops skill in listening, understanding, and typing what is heard on the belt with correct spelling, punctuation, grammar. Emphasizes transcribing mailable copy with speed and efficiency. **F, W, Sp**

2.667 Machine Transcription II 1 4 3
A continuation of 2.663, to increase students' transcribing efficiency from machine dictated materials. Stresses improved English skills and typing speed and accuracy to a usable, on-the-job level. **W, Sp**
Prerequisite: 2.663 or consent of instructor.

2.673 Business English Fundamentals 3 0 3
Emphasizes the expression of ideas in written form including a review of grammar and punctuation. Stresses business vocabulary and spelling. **F, W, Sp, Su**
Prerequisite: Wr40 or equivalent.

2.679 RPG for Operators 3 3 4
A study of the basic features of the RPG II language. Students write several RPG programs that print various reports and build and update a sequential disk file.
Prerequisite: BA131 or consent of instructor.

2.685 Personnel Principles and Supervision 3 0 3
A study of the principles of public relations, employee-employer relations, business customs, business ethics, the social side of business, importance of personality, relationships with others, evaluation, and the field of personnel supervision. **Sp**
Prerequisite: Second year standing or consent of instructor.

2.700 Briefhand I 2 3 3
A simplified note-taking system. Helpful to students at work, for taking lecture notes, and for personal use.

2.701 Briefhand II 2 3 3
A continuation of Briefhand I. Emphasizes speed development. Introduces some transcription techniques. **W, Sp**
Prerequisite: SS114 or consent of instructor.

2.702 Briefhand III 2 3 3
A continuation of Briefhand I and II. Special emphasis on transcription skills, review of theory, and speed building. **Sp**
Prerequisite: 2.701 or consent of instructor.

2.704 Machine Shorthand I 3 4 4
A beginning course in shorthand as taken on the stenograph machine. Includes the study of basic letter and word-forming principles and the taking of dictation in the latter part of the term. **F**
Prerequisite: SS121 and required score on reading and writing placement test.

2.705 Machine Shorthand II 2 3 3
A continuation of Machine Shorthand I. Stresses increased knowledge of word formation, theory, building dictation speed, and becoming familiar with transcription techniques. **W**
Prerequisite: 2.704.

2.706 Machine Shorthand III 2 3 3
Further refinement of the theory of machine shorthand as learned in 2.704 and 2.705 to increase speed. Includes study and practice in transcribing material taken from dictation. **Sp**
Prerequisite: 2.705.

2.709 Typing, Skill Building 1 4 3
Emphasizing improving typing skills (keyboard proficiency, typing speed, and accuracy). May be taken any time after a person has learned the keyboard. For students who wish to raise the levels of their skills high enough for advanced work in typing or who want to improve their skill. **W, Sp**
Prerequisite: SS121 or consent of instructor.

2.710 Secretarial Practicum 2 2 3
An advanced course in secretarial procedures, utilizing all previous training plus addition of other areas of specialization. Stresses decision making and quality production. **F**
Prerequisite: 2.641 and second-year standing or consent of instructor.

2.711 Legal Machine Transcription I 3 0 3
Practice in preparing and typing from machine dictation legal briefs, forms, transcripts, documents, and correspondence. **W**
Prerequisite: 2.713 and 2.663 or instructor approval.

2.712 Legal Machine Transcription II 3 0 3
A continuation of Legal Machine Transcription I with em-

phasis on increased skill in typing and handling of materials in production of legal documents. **Sp**
Prerequisite: 2.711.

2.713 Legal Terminology and Documents 3 0 3
An introductory study of legal terminology as it applies to the legal secretary and a survey of the documents commonly encountered by the legal secretary in the office of the private practitioner. **Sp**

2.714 Legal Office Procedures 2 2 3
Thorough coverage of duties of a legal secretary, 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. **F**
Prerequisite: 2.641, SS121, 2.713.

2.715 Introduction to Word Processing 2 2 3
Introduces various types of correspondence support activities, primarily the keyboarding of magnetic editing typewriters. Explains the organization of the typical word processing center as to correspondence support and administrative support functions. **F, W, Sp**
Prerequisite: SS121 and SS122 or consent of instructor.

2.716 Word Processing: CRT Operation and Text Editing 1 4 3
Individualized-instruction course in CRT (Cathode Ray Tube) automatic typewriter operation, combined with training in revising and formatting keyboards on both CRT and other text-editing typewriters. **F, W, Sp**
Prerequisite: 2.715 or consent of instructor.

2.720 Civil Exam Prep I 3 0 3
Review of subject areas included in the state civil service examination: English grammar, punctuation and spelling, fundamentals of mathematics including basic functions, fractions, percentages and business formulas, and practical applications. **F, W, Sp**

2.721 Civil Service Exam Prep II 3 0 3
Review of subject areas included in the state civil service examination. Also includes the usage of a reference manual, preparation of an application form, and a personal data sheet. **F, W, Sp**

3.200 Food and Nutrition 2 0 2
A practical study emphasizing the principles of basic food preparation, nutritional values of foods, and the retention of nutrients in cooking for commercial restaurants, fast foods operations, institutions, and industrial catering. **F**

3.201 Quantity Foods Production I 3 20 8
Preparation of quantity foods in a commercial kitchen under supervision. Includes preparation of various breakfast items, salads, entrees, stocks, soups, sauces, bakery, desserts, and short order cooking by standardized recipes following professional preparation techniques. Sta-

tions rotated approximately every two weeks to assure students the widest possible exposure to the commercial kitchen. Lectures on the handling of tools, equipment, and materials. **F**

3.202 Quantity Foods Production II 3 20 8
Preparation of quantity foods in an operating kitchen under professional guidance. Assigned projects in international cuisine and service. **W**
Prerequisite: 3.201.

3.203 Quantity Foods Production III 3 20 8
Preparation of quantity foods in an operating kitchen under professional guidance. Includes classical buffet and garde-manger cookery. **Sp**
Prerequisite: 3.202.

3.204 Dining Room Operations I 1 4 2
Experience in various types of restaurant services—cafeteria, snack bar, fountain, banquet, and table service. **F**

3.205 Dining Room Operations II 1 4 2
Continuation of 3.204. Includes American and English service techniques. **W**

3.206 Dining Room Operations III 1 4 2
Continuation of 3.205. Includes discussion and demonstration of French and Russian service. **Sp**

3.210 Sanitation and Safety 2 0 2
Food service 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**

3.211 Menu Planning and Culinary Terms 2 0 2
Principles of menu planning using the menu as a tool for marketing, merchandising, personnel scheduling and 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**

3.212 Purchasing and Store Control 2 1 3
Techniques of buying for large-scale food operations. Comparing food quality and establishing food specifications, using federal and state grade standards, receiving stock, storing, and issuing controls. **W**

3.213 Elementary Food Cost Analysis 2 0 2
Basic methods of computing food costs, including the costs of standard recipes, yield of raw food, standard portions, analysis of daily food costs, and the steward's report. **Sp**
Prerequisite: 3.216 or equivalent.

3.214 Food Production, Organization and Planning 2 0 2
Organization of commercial kitchens, quantity production work methods, the use and care of heavy duty kitchen equipment, planning and forecasting of food production, and the use of the cook's production worksheets. **Sp**

3.216 Mathematics for Food Service 3 0 3
Basic math used in food production, including adjusting menus for various servings, use of fractions, percents, weights, measures, and an introduction to the metric system. **F**

3.250 Survey of Food Service Industry 1 0 1
Orientation to the food service industry. Lectures on the history, organization, problems and opportunities in the industry, highlighted with talks by leaders in various branches. Emphasizes college district food service facilities. **F**

3.255 Advanced Menu Planning 3 0 3
Advanced study of the principles of menu making and nutrition. Includes factors affecting menu planning such as type of operation, season, clientele, equipment, personnel, and principles of nutrition. Consideration of menu pricing, and merchandising and control. **F**

3.256 Dining Room Supervision 1 5 3
The principles involved and the duties and responsibilities of scheduling and supervising staff, booking and supervising banquets and catered events, handling money and the cash register, preparing daily reports, opening and closing the dining room, and welcoming and serving guests. **F**

3.260 Organization and Management of Institutional Food Service 2 2 3
The application of management principles to institutional food services situations. Includes problems in financial and administrative control, legal and governmental regulations, safety and sanitation regulations, fire prevention, emergency procedures, repair and maintenance procedures and costs, and design and layout for food service facilities. **W**

3.261 Restaurant Management 2 2 3
Methods and techniques used by restaurants to accomplish effective and efficient operations. Includes methods and procedures in personnel selection, training, and motivation, labor relations, effective development of kitchen staff, location and layout design, trade ethics, state and local health regulations, special problems in hotel and restaurant sanitation, licensing regulations, and customer relations. **W**

3.262 Purchasing for Institutions 2 2 3
Food purchasing, storage, and inventory procedures, including purchasing policies, duties of the purchasing staff, organization of purchasing departments, and comparative buying of meats, staples, canned foods, and vegetables. Stresses the importance of food control, costs and sales analysis, portion control, and interpretation of daily reports. **Sp**

3.263 Inventory Control 2 2 3
Management of inventory including determination of requirements, pricing, source selection, and inventory policy, storage, and control. **Sp**

3.300 Internal Combustion Engines 3 9 6
Construction, working principles, and methods of servicing the internal combustion engine. Proper use of shop tools and equipment. Engines are disassembled, studied, serviced, and properly reassembled, using accepted rebuilding and servicing procedures. **F**

3.301 Fuel Systems and Carburetion I 2 3 3
Fundamental principles of carburetion and the basics of fuel systems. Detailed instruction on the basic carburetor circuits. **Sp**

3.302 Automotive Materials 2 0 2
Materials and material production commonly associated with the automobile. Includes uses and applications of materials. **Sp**

3.303 Automotive Shop Safety 1 0 1
A survey of principles of safety for the auto industry. Includes the use of films and case studies to develop an awareness of hazards and positive attitudes toward the prevention of accidents. **F**

3.304 Automotive Electrical Systems I 3 4 4
Basic electricity terminology, fundamentals, and principles of operation applied to the circuitry of the automobile. **Sp**

3.305 Power Trains 3 6 5
Operation removal, repair, and replacement of essential power train components of the automobile. Includes proper methods of determining which parts should be replaced, when and how to order them. **W**

3.306 Applied Fluid Mechanics 2 3 3
Principles of automotive fluid power systems. Includes basic components of fluid power systems, how they are combined to build up circuits and the repair of these circuits. Covers the basic design and use of hydraulic and pneumatic power systems as related to automobiles. **F**

3.307 Automotive Chassis 2 3 3
Basic frame and chassis related components of the automobile including how suspension systems work and methods of repair and adjustment. Includes steering gears, brakes, brake systems, and related studies. Applies methods of adjustment and repair using lab vehicles and components. **W**

3.308 Automotive Machine Shop 2 3 3
Operations in an automotive machine shop including cylinder head and block resurfacing, valve grinding, piston knurling, valve guide knurling, cylinder boring, piston fitting, honing, methods of precision measurement, piston pin and rod replacement, and other aspects of precision

machining for automotive technology. Sp			
Prerequisite: 3.300 or consent of trades department director.			
3.309 Technical Diagram Interpretation	1 3 2		
Fundamentals in sketching objects related directly or indirectly to automotive field. Involves pictorial representation, sectional views, and dimensioning. Includes methods of diagramming including symbols, how to read diagrams related to auto wiring, and how to draw and use diagrams. W			
3.316 Fuel Systems and Carburetion II	3 4 4		
Lectures and demonstrations dealing with two-barrel, four-barrel, and multiple carburetion systems, the diagnosis of problems in systems, technical coverage of operating principles of major types of carburetors, theory and principles of carburetor accessory devices. Also manifolding heat risers, etc. Students use actual units in the laboratory. F			
Prerequisite: 3.301 or consent of trades department director.			
3.317 Automotive Electrical Systems II	3 4 4		
A lecture-demonstration course covering in detail complete testing, diagnosis, and theory of operation of the ignition, charging, cranking, and lighting systems. Students work on actual components. Requires laboratory reports on each job. W			
Prerequisite: 3.304 or consent of trades department director.			
3.319 Automotive Auxiliary Systems	3 2 4		
Operation, testing, and repair of malfunctions in auxiliary systems including power tops, windows, seats, overdrives, vacuum controls (head lamps, doors, power brake units, door locks, etc.), power steering, and other automotive assist units. W			
3.320 Automotive Service Operations	2 0 2		
An outline of the duties and responsibilities of parts and service managers. Methods of organizing service personnel and shop facilities and an introduction to shop layout. Operation of parts rooms and the problems common to both parts and service departments. W			
3.325 Automatic Transmissions	2 4 3		
Fundamentals of automatic transmission operation including hydraulic principles, power flows, and methods of gear change used in automatic transmissions. Includes different makes and models of transmissions as well as applications. F			
3.326 New Automotive Developments	3 0 3		
Updated information on changes in the field. Primary concern is emission control devices used on major brand autos. Also changes dealing with safety, economy, and operation of vehicles such as transistor regulators and integral alternator regulators. Sp			
3.327 Automotive Repair I	1 9 4		
Work experience on prescribed automobile repair jobs. Job reports. Sp			
Prerequisite: Third term standing or approval of trades department director.			
3.328 Automotive Repair II	1 9 4		
A continuation of 3.327, with other jobs on the automobile. Provides experience and develops speed in the mechanical field. Sp			
Prerequisite: Fourth term standing or approval of trades department director.			
3.329 Automotive Repair III	1 9 4		
Specialization in particular areas of interest. Emphasizes automatic transmissions, engines, and general areas for students not wishing to specialize. Speed and skill are important. W			
Prerequisite: Fifth term standing or consent of trades department director.			
3.330 Tune-up and Diagnosis	3 9 6		
Tune-up and diagnosis procedures of the gasoline internal combustion engine including use of diagnostic equipment on vehicles during laboratory practice. Repairing electrical and fuel systems related to tune-up and diagnosis of these systems along with proper repair procedures. Keyed to actual experience on components and vehicles during lab periods. Sp			
Prerequisite: 3.316 and 3.317 or consent of trades department director.			
3.335 Automotive Parts I	2 8 6		
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, and price sheets. Identification of serviceable parts and filling of parts orders. F			
Prerequisite: Fourth-term standing or equivalent, or consent of trades department director.			
3.338 Automotive Parts II	2 4 4		
Instructions on automotive parts catalog and catalog indexing systems, inventory systems, and parts classification. Use of telephone, merchandise displays, and contacts with parts customers. Observations of automotive parts systems and methods of wholesale and retailing automotive parts at area dealerships and parts outlets. W			
Prerequisite: 3.335			
3.600 General Forestry	3 0 3		
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 our country, the distribution and character of our 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			
3.601 Forestry Seminar	1 0 1		
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. W			
3.603 Equipment, Machines, and Instruments	2 0 2		
Use and maintenance of tools, equipment, machines, and instruments used by forest products technicians. F			
3.605 Tools and Equipment	1 2 2		
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 studied include files, axes, pulaskis, hazel hoes, shovels, peevies, wedges, mauls, and crosscut and chain saws. Includes practical work for cooperating individuals or agencies. Discussion and practice of foremanship. Sp			
3.610 Tree Identification	1 2 2		
A review of basic botany necessary for tree identification including taxonomy, flower and plant parts with emphasis on fruit, bark, and twig characteristics. Deals with the common commercial coniferous species of the Pacific Northwest with emphasis on native Oregon species. Practices use of the dichotomous key, studies scientific names and the economic importance of each tree. W			
3.611 Tree Identification	1 2 2		
Identification of native hardwoods of Oregon. Includes common forest shrubs. Covers use of the dichotomous genus key and of terms. Field recognition labs using scientific names. F, Sp			
3.612 Commercial Trees	2 0 2		
Identification of commercial softwoods and hardwoods of the Pacific Northwest. Practice in use of dichotomous key. Study of scientific names and the economic importance of each species. Sp			
3.613 Lumber Grading	2 0 2		
Techniques for lumber grading. Includes the purpose, rules, and provision of grading, and recognition and identification of natural and manufacturing characteristics of lumber. Practice in grading, clears, framing, and special purpose grades. W			
3.614 Wood Products Marketing	2 2 3		
An introduction to all aspects of wood products marketing from producer to consumer including the relationships of quality control, traffic, wholesaling, retailing, financing, ordering, and merchandizing. Sp			
Prerequisite: Ec100, 4.286, 6.281.			
3.617 Scaling Practices	2 6 4		
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. W			
Prerequisite: 3.610.			

3.624 Forest Photogrammetry 2 2 3
Techniques and principles of forest photo interpretation, including forest-type mapping, volume estimating, horizontal measurement of distance, angle and area, vertical measurements, tree heights, and difference of elevation of two ground points. **Sp**
Prerequisite: Third term standing or consent of trades department director.

3.626 Forest Sciences 3 0 3
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**

3.630 Silviculture 3 0 3
A study of basics of forest soils, silvics, and silviculture treatment of forest stands as they apply to the Pacific Northwest, especially the major forest types of Oregon. **W**
Prerequisite: 3.600, 3.610, 3.611, 5.151, 3.626, and 6.300.

4.100 Electronic Drafting 0 8 3
Electrical drafting for drafting majors. Includes schematic and wiring diagrams, block and flow diagrams, PC board layout, charts, and graphs. **F**
Prerequisite: Second-year standing in drafting or consent of instructor.

4.101 Drafting I 0 4 2
Fundamentals of drafting. Includes basic drawing techniques. Emphasizes application of drafting instruments, standard orthographic projection, layout procedures, and ASA approved lettering techniques. Covers such drawing techniques as geometric construction, selection of views, sectional auxiliary views, and standard dimensioning practices. **F, W, Sp, Su**

4.102 Introduction to Specifications 3 0 3
A survey of development, composition, legal aspects, and writing of construction contract documents. Includes writing exercises, inspection of contract documents, simulations, and field visitations. **Sp**

4.103 Electrical Drafting 0 4 2
Fundamental electronic and electrical drafting for non-drafting majors. Includes standard symbols, schematic drawings, block diagrams, industrial wiring diagrams, PC board layout, and the graphics of typical electrical data. **W**
Prerequisite: 4.124 or 4.101 or consent of the instructor.

4.111 Structural Drafting 0 8 3
Use of structural design data for production of structural working drawings. Includes drafting and coordinating plans and details for a specific structure emphasizing layouts, procedures, and terms standard to the construction industry. **F**
Prerequisite: Second-year standing in drafting or consent of instructor.

4.115 Descriptive Geometry 1 5 3
Graphic solutions to mathematical and space relationship

problems for design/drafting majors. Includes auxiliary views, point line plane problems, and revolutions. Introduces the geometric solution of vectors. **Sp**

4.118 Sketching 0 3 1
The development of basic freehand technical sketching skills and techniques as used in drafting and practical pictorial communication. **F, W, Sp, Su**

4.120 Print Reading 0 4 2
How to read and interpret various construction prints, shop drawings, and as-built drawings. Students practice each type of drawing to gain familiarity. **F**
Prerequisite: 4.101 or consent of technology department director.

4.122 Industrial Materials 2 3 3
An introduction to fabrication and engineering materials used in industry. Emphasizes non-ferrous and non-metallic materials including ceramics, plastics, light metals, and "space age" metals. Laboratory time provides investigation of physical and electrical properties and methods to determine these properties. **F, W, Sp**

4.123 *Project Development 0 8 3
The development of plot plans, working drawings, and plotting field data. Includes laying out (staking) structures on plots of ground. **F, W**
Prerequisite: 4.101 and 4.120.

4.124 Basic Drafting for Electronics 0 4 2
Basic drafting techniques and standards. Includes use of materials and equipment, freehand lettering, orthographic projections, dimensioning practices, and the graphic and symbolic language of drafting. Stresses line work, lettering, and the appearance of finished drawings. **F, W**

4.126 Drafting Room Computation 0 2 1
The computation and presentation of technical data. Emphasizes the application of the engineering type calculators. Includes typical problems from mechanical, civil, tool design, and other related areas. **W, Sp, Su**
Prerequisite: 6.261 and 4.221 or consent of instructor.

4.131 Mapping and Platting 1 7 3
An introduction to basic components of maps, subdivisions, and plats with particular emphasis on drafting skills and techniques. **Sp**
Prerequisite: Third term standing or consent of instructor.

4.135 Project Graphics 0 4 2
Plot plans, working drawings, and plotting field data used in forestry and civil engineering. **Sp, Su**
Prerequisite: 4.101 or consent of instructor.

4.150 Welding 1 3 2
An introductory survey of welding technology. Correlates technical information with actual practice to provide an understanding of the composition of various metals and methods of fabrication used in construction, maintenance, and repair. Includes set-up and operation of oxyacetylene

and arc welding equipment, demonstrations, and practice in welding and brazing and soldering ferrous and non-ferrous metals and their alloys. **F, W**

4.152 Oxyacetylene For Drillers 1 4 2
The use and care of oxyacetylene welding and cutting equipment with special applications for well drillers in maintenance and repair of equipment and tools. **W**
Prerequisite: Current enrollment in the well drilling program or consent of trades department director.

4.153 Welding 1 3 2
Fundamentals and application of arc welding, oxyacetylene welding, brazing and cutting pertaining to the automotive industry. **F**

4.154 Intermediate Arc Welding for Drillers 2 6 4
A continuation of basic arc welding covering ferrous and non-ferrous alloys and welding procedures. **W**

4.155 Fabrication Practices I 2 3 3
Practices in the fabrication of metals and metal finishing including change of shape, change of physical characteristics, and joining of metals. **W**

4.156 Fabrication Practices II 2 3 3
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. **Sp**
Prerequisite: 4.155 or consent of trades department director.

4.157 Fabrication Practices III 1 4 3
A continuation of Fabrication Practices, with emphasis on fabrication and structural and ornamental iron machinery frames and bases. **W**
Prerequisite: 4.156 or consent of trades department director.

4.158 Fabrication Practices IV 2 6 4
Instruction and experience in production type welding with the use of jigs, fixtures, and positioners. **Sp**
Prerequisite: 4.157 or consent of trades department director.

4.159 Blueprint Reading for Construction 2 3 3
The relationship of various drawings in a set of plans to basic drawing principles. Recognition of detail in job prints related to the construction industries, prints of construction jobs, large scale detailing of portions of construction and material take off, fabrication, construction, and assembly. Uses commercial building and bridge or dam construction prints.

4.160 Electric Arc Welding 2 6 4
Fundamentals of electric arc welding. Includes machine setting and electrode manipulation. **F**

4.161 Basic Oxyacetylene Welding 2 6 4
Fundamentals of oxyacetylene welding introducing brazing and cutting processes. **F, W**

4.162 Electric Arc Welding II 2 9 5
A continuation of 4.160. Provides the necessary class and laboratory time to allow students to become proficient in all position welding, electrode selection, and machine setting. **F**

4.165 Production Mig Welding 1 6 3
Students set up and weld under production situations. Instruction in the proper selection of the MIG process to use in different production instances. **Sp**
Prerequisite: 4.252 or consent of trades department director.

4.166 Advanced Arc Welding 1 6 3
A laboratory course to train certified welders. Extensive practice on simulated tests required for certification in plate and pipe welding followed by the test and certification by the state if the student qualifies. Includes a study of welding procedures previously covered as they apply to heavy gauge welding. **Sp**
Prerequisite: Third term standing and successful completion of basic and 4.154. Certification test fee is determined by the number of students involved and the type of test. The fee must be paid at least one week prior to the test date.

4.167 Welding for Certification 1 9 4
A continued laboratory course to train certified welders. Extensive practice on simulated tests required for certification in plate and pipe welding followed by the test and certification by the state if the student qualifies. Includes a study of welding procedures, previously covered, as they apply to heavy gauge welding. **Sp**
Prerequisite: Successful completion of basic and intermediate welding courses. Certification test fee is determined by the number of students involved and the type of test. The fee must be paid at least one week prior to the test date.

4.168 Fabrication Shop Problems 1 4 3
Applies drafting and math courses to problems in fabrication and structural members, bins, hoppers, pipe fittings, chutes, etc. Includes principles and practices of pattern development for typical shapes and fittings. **F**
Prerequisite: 4.101, 4.202, and 4.244 or consent of trades department director.

4.169 Fabrication Problems 0 8 3
A continuation of 4.168 with emphasis on quality control. **W**
Prerequisite: 4.168 or consent of trades department director.

4.170 Industrial Materials and Processes 2 4 3
An introduction to the materials used by modern industry to manufacture industrial products. Covers ferrous and non-ferrous metals and alloys and a number of newly developed "exotic" metals. Emphasizes non-metallic materials used in industry. Includes processes and methods of utilizing these industrial materials. **Sp**

Prerequisite: 4.802 or consent of trades department director.

4.171 Mechanical Systems 3 3 4
An introduction to the transfer of power methods used by industry and industrial products with relation to the basic laws of physics. Emphasizes general types of mechanical equipment used, purpose of the components, and maintenance requirements of equipment. **F**
Prerequisite: 4.302, 4.202 or consent of trades department director.

4.172 Power Systems 3 4 4
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 to these units. Laboratory and classroom experience in the theory of operation and the component parts of these engines. **F**
Prerequisite: 4.302 or consent of trades department director.

4.173 Hydraulic and Pneumatic Systems 2 3 3
Fundamental principles of hydraulic and pneumatic systems. Includes study of the basic components of hydraulic and pneumatic systems, how they are combined to build up various circuits, ultimate use of these circuits, factors to be considered in the selection and installation and maintenance of hydraulic and pneumatic systems. **W**
Prerequisite: 4.202 or consent of trades department director.

4.174 Metal Fabrication and Finishing 2 6 4
The production sequence of a completed part or machine from fabrication and assembly to heat treating and final finishing. **W**
Prerequisite: 4.101 and fifth-term standing in machine shop program.

4.175 Industrial Control Systems 2 3 3
The operation and function of control devices and systems. The lab applications allow students to become familiar with control devices and systems by actual work in the areas of hydraulic, pneumatic, and electronic controls. **W**
Prerequisite: Second-year standing in mechanical design or consent of instructor.

4.176 Hydraulic and Pneumatic Systems II 2 3 3
A continuation of 4.173 with emphasis on applications of circuits with electrical controls. **W**
Prerequisite: 4.173 or consent of trades department director.

4.177 Foundry and Metal Forming Applications 2 3 3
Foundry, forging, and related metal forming methods. Stresses applied design, modern production methods, and new processes and materials. Lab includes local and

regional industrial field trips and group discussions of these visitations. **Sp**

4.178 Industrial Control Systems Design Lab 0 8 3
The general design of industrial controls including hydraulic, pneumatic, and electronic systems and the use of truth tables and logic diagrams. **Sp**
Prerequisite: 4.175 or consent of instructor.

4.190 Industrial Accident Prevention 3 0 3
An extensive study of accident causes and costs to employer and employee. A combination of 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. **Sp**

4.200 Basic Mathematics 2 2 3
A basic course in practical mathematics including the fundamentals of addition, subtraction, multiplication, and division in problems involving the use of whole numbers, fractions, decimals, percentages, and geometric measurements. Emphasizes analysis and solution of problems encountered in vocational fields. **F, W, Sp, Su**
Prerequisite: Proficiency with whole number operations.

4.201 Business Mathematics 3 0 3
A continuation and practical application of the business mathematics principles studied in 4.200, including mathematics of payroll, depreciation, insurance, taxes, dividends, and inventory. **F, W, Sp, Su**
Prerequisite: 4.200 or consent of instructor.

4.202 Introduction to Algebra and Geometry 2 2 3
Basic algebra and geometry introducing practical algebraic and geometric techniques and applications. Includes signed numbers, elements of algebra, equations and formulas, ratio and proportion, geometric figures, basic geometric measures, and occupational applications of these topics. **F, W, Sp**
Prerequisite: 4.200 or consent of instructor.

4.204 Introduction to Trigonometry with Geometry 2 2 3
Introduces further geometric techniques and basic trigonometry. Covers the Pythagorean theorem, similar triangles, right triangle trigonometry, some oblique triangle trigonometry, and occupational applications of these topics. **W, Sp**
Prerequisite: 4.202.

4.220 Tool Design Lab II 0 8 3
A continuation of 4.231 including advanced problems from the area of jig and fixture design and detailing. Stresses application of tooling materials and components. Introduces die design. Includes numerical control of machine tools. **Sp**
Prerequisite: 4.231 or consent of the instructor.

- 4.221 Machine Drafting** 1 7 4
An introduction to machine drafting, lettering, use of drafting machines and instruments, and line quality. Includes shape, description, and elements of modern dimensioning through applications of problems in orthographic projections. Covers geometric construction methods with practical applications. **F, W, Sp, Su**
- 4.222 Machine Drafting** 1 7 4
A continuation of 4.221. Includes application of precision dimensioning, geometric tolerancing, auxiliary, and sectional views. **W, Sp, Su**
Prerequisite: 4.221 or approval of instructor.
- 4.223 Machine Drafting** 1 6 3
A continuation of 4.222. Includes assembly and production drawings, *isometric drawing*, and *related pictorial drawings*. **Sp**
Prerequisite: 4.222 or approval of instructor.
- 4.224 Piping & Flow Systems Drafting** 0 8 3
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. **Sp**
Prerequisite: 4.222 and 6.262 or consent of instructor.
- 4.226 Architectural Drafting** 0 8 3
Basic architectural drafting techniques and methods. Covers architectural lettering, layout, arrangement symbols, and conventional construction methods used in residential or light commercial buildings. **W, Su**
- 4.227 Architectural Drafting** 0 8 3
The development of basic architectural drafting techniques, symbols, and methods. Includes advance planning, *detailing*, *design*, and *application* of related resource materials. Laboratory time is devoted to working drawing detailing of projects completed in 4.226. **Sp, Su**
Prerequisite: 4.226.
- 4.228 Technical Illustration** 0 8 3
Methods of pictorial drawing, exploded view drawings with pencil and ink shading, freehand and template drawings. Introduces various color media and rendering techniques. **W, Su**
Prerequisite: Second-year standing in drafting or consent of instructor.
- 4.229 Technical Illustration** 0 8 3
A continuation of 4.228. The illustration of more complex pictorial presentations, exploded views and charting methods. Use of a variety of media and techniques. **Sp, Su**
Prerequisite: 4.228.
- 4.230 Pattern Development** 0 8 3
Covers the development of patterns for sheetmetal and similar applications. Uses descriptive geometry in the development of typical patterns by parallel line, radial line, triangulation, and simplified triangulation methods. **F, Su**
Prerequisite: 4.222, 4.115 or consent of the instructor.
- 4.231 Tool Design Lab** 0 8 3
An introductory course in modern principles of tool design including gaging, locating, clamping, drill jigs, and fixtures. Stresses *limit dimensioning and tolerancing*. **W, Su**
Prerequisite: 4.222 and 4.802 or consent of instructor.
- 4.232 Machine Design Lab I** 0 8 3
Practical design situations as they relate 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. **W**
Prerequisite: 4.222 and 4.115 or consent of instructor.
- 4.233 Machine Design Lab II** 0 8 3
A continuation of 4.232. Uses a team approach to more complex design problems. Stresses the application of standard manufactured parts and components to an over-all design situation and introduces mechanical power and control systems. **Sp**
Prerequisite: 4.232 or consent of instructor.
- 4.234 Architectural Design** 0 8 3
A *problem solving course* dealing with the production of architectural design solutions to meet assigned program requirements. **F, Su**
Prerequisite: 4.226 and 4.227 or approval of instructor.
- 4.235 Photogrammetry I** 0 8 3
An introduction to mapping procedures using aerial photo interpretation skills. Includes map construction using standard methods, equipment, and symbols. **W**
Prerequisite: 4.131 or consent of instructor.
- 4.236 Civil Engineering Drafting** 0 8 3
An introduction to typical drafting room problems of consulting engineering firms. Studies typical drawings from plan-profile sheets, construction details, piping details and standards in relationship to an overall set of plans. Preparation of selected civil engineering drawings as assigned. **F, W, Su**
Prerequisite: Second-year standing or consent of instructor.
- 4.237 Photogrammetry II** 0 8 3
A continuation of aerial photo interpretation methods. Develops topographic map construction skills using anaglyphic mapping equipment. **Sp**
Prerequisite: 4.235 or consent of instructor.
- 4.238 Advanced TIG Welding** 1 3 2
A continuation of 4.251. Includes extensive welding on mild steel plate in all positions. **F**
Prerequisite: 4.251 or consent of trades department director.
- 4.240 Basic Arc Welding** 2 9 5
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. **F**
- 4.241 Intermediate Arc Welding** 2 12 6
A continuation of 4.240 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 metals. **W**
Prerequisite: 4.240 or 4.150 or consent of trades department director.
- 4.242 Oxygen-Acetylene Cutting** 0 2 1
The use and care of oxyacetylene cutting equipment. **F**
Prerequisite: Current enrollment in the one-year welding curriculum or consent of trades department director.
- 4.243 Fabrication Procedures** 1 4 3
Instruction in methods and application in layout and template design for structural shapes and pipe. **F**
Prerequisite: 4.244 or consent of trades department director.
- 4.244 Blueprint Reading and Sketching** 1 3 2
Basic sketching techniques and reading of three-view drawings for welders. Includes dimensioning practices, scaling, line alphabet notes, and symbols. Emphasizes developing an ability to read detail and weldment drawings. **F**
- 4.245 Layout Practices** 2 3 3
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*. **W**
- 4.247 Welding Metallurgy I** 2 0 2
The fundamentals of metallurgy pertaining to welders. Covers identification of ferrous metals, distortion, stress relieving, flame straightening and hardening plus various metallurgical problems. **W**
Prerequisite: Successful completion of term one of the one-year welding curriculum or consent of trades department director.
- 4.248 Welding Metallurgy II** 2 0 2
A continuation of 4.247 covering the common non-ferrous metals and chromium alloys. **Sp**
- 4.249 Weld Shop Problems** 2 12 6
A review and application of the 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 to present typical layout, fabrication, and production problems. **Sp**
Prerequisite: Third-term standing in welding program.
- 4.250 Basic MIG Welding** 1 4 2
Basic skills in semiautomatic MIG welding processes. Study of the principles involved in the 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. **W, Sp**

Prerequisite: 4.240 and 4.161 or consent of trades department director.

4.251 Basic TIG Welding 1 3 2

A practical course in the fundamentals of TIG welding processes, machine setting and application and development of inert gas welding skills. Includes welding of mild steel, aluminum, aluminum alloys, stainless steel metals and magnesium. **W, Sp**

Prerequisite: 4.240 and 4.161 or consent of trades department director.

4.252 Advanced MIG Welding 1 6 3

A continuation of 4.250. Includes mild steel, basic arc welding of 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 metals. **W, Sp**

Prerequisite: 4.240 or 4.150 or consent of trades department director.

4.253 Shop Safety 1 0 1

A survey of principles of safety for industry. Includes the use of films and case studies to develop an awareness of hazards and positive attitudes toward prevention of accidents. **F, W**

4.254 Shop Projects 1 2 2

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. **Sp**

Prerequisite: Concurrent registration as a full-time student in the welding program or consent of trades department director.

4.262 Exploratory Electronics 1 0 1

Introduces basic concepts, vocabulary, equipment, and manipulative skills required for electronics. Gives a "feel" for the skills, knowledge, and type of work done by an electronics technician. Can aid pre-technical students in their transition into the electronics engineering technician program. **F, W, Sp**

4.263 Electronic Principles 2 6 4

Studies the use of basic circuits and components of electronics as a base for understanding more complicated circuits. Covers such components and circuits as vacuum tubes, amplifiers, oscillators, power supplies, and other similar materials. Applies theory in laboratory experiments. **F, W, Sp**

Prerequisite: 6.202 or approval of instructor.

4.266 Television Principles 3 6 5

An introduction to the principles of television theory and circuit. A study of underlying principles of television transmission, the makeup of the television signal and the

receiver circuits. Each receiver circuit is analyzed individually as to the principle of operation and possible trouble causes. **Sp**

4.268 Television Servicing 1 3 2

Circuits of the television receivers are analyzed. Voltage readings, oscilloscope patterns, resistance readings and other testing procedures are used and the results analyzed. Troubles are installed within the TV receivers and practice gained by determining the trouble. **F, W, Sp**

4.269 Television Servicing Lab 0 8 3

See 4.268.

4.272 Solid State Servicing 3 3 4

The principles of trouble shooting solid state circuits and how to trace circuits. Uses commercial units for learning how circuits operate and the effects of problems within circuits. **Sp**

4.274 Logical Trouble Shooting 3 3 4

A logical approach to trouble shooting with emphasis on the approach, finding, and solving of problems. Stresses use of equipment for servicing. **F, W, Sp**

4.280 Forest Products 3 3 4

A study of the major non-chemical wood products industries and a brief introduction to the pulp and paper industry. Emphasizes economic importance, properties, uses, and manufacturing processes. **W**

4.281 Pulp and Paper Technology I 3 3 4

The fundamental processes of the pulp and paper industry. Mechanical and chemical pulping, refining, screening, filling, sizing, and sheet formation. Also includes cooking liquors, recovering chemicals, fiber recycling, and testing of pulp and paper products. **F**

4.282 Logging Practices 2 6 4

A study of the harvesting and transportation of logs. **F**

4.283 Milling Practices 2 6 4

A study of sawmill machinery and operations, material flow concepts, and material handling equipment used in major forest products industries. **Sp**

4.284 Pulp and Paper Technology II 3 3 4

Emphasizes acquiring proficiency in laboratory techniques and solving mill problems. Meets specific objectives of students through cooperation with instructors from other disciplines and industry. **Sp**

4.286 Wood Industry Economics 3 0 3

A basic review of economic principles applied to forestry and wood products industries including the allocation of forest lands, timber, human, and industrial resources for optimal usage. Also includes an economic guide for timber production and an economic approach to products other than timber, such as recreation, water and wildlife, valuation topics, interest, taxes and capital, and input-output analysis. Covers the wood industry in the Pacific and Rocky

Mountain regions of the United States and production economics in lumber and other forest products industries.

W

Prerequisite: Ec100.

4.287 Methods of Supervision 3 0 3

The basic techniques of supervision. Covers all aspects of supervision such as leadership, organization, communications, morale, job analysis, job training, accident prevention, planning time studies, cost analysis, etc. **Sp**

4.290 Drilling Operations I 3 2 4

A comprehensive introduction to the water well drilling industry. A study of drilling methods, equipment, tools, and terminology through current literature, lecture, demonstration, practice and field trips. Includes an introduction to well construction standards, specifications, contracts, and safety. **F**

4.291 Engine Theory and Maintenance 2 4 3

A continuation of power systems involving more detailed study of internal combustion engine performance. A study of diesel engines including operation and maintenance. **W**

Prerequisite: 4.172 or consent of trades department director.

4.292 Drilling Operations II 2 4 3

Further development in drilling operations with emphasis on a variety of setups and operations under varied conditions providing an introduction to and practice in well design development, sampling operations and well sanitation. **Sp**

Prerequisite: Third term standing in the well drilling program or consent of trades department director.

4.293 State Drilling Standards and Record Keeping 3 0 3

State standards for the water well drilling industry in terms of health and sanitation, fair practices, ethics, and standard drilling procedures. Includes required record keeping and record study. **F**

4.294 Hydrology for Drillers 3 2 4

A study of hydraulics pertaining to water wells, including water table studies, cones of depression and areas of influence. Includes factors affecting quality flow and well size and development. **Sp**

4.295 Drilling Operations III 3 6 5

A continuation of the drilling operations sequence, including a review and application of previous subject matter with emphasis on sampling operations and well design and development. **F**

Prerequisite: 4.292 or consent of trades department director.

4.296 Drilling Operations IV 3 6 5

A continuation of the drilling operations sequence with emphasis on maintenance and repair of drilling equipment and tools. Introduces water analysis, well rehabilitation,

troubleshooting, and preventative maintenance. **W**
Prerequisite: Second year standing in the well drilling program or consent of trades department director.

4.297 Drilling Operations V 5 12 8
 The final course in the drilling operations sequence, summarizing and applying skills and knowledge developed. Emphasizes development of a water supply with pump selection installation, testing, controls, seals, and interpretation and reports of results. **Sp**
Prerequisite: Drilling Operations III and IV or consent of trades department director.

4.298 Well Drillers Operating Lab 0 4 1
 A supplement to existing lab hours as needed, providing practical application of knowledge and skills learned in previous and current well drilling and related subjects. Includes drilling operations, well development, installation and maintenance, and repair of equipment. **F, W, Sp**

4.300 Practical Physics 3 2 4
 Practical physics for skilled workers, covering heat, light and sound. Laboratory time provides demonstrations and experiments to help clarify the principles and procedures covered in class. **W, Sp**

4.302 Practical Physics 3 2 4
 Practical physics for skilled workers covering matter, measurements, mechanics, machines and electricity. Laboratory time provides demonstrations and experiments to help clarify the principles and procedures. **Sp**
Prerequisite: 4.300, 4.202 or equivalent, or consent of instructor.

4.305 Elementary Geology 3 2 4
 A study of physical geology as it pertains to the drilling industry. Includes understanding and recognition of geological formations, topography, and maps to better identify and locate satisfactory drilling sites. **F**

4.321 Introduction to Drafting 0 3 1
 Fundamentals of drafting. Emphasizes use of drafting instruments, standard orthographic projection, layout procedures and ASA-approved lettering techniques. Covers such drawing techniques as geometric construction, selection of views, sectional and auxiliary views, revolutions, heads, and standard dimensioning practices. **Offered as needed.**

4.324 Architectural Drafting I 0 3 1
 A problem-solving course dealing with the production of architectural design solutions for assigned program requirements. **W**

4.325 Architectural Drafting II 0 3 1
 Basic architectural drafting techniques and methods. Covers architectural lettering, layout, arrangement, symbols, and conventional construction methods used in residential or light commercial buildings. **Sp**

4.326 Architectural Drafting III 0 3 1
 Development of basic architectural drafting techniques, symbols and methods. Familiarizes students with advance planning, detailing, design and the application of related resource materials. **Offered as needed.**

4.500 Employer-Employee Relations 3 0 3
 The rights and responsibilities of labor and management and the roles played by them in relation to the individual, the community and the national economy. Includes history, organization, laws, wage and hours, contracts, and community responsibilities. **Sp**

4.605 Design Problems 2 6 4
 Opportunities in advanced drafting room practice. Students apply knowledge of mathematics, science, and drawing to practical problems while designing complete machines or component parts machines. Includes analyzing problems, gathering data, sketching ideas, covers mathematical calculations, making working drawings, and checking work. **Offered as needed.**

4.802 Machine Shop I 2 3 3
 A basic machine shop operations course, introducing principles and operations of basic machine tools, work, and procedures. Includes hand tools, measuring tools, layout tools, drill press (sensitive), grinder, saws, lathes, and milling machine. **F, W**

4.804 Machine Shop II 2 3 3
 A continuation of 4.802 including machine tool processes, machine set up and machining operations, radial drill press, lathe, milling machine, and surface grinder. **W**
Prerequisite: Machine Shop I 4.802 or consent of trades department director.

4.805 Machine Shop Operations Lab 0 3 1
 A supplement to existing lab hours for first-year machine shop students, providing practical application of knowledge and skills learned in previous and current machine shop subjects. Includes technical instruction on specific machinery. **F, W, Sp**

4.807 Machine Tool Processes I 2 6 4
 A basic machine shop operations course, introducing principles involved and operations of basic machine tools, work, and procedures. Includes hand tools, measuring tools, layout tools, drill press (sensitive), grinder, saws, lathes, and milling machines. **F**

4.808 Machine Tool Processes II 2 6 4
 A continuation of 4.807, including machine set up and machine operations, radial drill press, lathe, milling machine, and surface grinder. **W**
Prerequisite: 4.807 or consent of trades department director.

4.809 Machine Tool Processes III 2 9 5
 A continuation of the basic machine tool operation sequence. Introduces production methods, inspection, and

quality control. Includes metal spraying and job shop type repair projects to increase understanding of common industrial practices to introduce application of carbide cutting tools. Emphasizes habits and attitudes as they relate to productivity, general housekeeping, tool care, safety, and regard for fellow workers. **Sp**
Prerequisite: Third-term standing in machine shop program or consent of trades department director.

4.810 Shop Drawings and Layout I 2 6 3
 The first of two courses in development, interpretation, and use of mechanical drawings and shop sketches. Covers fundamentals of mechanical drawing and sketching, blueprint reading and layout principles, and tools and practices. Includes such drawing techniques as geometric construction, selection of views, section and auxiliary views, dimensioning with blueprint reading, and layout problems in the shop. **F**

4.811 Shop Drawings and Layout II 1 3 2
 A continuation of 4.810. Further development of mechanical drawing and geometric construction with applications in blueprint reading and layout problems. Discusses limitations of general shop equipment. **W**

4.820 Machine Shop Problems 3 0 3
 An applied mathematics course, solving typical machine shop problems with the aid of mathematics. Includes tables and practical applications, figuring tapers, tolerances and allowances, gearing problems, and bearing fits. **F**

4.824 Machine Shop Automation 2 0 2
 A study of theory and practice of automation. Includes mechanical numerical card and tape controls, history, theories, trends, and applications of automated machines. Field trips supplement classroom activities. **Sp**
Prerequisite: 4.202, 4.804 or consent of trades department director.

4.833 Advanced Lathe Practices 2 6 4
 A continuation of the machine tool series. Includes internal boring, threading and taper turning, angular turning, and machine reaming. Laboratory time provides student operation of equipment. **W**
Prerequisite: 4.841.

4.837 Advanced Milling Machine Practices 2 4 3
 A continuation of the machine tool series. Studies include straddle milling, rotary table work, dividing head construction and indexing, gear cutting and terminology, and boring work on milling machines. Laboratory time provides student operation of equipment. **W**
Prerequisite: 4.841.

4.841 Machine Shop Practices 3 9 6
 Working conditions of a typical machine shop. Assigned projects require related technical information and shop skills previously acquired. Includes advanced theory application and extended machine operations. **F**

- 4.845 Job Machining Practices** 4 12 8
Typical job shop applications and sequence with emphasis on speed and quality of finished product. **Sp**
Prerequisite: 4.833, 4.837, 4.174.
- 4.847 Tool and Fixture Design and Application** 2 7 4
An overview of design and making of tool fixtures and jigs. Application of drill jigs, special work holding devices, indexing work holders and other applications. Includes designing and drawing jigs and fixtures. **Sp**
Prerequisite: 4.833, 4.837, 4.174.
- 4.849 Heat Treatment of Steel** 2 3 3
A study of methods and procedures for improving the characteristics of steel by hardening and tempering. Processes of heat treating 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. **F**
- 5.000 Medical Practice Seminar** 1 0 1
Study of relationship of clinical practicum in medical office settings with theoretical course content; application to career and personal goals. **Sp**
Prerequisite: Concurrent enrollment in 5.609.
- 5.100 Introduction to Fire Protection** 3 0 3
Philosophy and history of fire protection. History of loss of life and property by fire, role responsibility of the fire department in the 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**
- 5.101 Fundamentals of Fire Prevention** 3 0 3
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**
- 5.103 Elementary Science/Firefighters** 3 2 4
Practical physics covering matter, measurements, machines, and energy. Laboratory time provides for demonstrations and experiments to help clarify the principles and procedures covered in class. **W**
- 5.104 Fire Service Hydraulics** 3 2 4
Hydraulic laws and formulas as applied to the fire service. Includes a review of basic math and application of formulas and mental calculations to hydraulic problems. Covers fireground water supply problems and underwriter's requirements for pumps and accessories. **W**
Prerequisite: 4.200 or equivalent.
- 5.105 Fire Pump Construction and Operation** 2 2 3
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 fireground hydraulics calculations. **Sp**
Prerequisite: 5.104.
- 5.106 Fire Protection Systems and Extinguishers** 3 0 3
Portable extinguisher equipment, sprinkler systems, protection systems for special hazards, fire alarm and detection systems, ventilating systems. **W**
Prerequisite: 5.109 and 6.966 or approval of instructor.
- 5.107 Fire Investigation** 3 2 3
Study of burning characteristics of combustibles, interpreting clues, burn patterns leading to points of origin, identifying incendiary indications, sources of ignition and materials ignited, and preservation of fire scene and evidence. **Sp**
- 5.108 Hazardous Materials I** 3 0 3
The chemistry of fire. Includes handling emergencies involving flammable liquids, gases, and solids, cryogenics, combustible metals, plastics, and oxidizing agents. **F**
- 5.109 Hazardous Materials II** 3 0 3
Handling of emergencies involving explosive and unstable materials, rocket propellants, water reactive materials, poisons, corrosives, combustion products, and radioactive materials. **W**
- 5.110 Fire Training Programs and Techniques** 3 0 3
Purposes of fire service drills and training programs. Development and operation of departmental training programs. Facilities and equipment necessary for modern training, selecting, and training instructional staff, lesson planning, training aids, and other techniques of program training. **Su**
- 5.111 Fire Insurance Principles and Grading Schedules** 3 0 3
Insurance grading schedules and principles of application. Methods of analyzing fire hazards and the effects of fire hazards on fire insurance rates. Fundamentals of fire insurance rating methods, loss records, and municipal grading. **Offered on request.**
- 5.112 Fire Department Organization and Management** 3 0 3
Fire company and department organization and management, duties and responsibilities, response to alarms, public relations, fire prevention, records, and communications. Basics of why and how various functions of administration are carried out, authority and responsibilities of command officers, chiefs, and elected officials. **Sp**
Prerequisite: 5.100, 5.101 and Psy100, or consent of instructor.
- 5.113 Fire Fighting Tactics and Strategy** 3 0 3
Pre-fire survey and planning, response and size-up, fire-ground tactics, analysis, and post-mortem. **Sp**
- 5.116 Fire Codes and Ordinances** 3 0 3
A study of the uniform fire code, uniform building code, flammable liquid, and other codes relating to fire prevention and life safety. **W**
Prerequisite: 5.100, 5.101 or approval of instructor.
- 5.117 Water Distribution Systems** 3 0 3
Main systems—size, gridding, valves, hydrants, pumping stations and reservoir; fire flow requirements for commercial and residential districts, storage tanks, cisterns, and mobile supplies. **Offered on request.**
- 5.120 Fire Service Rescue Practices** 1 2 2
The 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. **Sp**
Prerequisite: 5.122 and 5.123.
- 5.122-27 Fire Related Experience** 0 9 3
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. **F, W, Sp**
- 5.129 Emergency Medical Technology I** 3 4 6
Basic skills in patient assessment, patient care, preparation of equipment, communications, extrication, patient transfer, and patient transport. Successful completion prepares eligible students to sit for Oregon State Health Division examination for EMT-I certification. **F, W, Sp**
Prerequisite: Age 18. Admission and eligibility for certification based on Oregon State Health Division priorities and regulations. Consent of allied health department director.
- 5.131 Building Construction for Fire Suppression** 3 0 3
Fire problems inherent in the 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**
- 5.135 Emergency Medical Technology I, Part A** 1 2 2
Basic skills in patient assessment, patient care, preparation of equipment, communications, extrication, patient transfer and patient transport. Successful completion prepares eligible students to sit for Oregon State Health Division examination for EMT-I certification. **F**
Prerequisite: Age 18. Admission and eligibility for certification based on Oregon State Health Division priorities and regulations, consent of allied health department director.

5.136 Emergency Medical Technology I, Part B 2 2 3
 A continuation of 5.135. **W**
Prerequisite: Satisfactory completion of 5.135 or consent of allied health department director.

5.137 Emergency Medical Technology I, Part C 0 2 1
 Continuation of 5.135 and 5.136. Ten hours of patient contact in selected emergency settings. **Sp**
Prerequisite: Satisfactory completion of 5.136 or consent of allied health department director.

5.138 Emergency Medical Technology II 1 0 1
 Includes airway management, shock management, utilization of intravenous fluids necessary for fluid control, anatomy, physiology, fluid site selection, fluid selection, and electrolyte balance. **Sp**
Prerequisite: 5.129 or 5.137 and consent of department.

5.139 Emergency Medical Technology III, Part A 5 10 8
 Responsibilities, human systems and patient assessment, fluid therapy, pharmacology, respiratory and cardiac pathophysiology, and utilization of adjunctive equipment. **F**
Prerequisite: 5.138 and consent of department.

5.140 Emergency Medical Technology III, Part B 5 9 8
 A continuation of EMT III. Includes cardiovascular components, conductive systems, cardio-conversation and applied practice accenting the care of the coronary related patient, syncope, hypertensive, and trauma. Cardiopulmonary resuscitation procedures including intracardiac drugs, arrhythmia detection, intubation, and utilization of related equipment. **W**
Prerequisite: 5.139 and consent of department.

5.141 Emergency Medical Technology IV (Paramedic) 3 8 6
 Continuation of the emergency medical technology sequence. Includes management of CNS disorders, soft tissue injuries, muscular and skeletal problems and fractures, medical emergencies, emotional disturbances, emergency childbirth and gynecological problems, and care of the neonatal and pediatric patient. **Sp**
Prerequisite: 5.140 and consent of department.

5.142 Rescue Fundamentals 3 0 3
 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 the utilization of rescue items and total integration of basic rescue principles. **F**

5.143 Emergency Response Driving 1 0 1
 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. **W**

5.144 Dispatching and Radio Communications 2 0 2
 Federal Communication Commission rules and regulations, radio theory, frequency utilization, radio procedures, codes, voice and *telemetary transmission site selection* and net composition, communication standard operating procedures, utilization coordination and systems design. **W**

5.145 Introduction to Emergency Medical Services Systems 3 0 3
 An overview of the emergency medical services systems, federal, state and local emergency services organizations, including history, trends, future expectations, legislation, funding mechanisms, *controls and regulations* of the industry. Involvement of personnel in the operations, health systems and emergency medical services interaction. **Sp**

5.146 Ambulance Service in the Community 3 1 3
 The relations of the ambulance service with other organizations: Cooperation and role identification in disaster planning, home and industrial needs, occupational safety programs, consumer protection and education, and planning a complete *emergency health care system for public safety*. **F**

5.147 Crisis Intervention 3 0 3
 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. **W**

5.151 Natural Cover Fire Protection 3 2 4
 The organization, methods, tactics and strategy of safely controlling and extinguishing grass, brush and forest fires, uses of hand tools, portable pumps, motorized apparatus, aircraft and helicopters, chemicals and other related equipment used in the suppression of natural cover fires. Also covers forest and wildland fire prevention techniques.

5.161 Fire Prevention Inspection 3 0 3
 Inspection, preparation, pre-approach information, inspector equipment, appearance, gaining admission, explanations, inspection tour, techniques, mapping, observation, note-taking, records, follow-up, persistence, consistency, advantages, purposes, records maintenance, in-service company inspections. Also types of inspections by rating bureaus and insurance companies, industrial complexes and home inspections, value of public relations, hazard identification and elimination, fire extinguisher, and other installed *fire protection equipment inspection*. **W**

5.162 Firefighters Law 2 0 2
 Firefighters' legal responsibilities in driving, inspecting, alarms and communications, other fire protection activities. Firefighters' rights, duties, liabilities, and participation in legal activities including state and local fire marshal laws relating to fire protection. **Sp**

5.163 Water Supplies 1 0 1
 Mechanics of liquids, principles of the effect of pressure on liquids, pressure-static, operating, residual, flow, resistance, discharge, specific gravity, adequacy and degree of liability of various types of water systems. Relative capacities of various sizes of mains, hydrant types, specifications, installation and maintenance, distribution, fire flow requirements, computing available water, fire flow tests, *supplying installed* fire protection equipment, pilot and pressure gauges and grid, and dead end water main systems. **Sp**

5.164 Building Construction—Fire Protection 3 0 3
 Classification of buildings, structural features affecting fire spread, effect of fire on structural strength, fire stops, ratings of materials, fire retardants, *sanborne maps*. **F**
Prerequisite: 5.119 or consent of instructor.

5.165 Industrial Fire Protection 3 0 3
 Specific concerns and safeguards related to business and industrial fire brigade organization and development, fire prevention programs, hazardous situations and prevention methods, gaining cooperation between the public and fire department organization, study of elementary industrial fire hazards in manufacturing plants. **W**

5.166 Advanced Detection and Prevention Systems 3 0 3
 Heat, flame, smoke, ion detectors, alarm transmitting and receiving equipment, system inspecting and servicing requirements, extinguisher system design and installation standards, sprinkler system valves, water supply, piping, service testing, and protection systems for special hazards. **Sp**

5.167 Fire Insurance Fundamentals 3 0 3
 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. **Sp**

5.401 Expanded Duties I 0 3 1
 Studies of the theory and practice of new procedural responsibilities delegated to dental auxiliary personnel. Includes discussion and demonstration of fluoride application, rubber dam application, polishing of silver, and preventive dentistry. **W**
Prerequisite: 5.411 or equivalent.

5.402 Expanded Duties II 0 3 1
 A continuation of 5.401, including laboratory procedures with practical application of the topics covered in 5.401. **Sp**
Prerequisite: 5.401.

5.403 Chairside Assisting and Basic Lab Procedure 1 7 3
 Practical experience in chairside assisting at the University of Oregon Dental School. Review of experiences at the dental school *in lecture hour*.
Prerequisite: Completion of terms I and II in dental assisting curriculum.

5.404 Dental Materials and Instrumentation 2 4 4
An introduction to materials and instruments used in dental offices. Includes use, identification, chemistry, and manipulation of the dental materials, and use, identification, transfer, manipulation, and care of the dental instruments and equipment. Includes instructional demonstration. **F**

5.405 Dental Anatomy and Physiology 3 3 4
A study of anatomical terminology, head anatomy including skeletal structure blood supply, innervation of the face, oral anatomy and physiology, muscles of mastication and paranasal sinuses. **F**

5.407 Advanced Laboratory Procedures 2 4 4
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. **Sp**
Prerequisite: 5.416, concurrently or previously.

5.408 Principles & Basic Application of Dental Radiology I 2 3 4
The principles of radiology with practical applications such as film placement, cone angulation, machine manipulation, film processing, and safety precautions. **W**

5.409 Dental Office Practicum II 0 16 5
Practice and observation in a dental office. **Su**
Prerequisite: Completion of first three terms in dental assisting curriculum.

5.410 Dental Office Management 2 2 3
Personal and vocational relationships, including telephone, reception and business office procedures, purchases, storage and care of supplies, and maintenance of office and equipment. **W**
Prerequisite: 5.411.

5.411 Introductory Concepts in Dental Assisting 4 0 4
A basic study of the dental assistant's role with reference to personal regimen, housekeeping, terminology, materials, instruments, and equipment. Emphasizes the qualifications necessary for success as a dental assistant. **F**
Prerequisite: Consent of allied health department director.

5.413 Applied Radiography II 0 2 1
A continuation of 5.408. Develops further skills in producing diagnostic radiographs. **Sp**

5.415 Dental Sciences I 3 0 3
A study of the sciences associated with the practice of dentistry. Includes microbiology, oral pathology, sterilization, anesthesia, first aid, and pharmacology. **F**
Prerequisite: 5.601 or BI120 or consent of allied health department director.

5.416 Dental Sciences II 3 3 4
A study of the various fields of specialized dentistry recognized by the American Dental Association and the

sciences associated with them. Includes diet and nutrition, and the dental disciplines of oral surgery, periodontics, pedodontics, endodontics, orthodontics and public health dentistry. Role playing in simulated clinical situations. **W**
Prerequisite: 5.415 or consent of allied health department director.

5.417 Dental Office Practicum I 0 8 3
Practice and observation in an approved dental office. **Sp**
Prerequisite: Completion of terms 1 and 2 in dental assisting curriculum.

5.435 Nursing Assistant 5 25 14
Basic health care duties. Open to men and women in satisfactory health. Includes practical experience in nursing assistant methods, procedures, and techniques. Students who successfully complete the nursing assistant program earn a basic certification. **F, W, Sp, Su**

5.436 Survival in the Bureaucracy, HRT I 3 0 3
An introductory training course for human service workers with emphasis on awareness and acceptance of self and others, roles and functions of human service workers, professional ethics and basic communication, and problem solving skills. **F**
Prerequisite: Admission to program or consent of public service department director.

5.437 Interviewing Skills, HRT II 3 0 3
Introduction to the theory and practice of interviewing. Includes role playing, basic purposes and techniques of observation, interviewing, summarizing, recording, and communicating. **W**
Prerequisite: 5.436, concurrent registration in 5.443-8 or consent of public service department director.

5.438 Group Dynamics, HRT III 3 0 3
Introduction to theory of groups and group functioning. Includes styles of group leadership, roles played by various group members, and supervisor-subordinate relationships. **Sp**
Prerequisite: 5.439, 5.443-8 or consent of public service department director.

5.439 Futures, HRT IV 3 0 3
Successful job finding techniques and termination of staff, students, and clients. **F**
Prerequisite: 5.438, concurrent registration in 5.443-8 or consent of public service department director.

5.440 Applied Personality Theory I, HRT V 3 0 3
First of a two-term sequence covering theoretical models used to describe mental health/illness and an overview of the treatment modalities for each theory. Discusses the application of these theories in local agencies. Includes reporting techniques, semantics, advocacy, application of intervention techniques, testing, and child abuse. **W**
Prerequisite: 5.439, concurrent registration in 5.443-8 or consent of public service department director.

5.441 Applied Personality Theory II, HRT VI 3 0 3
The second of a two-term sequence covering the theoretical models used to describe mental health/illness and an overview of the treatment modalities for each theory. This course also deals with the application of these theories in the local agencies. Reporting techniques, semantics, advocacy and application of intervention techniques. Topics such as eclecticism and moral development theory are also presented. **Sp**
Prerequisite: 5.440, concurrent registration in 5.443-8 or consent of public service department director.

5.442 Community Resources 3 0 3
The social service delivery system, both locally and historically. **F and offered as needed.**

5.443-48 Practicum: Human Resources Technology variable
On-site clinical and community experience with human service organizations. **F, W, Sp (Su as needed)**
Prerequisite: Admission to the HRT program and concurrent enrollment in 5.450-5.455 or consent of public service department director.

5.450-5.455 HRT Practicum Seminar I-VI 1 0 1
Integrates classwork and planning for practicum placement and life experience. **5.450: F; 5.451: W; 5.452: Sp; 5.453: F; 5.454: W; 5.455: Sp**

5.513 Multimedia First Aid 1 0 1
Fundamentals of first aid theories and procedures. Upon satisfactory completion, student receives American National Red Cross Multimedia First Aid card. Meets OSHA requirements. **F, W, Sp, Su**

5.525 Gerontology 3 0 3
The physical, mental, and cultural dynamics of aging as a continuation of the human growth process. An orientation of involvement of the aging with life rather than a preparation for death. **Sp**

5.600 Medical Terminology I 3 0 3
Analysis of anatomical terms, roots, prefixes, and suffixes, as well as Greek and Latin verbs and adjectives in building a medical vocabulary. Examination of representative anatomical structures, diseases, operations, tumors, and descriptive terms through analysis of words. **F and offered as needed.**

5.601 Basic Science Principles 2 2 3
Introductory concepts of physics, chemistry, and microbiology. Includes practical application of problem solving, scientific observation and measurement, use of equipment, and basic laboratory techniques. **F**

5.602 Medical Assisting, Basic Procedures 2 2 3
A survey of requirements and qualities for success as a medical assistant. Techniques, methods, and procedures including assisting the physician with examinations, medical

and surgical aseptic procedures, obtaining vital signs, care of equipment, supplies, drugs, and solutions. **F**
Prerequisite: Admission to medical assisting program.

5.603 Medical Transcription 1 2 2
 Introduction to the techniques of transcribing from the recorded voice to the typewriter. How to operate a transcriber and transcribe mailable copy with speed and efficiency. Includes transcribing letters, case histories, pathological reports, and other medical records. **W**
Prerequisite: SS122 and 5.600 or consent of allied health department director.

5.604 Medical Office Procedures 3 3 4
 Techniques and procedures used in medical offices. Receiving patients, *using the telephone, making appointments, and filing.* Includes techniques, methods, procedures of processing medical and health records, forms, insurance claims, travel arrangements. **W**
Prerequisite: SS122 or consent of allied health department director.

5.605 Introduction to Medical Science 3 0 3
 A survey of disease conditions, types of treatment, and medical and surgical specialties. **Sp**
Prerequisite: Consent of allied health department director.

5.606 Medical Assisting, Advanced Procedures 2 2 3
 Theory and practice of basic diagnostic and treatment procedures. Collection, preparation, and preservation of specimens for diagnostic studies. **Sp**
Prerequisite: 5.602, 5.600 or consent of allied health department director.

5.607 Medical Office Management 3 0 3
 Handling finances and records with accuracy and efficiency. *Provides an understanding of accounting, credits, and collections in order to maintain good records, a help when working with accountants, auditors, and collection agencies.* Includes training in the use of transcribing machines and practice in transcription of letters and medical reports. **W**
Prerequisite: SS121, 4.201 or consent of instructor.

5.609 Medical Office Practice 0 16 6
 Clinical practice in medical assisting methods, procedures, and techniques. **W, Sp**
Prerequisite: Current enrollment in medical assisting program and completion of all medical assisting courses before spring term or consent of allied health department director.

5.610 Medical Terminology II 3 0 3
 Continuation of 5.600. **W and offered as needed.**

5.611 Medical Law and Ethics 3 0 3
 A survey of laws affecting the practice of medicine and the codes of behavior the medical profession has set for itself.

An introduction to medical economics and the history of medicine. **Sp**
Prerequisite: Consent of allied health department director.

5.615 Body Structure and Function I 3 1 3
 The normal structure and functions of the human body, chemical principles, characteristics of the cell as basis for life, organization of tissues, organs, and systems. **F**

5.616 Body Structure and Function II 3 1 3
 A continuation of 5.615. **W**
Prerequisite: 5.615.

5.620 Health Information Systems Procedures I 2 4 4
 Health information systems and related skills and practice in admitting and bed control procedures. Includes basic health statistics, health record content and discharge procedures, transcribing doctors' orders, filing procedures, indexes and registers, scheduling and appointments, and receptionist functions. **F**
Prerequisite: Enrollment in health records option of either the medical assistant or medical secretary programs.

5.621 Health Information Systems Procedures II 3 4 5
 Continuation of Health Information Systems Procedures I. **W**
Prerequisite: 5.620.

5.622 Health Records Processing 0 20 5
 Processing medical reports and records, including basic histories and physicals, discharge summaries, operative reports, medical specialty reports, and radiology, pathology, and autopsy reports. A variety of problem situations including actual experiences in, or from, a variety of offices and settings. Evaluation of students by demonstration of proficiency in typing, transcription speed, accuracy, and organization/processing of health record information. Projects graded continuously by instructor with immediate feedback to the student. **Sp**
Prerequisite: 5.621, 5.616 or 5.610, typing speed of 50 wpm on a five-minute timing and no more than five errors, or consent of allied health department director.

5.700 Health Occupations Overview 1 0 1
 The study of concepts for 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 the patient as a member of the health team. **F, W, Sp, Su**

6.101 Plane Surveying 2 6 4
 A beginning study of surveying techniques including fundamentals of taping and leveling, care and handling of surveying instruments, and office procedures. Field work provides practical application of the techniques. **F**
Prerequisite: Foresters - 4.202, Engineers - 6.261.

6.103 Plane Surveying 2 6 4
 A continuation of 6.101. A study of 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. **W**
Prerequisite: Engineers - 6.101 and 6.262, Foresters - 6.101 and 4.202.

6.105 Strength of Materials I 2 3 3
 A study of the stresses and strains that occur in bodies subjected to tensile, compressive, and shearing forces, including the common theory of beams. Examines the distribution and magnitude of stresses in welded and riveted joints, thin wall cylinders, torsional members, and beams. Practice problems emphasize the materials studied. **F, Sp**
Prerequisite: 6.109 and 6.266 taken concurrently or equivalent.

6.109 Applied Mechanics 2 3 3
 A study of static forces and their effect upon rigid bodies at rest. Includes resolution of forces, equilibrium, and resultants of force systems. **W, Sp**
Prerequisite: Third term standing or approval of trades department director.

6.110 Construction Estimating 2 3 3
 Estimating the amounts and cost of materials required and labor cost involved in various types of construction. **W**
Prerequisite: Second-year standing or approval of trades department director.

6.113 Hydraulics 3 2 4
 A study of static and dynamic hydraulics. How to solve the problems associated with these concepts. Experiments allow students to visualize the reaction of water as a force. **W**

6.116 Building Code I 3 0 3
 Study and use of portions of the uniform building code manual that relate to occupancy classification. Includes detailed requirements relating to types of construction, and the physical locations of buildings and building areas. **F, W**

6.117 Applied Fluid Power 2 2 3
 The fundamental principles of fluid power systems including the basic components of fluid power systems. How these combine to build up circuits. The uses of these circuits. Covers the basics of design and use of fluid power systems and various components in these circuits. Laboratory experiments illustrate and amplify the classroom learning.

6.118 Contracts and Specifications 3 0 3
 Common usage and practices in the preparation of contracts and attendant specifications. Examination of existing contracts covering current jobs will be used whenever possible with practical problems designed to teach the application of theory learned. **F**

Prerequisite: Second-year standing or approval of trades department director.

6.119 Building Code II 3 0 3

Additional building code study concerning areas that present 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. **W, Sp**
Prerequisite: 6.116.

6.120 Mechanical Code Inspection I 3 0 3

An introduction to the state building code and building inspection certification requirements. Based on the needs of inspectors, contractors, and suppliers. **F, W**

6.121 Dwelling Construction Under the UBC 2 3 3

A study of the Uniform Building Code including state amendments. Covers specific code requirements relative to dwelling construction including occupancy standards, siting, footing and foundations, framing, and other materials of construction. Includes field inspection of dwellings in various stages of construction. **W**

6.122 Soil Mechanics Fundamentals 2 3 3

A study of various soil classifications and how they relate to one another. Includes the strengths of soils and the consolidation of soil in fills and on construction sites. Developing earthwork contracts. Covers soil reports, the relationship of soil tests, and other data. **Sp**

Prerequisite: Third-term standing or approval of trades department director.

6.123 Concrete Construction and Design 2 3 3

Theory and design of reinforced concrete structural members and the design and control of concrete mixtures. Includes construction inspection and field and laboratory testing procedures. **Sp**

Prerequisite: Sixth-term standing or approval of technology department director.

6.124 Soil Mechanics 2 3 3

A study of the properties of soils including soil index properties, strength, compaction, permeability, and lateral pressures. Laboratory experiments cover each phase of study. **Sp**

Prerequisite: Second-year standing or approval of technology department director.

6.125 Timber and Steel Construction 3 3 4

A study of steel and wood fasteners and connections, timber beams and columns. Analyzes structural members for design features. Includes field trips to see applications. **W**

Prerequisite: 6.120.

6.126 Building Codes III 3 0 3

A final review of the Uniform Building Code including pedestrian protection during construction, permanent occupancy of public property, prefabricated construction,

fire extinguishing systems, fire detection systems, energy conservation, architectural barriers. **Sp**

Prerequisite: 6.116 and 6.119.

6.128 Strength of Materials II 2 3 3

A study of the stresses and strains that occur in bodies subjected to tensile, compressive, and shearing forces. **F, W**

Prerequisite: 6.105 or equivalent.

6.132 Survey Law 3 0 3

A study of the obligations, liabilities, and legal responsibilities of the land surveyor, and the basic principles of land survey law as evolved in the courts. **W**

6.134 Public Land Survey 3 0 3

A study of the laws and procedures for the surveying and subdivision of public lands of the United States, and for relocation of lost boundaries. Fundamental knowledge for land surveyors. **W**

Prerequisite: 6.101 and 6.103, 4.135.

6.136 Engineering Technician Orientation 1 2 2

Programming of engineering calculators, FORTRAN programming for large computers, and basic programming using remote terminal equipment. Uses engineering problems to familiarize students with this type of work as well as give them experience with recognized engineering formats. **F, W, Sp**

Prerequisite: One year of high school algebra or the consent of technology department director.

6.138 Engineering Problems 0 2 1

A study of the presentation of technical data and computations. Includes procedures for dimensional analysis, recognition and usage of unit systems, preparation and usage of graphs and curves, and practical applications of such skills. **W**

Prerequisite: 6.194 or consent of instructor.

6.139 Environmental Quality Control 2 3 3

Covers the 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. **Sp**

6.140 Sanitary Engineering 2 3 3

A study of domestic and industrial water supply and waste disposal, collection, storage, and treatment facilities. **Sp**

6.163 Basic Technical Photography 3 6 5

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. **F**

6.164 Intermediate Technical Photography 2 9 6

A mixture of professional and graphic arts photography which incorporates light measuring, gamma, densitometry,

sensitometry, interpretation and uses of technical data, technical aspects of photographic design, microfilm, color processing, and career opportunities. Includes technical mastery of the photographic processes so students may then use photography as a communication design tool. Use of color analyzers and densitometers. **W**

Prerequisite: 6.163.

6.166 Graphic Design and Character Generation 3 6 5

Paste-up, character generation, art techniques, design principles, layout, proof reading, copy classification, photo composition, and typography. **F, W, Sp**

6.167 Advanced Graphic Design 3 9 6

Practice and experience in visual communication and graphic technology relating to information design, multiple paste-up, register controls and systems, typographic design, display and tabular composition, proofing procedures, career opportunities, symbology and audience analysis. **F, W, Sp**

Prerequisite: 6.166.

6.168 Process Photography, Stripping and Platemaking 3 9 6

Development of technical competency in production methods and knowledge of process photography, line copy, halftones, development methods, stripping (including multiple exposures), scribing, register systems, exposure computers, platemaking and elementary densitometry. Includes practical applications of the theoretical basis of process photography. **F, W, Sp**

6.169 Image Conversion and Image Carriers for Offset Lithography 3 9 6

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. **F, W, Sp**

Prerequisite: 6.168.

6.170 Press Work and Reproduction Systems 3 12 7

Image transfer systems, press designs, feeders, printing units, dampening units, inking systems, delivery systems, office duplication, pH control, and career opportunities. **F, W, Sp**

6.171 Advanced Presswork 3 9 6

Practical experience relating to papers and inks, rollers and cylinder adjustments, multiple color runs, registration controls, pH control, and outside plant observations. **F, W, Sp, Su**

Prerequisite: 6.170.

6.172-5 Special Problems in Graphic Communication 1-4-3/2-6-5/2-8-6/3-8-7
 A "final" course for students in both graphic arts and photography. After identifying a communication 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.) **F, W, Sp, Su**
Prerequisite: Technology department director approval.

6.192 Introduction to Engineering Calculators 0 2 1
 A lab course using a variety of calculators to solve engineering and surveying problems. **F, W, Sp**

6.194 Engineering Orientation 0 2 1
 An introduction to electronic engineering. Emphasizes calculations, scientific notation, formula manipulation, and use of the calculator in solving problems associated with electronics. **F, W, Sp**

6.195 Properties of Materials 3 0 3
 A study of the properties of various materials and the effects of stresses and strain on them. Covers methods of measuring stress and strain. **Sp**

6.196 Fluid Systems 2 3 3
 A study of basic principles of fluid flows, circuits, and controls. Laboratory experiments demonstrate hydraulic and pneumatic devices and applications. **F**

6.200 Electrical Theory DC 3 3 4
 An introduction to electronics on the basis of direct currents. Emphasizes contemporary techniques as a supplement to basic concepts. Covers the principles of electron physics, unidirectional current and factors affecting its magnitude, series circuit analysis, parallel-circuit analysis, complex unidirectional-current circuits, and magnetism. **F, W, Sp, Su**

6.202 Electrical Theory AC 3 3 4
 A continuation of 6.200. Covers the principles of electron physics, bi-directional circuit analysis, magnetism and electromagnetism, and the characteristics of inductance and capacitance. **W, Sp**

6.205 Applied Electronic Calculations 3 6 5
 Mathematics for students of electronic servicing with reasonable backgrounds in arithmetic. Covers mathematics necessary to handle the problems and theories of electronics with practical application when possible. **F, W, Sp**

6.206 Electrical Circuits 3 3 4
 A continuation of electrical theory emphasizing analysis of the characteristics of complex wave form circuits. Covers

passive filter networks, bi-directional wave forms, complex waveform analysis of simple circuits, waveform analysis of combined networks, series resonance, parallel resonance, and power. **F, Sp**

6.207 Radio Circuits 2 6 4
 An overall study of radio circuits and their problems, servicing techniques, service procedures, and case histories. Troubles installed in radio receivers are analyzed to simulate actual field problems. **F, W, Sp**
Prerequisite: 6.202 and a transistor theory class (may be concurrent) or consent of instructor.

6.208 Electricity 3 2 4
 An introduction to electrical circuitry and equipment emphasizing the concepts of electrical physics. Includes electricity and magnetism, circuits and components, currents, power, basic electronics, motors, and controls. **Offered as needed**

6.209 Introduction to IC's 3 3 4
 An introduction to linear and digital devices, including their theory and application to basic circuits. Laboratory includes learning to use specialized equipment for IC circuits and the checkout of basic circuits. **F, W, Sp**

6.210 Transistor Fundamentals 3 3 4
 Fundamentals of semiconductor physics presenting the junction diode and its construction, operation and applications as a bridge to understanding transistors. The second half of the course includes the structure of transistors and their operation in basic common-base, common-emitter and common-collector circuits. Laboratory experiments illustrate diode and transistor theory and operations. **F, W, Sp**
Prerequisite: 6.200 and 6.261 or approval of technology department director.

6.211 Transistor Circuits 3 6 5
 A continuation of 6.210. Applies the theory of transistor operations to practical amplifier circuits. Studies methods of biasing, effects of inverse feedback, temperature stability, frequency response, and cascaded stages with laboratory tests. **F, W, Sp, Su**
Prerequisite: 6.210 or approval of technology department director.

6.212 Electronic Circuit Concepts 2 6 4
 A study using the basic circuits and components of electronics emphasizing design and proving of design concepts. Covers solid state amplifiers, oscillators, and power supplies. Students design circuits in the theory section and prove them in the laboratory section. **F**

6.213 Pulse Fundamentals 2 3 3
 A study and application of pulse and wave shaping circuits. How to shape wave forms and convert wave forms. Studies devices and circuits to shape and convert wave forms. Circuits may be constructed and proved in the laboratory. **F, W, Sp**

6.214 Electronic Circuit Practices 2 6 4
 A study of the basic circuits of electronics emphasizing circuit operation and what effect component failure has on a circuit. The theories discussed are put into practice in the laboratory. **F, W, Sp**

6.215 Digital and Analog Circuits 3 3 4
 The use of digital and analog devices in circuits. Discussion and application of these devices demonstrate principles and capabilities of circuits based on practical usage. **F, W, Sp**

6.216 Advanced Electronic Circuits 1 3 2
 The use of operational amplifiers in circuits. Students analyze and construct circuits as a practical application of the devices and how they operate in circuits. **F, Sp**

6.218 Industrial Electronics 3 3 4
 An introductory class and laboratory covering the principles and applications of electronic building-block circuits to simple control problems. Emphasizes industrial component and control symbols and the operating principles of temperature, pressure, light, and related transducers. **W, Sp**

6.220 Electronic Instruments 2 2 3
 Application of equipment and some circuits that could be used in instruments. Lab work uses the IC's in instrument type circuits demonstrating the principles of individual circuits operations. **F, Sp**

6.221 Mechanical and Electrical Measuring Principles 2 2 3
 A study of the theory and operation of measuring units and devices. Uses of instruments in analysis, circuit evaluation, and instrument limiting factors. The laboratory experiments prove the theories. **Sp**

6.222 Television Circuits 2 3 3
 A continuation of television principles. A study of television circuits including color circuits, their operation and problems. Analyzes and traces circuits and their effects on other circuits of the receiver through laboratory projects. Students solve problems introduced into television receivers. **F, W, Sp**

6.223 Stereo/Hi-Fi 2 3 3
 A study of the principles of stereo receivers and their operation. The testing of receiver circuits, measurements of distortion and gain of the receivers. Analyzes multiplexing circuits and checks their operation. Students find service problems installed in units. **W, Sp**

6.224 Changers and Recorders 2 3 3
 Servicing and lubricating record changers and tape recorders and the cartridges. Checking and demagnetizing tape heads. Checking and setting up electronic circuits of tape units. Students locate problems installed within the units. **W, Sp**

6.225 Advanced Television Servicing 3 6 5
 A continuation of television servicing with the service prob-

lems becoming increasingly difficult and with conditions as close as possible to an actual shop. Practice of IF and color alignments. **Sp**

6.226 Introduction to Communications 3 0 3
An introduction to communication systems. Principles, operation and life of types of systems, noise factors, filter systems, amplitude modulation, frequency modulation, and single sideband techniques. **F, W, Sp**

6.227 Transmitters and Receivers 3 3 4
Analyzes transmitter and receiver circuits and how they are interfaced to make an operational unit. Sets up and analyzes operation of two-way equipment. Includes AM and FM circuits. **W, Sp**

6.228 Industrial Television 3 6 5
Circuit analysis of television systems, including each individual section and its circuits. Helps students develop methods of problem solving by finding circuit faults. **F, Sp**

6.229 FCC License Preparation 3 0 3
A review of electronic circuits and discussion of FCC rules and regulations. Preparation for FCC examination. **Sp**
Prerequisite: 6.226 and 6.227 or consent of instructor.

6.230 Network Analysis 2 0 2
Introduction of IC's emphasizing operational amplifiers. **F, W**

6.231 Antennas and Transmission Lines 2 0 2
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. **W**

6.232 Two-Way Radio Servicing 2 6 4
Circuits of two-way radios. Practice on citizen band and standard mobile business band units. Includes alignment and frequency checks and circuit trouble-shooting. **Sp**

6.233 Introduction to Audiovisual Equipment 2 3 3
Setup and adjustment of audiovisual equipment. Covers types of equipment and how to make minor adjustments for optimum operation. **F, W, Sp**

6.234 Wave Generation and Shaping 2 3 3
An introduction to pulse techniques. Includes historical development, typical applications, nomenclature, importance of pulse shapes and responses of frequency-selective circuits to pulses. Covers theory and operation of limiter and clipper circuits, differentiating and integrating circuits, DC restoration, various multi-vibrator circuits, synchronization circuits, and multivibrators. **F, W**

6.235 Closed Circuit Systems 3 3 4
Covers closed circuit television and sound systems, picture transmissions, scanning process and composite signal,

camera tubes and circuits, camera video amplifier systems, camera sync and deflection generators and several types of commercial industrial cameras. Also video and film projection systems, signal processors, time base correctors, switchers, special effects generators, RF modulators, RF and video monitors, video and audio dubbers, video recording of films and slides, the use of studio, remote and portable equipment, P. A. systems, microphones, sound mixers, frequency filters. Emphasizes circuit analysis, set up procedures, operations, and adjustments. **Sp**

6.236 Projector Maintenance 2 6 4
Operation and maintenance of 16 mm projectors. How to disassemble, reassemble, and check the projectors. **W, Sp**

6.237 Semiconductors 2 3 3
A survey class and laboratory covering such operating principles of solid-state devices as the unijunction transistor silicon-controlled rectifier transistor, field effect transistor, and photoconductors and their basic circuits and application. **F, W**

6.238 Solid State Devices 2 3 3
The physical principles underlying the behavior of semi-conductors, transistors and other solid state devices and their application to various electronic circuits. Discusses the physics pertinent to transistors and semi-conductors and their characteristics and how they operate. Covers the use of semi-conductor devices in various amplifiers, oscillators, and switching circuits emphasizing developing concepts and knowledge basic to transistor and semi-conductor theory. **F, W, Sp**
Prerequisite: 6.211 or approval of technology department director.

6.239 Audio-Visual Maintenance 2 6 4
How to service various types of AV equipment to gain a broad background of types and models. **Sp**

6.240 Electronic Data Processing 3 0 3
An introduction to the principles of electronic digital computers. Covers the application and programming of computers in business, industrial, and scientific organizations. Reviews numbering systems as they relate to computers, analyzes computer circuitry with emphasis upon solid-state switches, presents the fundamentals of logic design with an introduction to Boolean algebra and analyzes the major divisions of a digital computer with block diagrams. **W, Sp**

6.241 Data Communications 2 2 3
An introduction to modern analog and digital devices and systems. Discussion of principle and practice of the use of analog devices and digital devices including TTL, CMOS, and ECL devices. **W**
Prerequisite: An understanding of AC/DC theory and transistor circuits.

6.242 Microwaves 2 3 3
A theoretical and practical introduction to microwaves.

Covers microwave power sources, transmission and receivers, and propagation and location of sites. **Sp**

6.243 Electromechanical Devices I 1 2 2
An introduction to mechanical electromechanical devices. Includes gears, belt and chain drives, clutches, lubrication, and bearings. Covers considerations in the design, installation, and operation of basic mechanical devices. **Sp**
Prerequisite: 6.261, 6.371

6.244 Electromechanical Shop Practice 1 3 2
The use of hand tools and various types of machine tools. Includes the interpretation and construction of designs from blueprint. **F**

6.245 Electromechanical Fabrication 1 3 2
The characteristics and methods of fabricating materials. Practice of gas and electric welding. Studies of ferrous and non-ferrous material and their application to industrial products. Construction of small sub-assembly units in the laboratory. **F**

6.246 Electromechanical Maintenance Procedures 2 3 3
A study of the proper approach and procedures needed to keep industrial equipment operating. Preventative maintenance and troubleshooting of mechanical and electrical problems. The how's and why's of lubrication and cleaning of equipment including the use of chemical and ultrasonic cleaners. **Sp**

6.247 Rotating Machines 3 3 4
A study of different types of DC and AC machines and their applications. Includes single-phase and three-phase machines. Laboratory experiments support the theory of the course. **Sp**

6.248 Advanced Industrial Electronics 2 3 3
A continuation of industrial electronics with emphasis on combining control functions into larger systems. Application of various transducers and simple servo systems. Magnetic amplifiers, small motor controls, light-operated controls, and interpretation of control diagrams. **Sp**

6.253 Industrial Instrumentation 2 3 3
A study of pneumatic, hydraulic, and electronic instruments and measurements for temperature, pressure flow, and related phenomena. Employs many principles and laws of physics. Laboratory classes demonstrate ideas brought forth in theory sessions.

6.254 Industrial Instrumentation 2 3 3
A further study of pneumatic, hydraulic, and electrical instruments and measuring devices as they apply to process and control systems. Laboratory classes demonstrate and apply the ideas brought forth in theory sessions.

6.255 Electrical Control Systems 2 3 3
An investigation of various control systems commonly used

in industry. Uses various methods of systems analysis to predict performances of systems. **W**

6.256 Servo and Regulation Systems 2 3 3
The principles of open- and closed-loop control systems, servos, regulators, and valves. Includes performance evaluation. Discusses types and application of these devices and the reasons for the choice of a specified type for a particular system. Laboratory work consists of using and testing devices studied in theory sessions. **Sp**

6.257 Electrical/Electronic Troubleshooting 2 3 3
Troubleshooting methods and applications as they pertain to electrical and electronic equipment. Laboratory sessions are practical applications of the methods studied. **Sp**

6.261 Technical Mathematics I 4 0 4
Covers basic algebraic operations. Includes the study of monomials and polynomials, linear equations and systems of equations, quadratic equations, the set-up and solution of story problems, graphs and slope of linear equations, and basic right triangle trigonometry. **F, W, Sp**
Prerequisite: "B" or better in 4.200 or Mth010.

6.262 Technical Mathematics II 4 0 4
A study of the definitions of trigonometry functions and the relationships between them, the solution of right and oblique triangle problems, powers and radicals, complex numbers and vectors, log function and computations, algebraic fractions, factoring, and solution of fractional equations. **F, W, Sp**
Prerequisite: 6.261.

6.266 Technical Mathematics III 4 0 4
Applied mathematics at the technical level involving the use of calculus. Covers plane analytical geometry differentiation with applications, integration with applications, and the differentiation and integration of transcendental functions. **W, Sp**
Prerequisite: 6.262.

6.267 Digital Applications 2 2 3
An introduction for work in logic, digital, and computer areas. Includes binary, octal, and hexadecimal number systems with conversion to decimal, non-decimal arithmetic binary number codes, Boolean algebra principles and logic circuits with emphasis on hardware and simplification. Laboratory work in related electronics classes applies the topics studied in class. **F**

6.268 Digital Control System 3 2 4
Input-output units, numerical control units and other digital readout devices. A study of the theory, operation, and maintenance procedures of these units. Laboratory work is practical application, working with and maintaining the equipment studied. **Sp**

6.269 Computer Programming 2 2 3
An application of programming using basic and assembly

languages related to control systems and industrial applications. **W**

6.275 Introductory Chemistry 3 2 4
The fundamentals of modern chemistry for students with little or no previous training in chemistry. Covers the basic principles of chemistry with emphasis on industrial application. **F**

6.279 Wood Adhesives, Coatings, and Plastics 3 2 4
The basic physical and chemical nature of wood, wood finishing, synthetic resins, plastics, adhesion principles, and coating techniques. *Quality practices in paint, furniture, and glue manufacturing plants and laboratories.* **W**

6.280 Wood Structure and Identification 1 6 3
A study of basic wood structure and the gross features of wood. Includes identification of common softwood and hardwood species. **W**

6.281 Building Materials 2 3 3
Wood as an engineering material, lumber merchandising, basic methods in residential building construction, codes, and grading rules. Elementary knowledge of building materials other than wood. **F**

6.282 Wood Preservation and Drying 3 2 4
Various methods of preserving wood against insects, decay, fire, and weathering. Includes wood preservatives, pressure and non-pressure treatments, preparation of material for treatment, and properties of treated wood. Explains methods of air seasoning and kiln drying, developing kiln schedules, drying defects, type of equipment, shrinkage, swelling, dimensional stabilization of wood, and drying of specialty products. **F**

6.285 Plywood, Composite and Laminated Wood Products 2 4 3
Manufacturing, properties, uses and testing of plywood, particleboard, insulation board and lumber laminates, plastic overlays, and veneers. Commercial requirements, specifications and quality, log allocation, and optimum recovery. **W**

6.287 Industrial Quality Control 2 2 4
Simple quality charts and calculations applied to mass produced items. Methods of testing and controlling effluents, industrial waste, sound, and air and water quality. Includes selective topics in quality control of specific interest to individual students. **Sp**

6.300 Forest Mensuration I 3 4 4
The first of two courses in measurement and appraisal of individual trees, timber stands, and certain forest products. Includes theory and field work in strip and fixed-plot cruising methods. Introduces variable-plot cruising techniques. **Sp**
Prerequisite: 4.204, 3.610 and 6.101.

6.301 Forest Mensuration II 3 4 4
The second of two mensuration courses. Reviews subjects covered in 6.300 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. **F**
Prerequisite: 6.300.

6.323 Chemistry for Technicians 3 9 6
An introduction to techniques and principles of physical chemistry with emphasis on equilibrium and rates of reactions, spectroscopy and atomic absorption spectroscopy. Considers selective biochemical compounds and synthetic polymers. Coordinated class and laboratory. **F**
Prerequisite: 6.322.

6.324 Chemistry for Technicians 3 9 6
Emphasizes special techniques of chromatography, nuclear chemistry, and electrochemistry. Coordinated class and laboratory. **W**
Prerequisite: 6.323.

6.325 Chemistry for Technicians 3 9 6
Thermal methods of analysis, nuclear magnetic resonance spectroscopy and mass spectrometry. Assigns short individual student projects based on interests and future plans. Discusses job interviewing and types of positions. Coordinated class and laboratory. **Sp**
Prerequisite: 6.324.

6.326 Quantitative Analysis for Technicians 1 3 2
An extension of analytical procedures and techniques covered in 6.320-6.325. A variety of procedures and techniques using official methods offer more in-depth experience. Emphasizes modern methods using instrumental analysis. Coordinated class and laboratory. **W**
Prerequisite: 6.325.

6.327 Chemical Laboratory Methods I 0 3 1
A laboratory course emphasizing techniques, methodology, and safety aspects of general chemistry. Introduction to simple instruments. **F**
Prerequisite: Ch104 or Ch204 or concurrent enrollment.

6.328 Chemical Laboratory Methods II 0 3 1
A continuation of 6.327. Introduces qualitative ion identification and acid base titration. **W**
Prerequisite: Ch105 or Ch205 or concurrent enrollment.

6.329 Chemical Laboratory Methods III 0 3 1
A continuation of 6.328. Includes kinetics, rates, and quantitative aspects. **Sp**
Prerequisite: Ch106 or concurrent enrollment.

6.330 Organic Chemistry I 2 6 4
An introduction to the nomenclature and physical properties of major classes of organic compounds. Includes such physical techniques of separation as distillation,

- recrystallation, and chromatography methods including instrumental. Introduces techniques of infrared spectroscopy as a means of identification. **F**
Prerequisite: Ch106 or Ch206.
- 6.331 Organic Chemistry II** 2 6 4
 Covers the chemical nature of the major classes of organic compounds. Techniques acquired in 6.330 are applied in the identification and reactions of these classes. **W**
Prerequisite: 6.330
- 6.332 Natural Products and Synthetic Polymers** 2 6 4
 A continuation of 6.331 covering nitrogen and sulfur compounds, heterocyclics, and the major natural product groups as well as an introduction to the vast field of synthetic polymers. Laboratory emphasizes practical methods and techniques with the use of instrumentation. **Sp**
Prerequisite: 6.331.
- 6.333 Analytical Chemistry** 2 6 4
 Reviews the principles of pH measurement and titrimetric analysis, techniques of sampling and sample preparation, sampling gases, gravimetric analysis, practical experiments using titrimetric analysis, oxidation and reduction, coordination compounds. Coordinated class and laboratory. **F**
Prerequisite: 6.329, Ch106 or Ch206.
- 6.334 Instrumental Analysis** 2 6 4
 An introduction to the use of optical, electro-analytical, and other instrumental methods for analysis. Experiments include IR, visible and UV spectrophotometry, emission spectroscopy, conductometry, potentiometry, atomic absorption, flame photometry, and gas chromatography. **W**
Prerequisite: 6.333
- 6.335 Land Division and Mapping** 2 4 3
 An introduction to basic principles of map layout, methods of platting, and basic photogrammetric procedures. **F**
Prerequisite: Second year standing or consent of instructor.
- 6.336 Instrumentation and Special Techniques** 2 6 4
 A continuation of 6.334 with emphasis on electrochemistry, electrolytic cells, ion selective electrodes, thermal methods of analysis, nuclear magnetic resonance spectroscopy and mass spectrometry. Discusses new instrumental techniques such as the I.C. Plasma. **Sp**
Prerequisite: 6.334.
- 6.339 Glass Blowing** 0 3 1
 Elementary techniques of glass blowing, types of glass, and the various uses. How to make useful glass laboratory equipment. **F**
- 6.345 Radiation Measurement** 2 3 3
 Basic theories of nuclear chemistry. Detailed study of the problems of safety in handling, storage, and other aspects of radioactive materials. Laboratory time allows students to become familiar with instrument and laboratory techniques dealing with radionuclides. **Sp**
- 6.370 Applied Physics** 3 2 4
 The 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. **F, W, Sp**
- 6.371 Applied Physics** 3 2 4
 Applied physics at the 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. **W, Sp**
- 6.405 Plumbing Code and Inspection I** 3 0 3
 An in-depth study of plumbing code requirements related to drain, waste, and ventilation systems, water and gas supply systems, sizing systems, fitting, and fixture requirements. **W**
- 6.410 Non-structural Plan Review** 1 4 3
 How to check and examine plans (except structural) and be able to recognize necessary corrections and additions to fulfill code requirements. **Sp**
Prerequisite: 6.116 and 6.119.
- 6.411 Engineering for the Building Inspector** 1 4 3
 Review of structural plans as they relate to code requirements, including plumbing and mechanical codes correlation. Studies seismic and wind loading problems. **Sp**
Prerequisite: 6.410.
- 6.415 Structural Inspection/Masonry** 2 4 3
 Covers specific code requirements for all types of masonry construction, both structural and non-structural. Includes an introduction to fireplace construction. **W**
- 6.420 Techniques of Inspection I** 2 3 3
 Practical experience of inspection through the use of audiovisual materials, class discussions, and field trips. **W**
- 6.421 Techniques of Inspection II** 0 8 3
 On-the-job training, under the supervision of an instructor or inspector. Various day long field trips allow students to participate in the inspection of buildings under construction. Discussions held during inspection trips. **Sp**
Prerequisite: 6.420.
- 6.422 Structural Inspection - Steel** 2 3 3
 A study of steel as a construction material, including its identity as a construction type in light, medium, and heavy steel frame construction, methods of connections, its fire resistive qualities, manufacturing and fabrication processes. **W**
Prerequisite: 6.116 or as approved by instructor.
- 6.423 Introduction to Uniform Building Code** 3 0 3
 Historical and legal foundations of building codes. Compares performance versus specification standards. Emphasizes Uniform Building Code, Uniform Building Code Standards, Uniform Mechanical Code, Uniform Plumbing Code, Uniform Housing Code, and National Electrical Code. General introduction to usage, development, and format of Uniform Building Code and supporting codes. **F**
- 6.424 Structural Inspection - Concrete** 2 4 3
 A study of concrete as a construction material, as identified by the building code. Its physical properties including mix design, handling, storage, delivery, proper placement, and its fire-resistive qualities. **F**
Prerequisite: 6.116 or approval of instructor.
- 6.425 Electrical Code and Inspection I** 3 0 3
 A study of the various wiring methods and basic installation standards. How to recognize numerous hazards in new construction as well as in existing construction, and safety procedures for all phases of construction. **Sp**
- 6.426 Structural Inspection - Wood** 2 3 3
 An introductory course in building inspection of wood structures covering simple wood framing, the requirements of the Uniform Building Code, alternate materials, methods of construction and design, and wood frame design such as beams and shear diaphragms. **F**
Prerequisite: Dwelling construction under the Uniform Building Code or approval of instructor.
- 6.430 Building Department Administration** 3 0 3
 An introduction to Oregon law as it relates to the building code. Discusses problems in administering the code, under the law, enforcement of the law, and legal remedies. Study of case histories in detail. **Sp**
- 6.500 Survey Computations** 1 6 3
 A study of trigonometric and geometric formulas, mechanical computers and integrating instruments, area computations, traverse calculations, leveling and plotting surveys, simple curves, intercepts of straight lines, solar observations, state plane coordinates, and spiral curves. **Sp**
- 6.507 Route Surveying I** 1 6 3
 The location and selection of a route for current modes of transportation. Use of the transit and machine calculators to lay out routes on the ground and do the necessary computations. **Sp**
Prerequisite: 6.500 or approval of department director.
- 6.510 Forest Road Surveying** 2 6 4
 The principles of forest road design and layout, including curves, grades, cross sections, profiles, and earth computations. Includes solar observations, computation of areas of land, and balancing of survey coordinates. **Sp**
Prerequisite: 6.103, 4.204, 6.262 or second year standing and the approval of trades department director.
- 6.530 Introduction to Oregon Soils** 2 4 4
 Survey of types of soils, problems of soil preparation, drainage, organic matter, soil supplement, pH and soil microorganisms, etc. How to evaluate soil and understand how to correct major soil problems for crop production. **F**

6.531 Agriculture Career Survey	3 0 3	Survey of such employment opportunities available in agriculture fields, as marketing, sales, management, processing, production. Guests discuss employment, training, and salary with students. F	cludes preparation and management of field crops and harvesting equipment. F
6.532 Plant Science	2 4 4	A basic course on anatomy, physiology, morphology, and genetics of agricultural plants. Covers basics of plant identification. F	6.550 Agricultural Marketing 3 0 3 Methods of marketing agricultural products, cooperative marketing, price determination, margins, costs, profits, marketing agreements, and commodity markets. W
6.533 Basic Orchard Practices	2 4 4	Pruning, grafting, training, and production of fruit trees. Basic requirements for establishing new orchards. W	6.552 Agricultural Finance and Banking 3 0 3 Farm finance requirements, credit arrangements and sources, cash flow, costs analysis, taxes, insurance, and farm capital management. Sp
6.536 Soil Management	2 4 4	Soils-crop relationship. How to collect soil samples for nematode, insect, and chemical analysis. Crop yield with relation to fertilizer recommendations and methods of applications. How to read and interpret soil and leaf analysis by Oregon State University soil lab. W	6.553 Vegetable Crop Production 2 4 3 Production and management of vegetable and seed crops, preparation, fertilization, weed and pest control, and harvesting equipment. Sp
6.537 Pesticide Safety and Regulations	3 0 3	Covers major topics in pesticide safety and current state and federal regulations. Preparation for both private and commercial pesticide applicators license exams. Sp	6.554 Agriculture Seminar 1 0 1 Formal presentation and discussions of topics in agriculture technology. Includes students and instructors. Sp
6.538 Weed Identification and Control	2 2 3	How to recognize most of the common weeds in the valley. Methods of weed control and management. Students prepare weed collections. Sp	6.556 Fertilizers and Plant Nutrition 2 4 4 Types of fertilizers, fertilizer requirements and regulations, fertilizers and crop problems, and fertilizer calculations and analysis.
6.539 Farm Survey and Measurement	2 2 3	Survey, measurements, and mapping farm lands to be used for basic construction of farm buildings, roads, irrigation, and drainage systems. Sp	6.557 Farm Equipment Repair and Maintenance 2 4 3 A review of the principles of maintenance and repair of farm equipment emphasizing locally used equipment. W
6.540 Irrigation and Drainage	2 4 4	Basic methods of irrigation and drainage. How to plan a sprinkler system, select sprinkler head, pumps and pipes. Basic water laws. Practice irrigation and drainage systems. Sp	6.558 Agricultural Insects 2 4 4 Common insects and their damage to crops. Insect survey and management, lab and field study. Students prepare insect collections. Sp
6.542 Plant Identification (Agricultural and Ornamental)	2 2 3	How to recognize common agricultural and ornamental plants. Students prepare a plant collection. Sp	6.559 Plant Diseases 2 4 4 Common diseases responsible for damage to crops, survey, and management. Recognition of diseases of agricultural crops through laboratory and field studies. Sp
6.543 Agricultural Economics and Farm Management	3 0 3	Introduction to farm management, marketing, finance, and land economics. F	6.560 Christmas Tree Production 2 3 3 A study of methods of establishing, operating, and managing Christmas tree farms. Offered as needed
6.544 Orchard Production	2 4 3	Management and production of established orchard crops. Includes pruning, fertilizer, weed, insect, and disease management and other cultural and harvesting equipment. F	6.561 Construction of Farm Buildings and Farm Building Codes 3 0 3 A study of 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
6.548 Field Crop Production	2 4 3	Management and production of grain and legume crops. In-	6.562 Crop Improvements and Certification Programs 3 0 3 A study of methods of improving crop production emphasizing potato, mint, bean, stone fruit, and other certification programs. Offered as needed
			6.563 Current Agriculture Problems and Environment 2 0 2 Discusses agriculture problems with relation to environment, including pesticide residue, fertilizer contamination, farm waste, field burning, and possible alternatives. Offered as needed
			6.564 Elevator Operations 2 0 2 A study of elevator operations and maintenance and methods used for storage, fumigation, and cleaning. Offered as needed
			6.565 Farm Records 3 0 3 Farm record keeping and budget analysis. Cost accounting of different farm operations. Offered as needed
			6.566 Grape Production and Management 3 0 3 Establishing, training, managing, and marketing grapes in the Willamette Valley. Offered as needed
			6.567 Introduction to Agricultural Microbiology 2 4 4 A basic study of such microorganisms as fungi, bacteria, nematode, and viruses related to agricultural crops. Offered as needed
			6.568 Nursery and Greenhouse Problems 3 0 3 A basic study in pest management (involves weeds, insects, and disease, etc.). Includes current pest and nutritional problems, soil mixes, and plant requirements. Offered as needed
			6.569 Plant Clinic 1 3 2 How to recognize problems associated with agricultural crops. Offered as needed
			6.570 Plant Propagation 2 4 4 Methods of propagation of fruit and ornamental crops. Offered as needed
			6.571 Seed Crop Production 3 4 4 The production and management of seed crops, their requirements, operations, and marketing. Reviews rules and regulations governing seed production. Offered as needed
			6.572 Seed Quality and Testing 2 4 4 A study of seed cleaning, processing, grading, and testing techniques. Basic identification of weed seeds, insects, and diseases associated with seeds. Reviews programs of seed certification and phytosanitary certificate requirements. Offered as needed
			6.573 Small Fruit Production 3 4 4 Fundamentals of the establishment, operation, management, and marketing of small fruits. Offered as needed
			6.574 Soil Preparation, Equipment Operation, and Maintenance 2 3 3 Review of basic soil preparation, equipment operation and maintenance, and the timing of fall and spring activities. Offered as needed

6.575 Spray Equipment, Operation, and Maintenance 2 3 3
Basic operations, calibrations, and maintenance of power equipment. How to assemble and calibrate different types of power sprayers. **Offered as needed**

6.576 State Agriculture Laws, Grades, and Standards 3 0 3
A study of federal and state laws governing crop production, interstate and international shipment of crops. **Offered as needed**

6.577 Nursery and Greenhouse Operations 2 4 3
The operation and management of nurseries, including an introduction to basic methods of plant propagation, fertilization, environmental control, and other operations. **Offered as needed**

6.600 Elements of Metallurgy 3 0 3
A study of basic metallurgical theories as they apply to the welding industry. **Sp**
Prerequisite: 4.300.

6.602 Metallurgy 2 3 3
Principles relating to metals, structures and physical properties. Explores the uses, heat treatments, and testing of various metals. Laboratory time provides demonstrations and experiments to aid classroom studies. **W**
Prerequisite: 6.275 or equivalent.

6.606 Manufacturing Process 2 3 3
Manufacturing materials and fundamental types of manufacturing methods as employed in cold working process. Lectures, demonstrations, and practical applications familiarize students with various types of machine tools, tooling, measuring, inspection procedures. Introduces automation and information on modern practices of numerical control for machine tools. **W**

6.612 Electromechanical Devices II 3 3 4
Introduces basic electromechanical devices and combines them with units studied in 6.243 and 6.247 into basic control systems. Study of the effects of alignment, loading, and system response. Analyzes design and faults. **F**
Prerequisite: 6.247 and 6.243.

6.918 Applied Business Math 3 0 3
Applications of arithmetic to the world of business and commerce. Includes insurance, depreciation, taxes, stocks and bonds. **W, Sp**
Prerequisite: 4.201

6.923 Accounting Procedures I 4 0 4
A study of business accounting, including basic procedures using the double-entry system, accounting for cash, payroll accounting, accounting for personal service firms, accounting for merchandise, accrual accounting, end-of-period work sheet, and financial statements. 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. **F, W, Sp**
Prerequisite: 4.201 or consent of instructor.

6.924 Accounting Procedures II 4 0 4
A study of accounting for notes and interest, purchases, sales, inventory and prepaid expenses, tangible long-lived assets, owner's equity, and accrual accounting for a wholesale concern. Students work through a practice set for a retail business. For students who do not plan to attend a four-year college and/or who are not enrolled in Chemeketa's accounting curriculum. **W**
Prerequisite: 4.201 and 6.923 or consent of instructor.

6.925 Accounting Procedures III 4 0 4
A study of accounting for partnerships, corporations, capital stock, corporate earnings, corporate bonds, investments, intangible long-lived assets, annual reports, manufacturing business, and cost accounting. For students who do not plan to attend a four-year college and/or who are not enrolled in Chemeketa's accounting curriculum. **Sp**
Prerequisite: 6.924 and 6.918 or equivalent, or consent of instructor.

6.930 Computer Applications Using Basic 3 2 4
How to load and access typical diskette files on small office computers. How to prepare reports, letters, and financial documents from computer files. **F, W**
Prerequisite: Mth151 or equivalent.

6.935 Basic for Programmers 3 3 4
A study of the features and instructions of the Basic language. How to write computer programs using Basic that print reports and build and maintain files. Students develop reports and file contents. **F, W**
Prerequisite: 6.944 (or concurrently) and BA231 or CS213 or equivalent.

6.941 Fundamentals of Computer Programming II 4 0 4
The second course in programming concepts with emphasis on mathematics as applied to data processing. Covers numbering systems with emphasis on binary, hexadecimal, set theory, and flow charting. Covers logic problems involving single, double, and triple table handlings, table searching, random and sequential file manipulation. **W, Sp**
Prerequisite: 6.948; two years of high school algebra or consent of instructor.

6.944 Systems Analysis I 3 0 3
Use of procedures as a basic administrative technique. The principles of organizing, planning, and administering a procedure program. Methods of carrying out individual systems and procedure studies. **F**

6.945 Systems Analysis II 3 0 3
Fundamentals of automated data systems and procedures. Techniques and principles of systems analysis, forms design and control, systems economics, feasibility studies, and the installation of electronic data processing systems. **Sp**

6.946 Data Processing Management 3 3 4
An introduction to the fundamentals of management and coordination of a data center. **Sp**

6.948 Fundamentals of Computer Programming I 3 0 3
A beginning course in basic programming concepts oriented toward COBOL programming language. Emphasizes using flowcharts to solve business problems and learning good flowcharting techniques. **F**

6.949 System 370 DOS/VS Job Control 4 0 4
An advanced study of DOS/VS job control. Includes link edit statements, disk and tape label statements, and utilization of librarian programs for affecting system libraries. **Sp**

6.950 Computer Center Operation I 3 8 5
An introduction to the operation of a computer center. **F**

6.951 Computer Center Operations II 3 0 3
An intermediate course in the operation of a computer center using the IBM/370 Model 125 computing system. Introduces operator commands, computer center standards and procedures, recovery procedures, scheduling considerations, and the physical organization of disks and tapes. Designed to be taken concurrently with either 6.993 or 6.991. **W**
Prerequisite: 6.950 and 6.940 (or BA131) or consent of instructor.

6.952 Computer Center Operations III 3 0 3
Continuation of 6.951. **Sp**

6.956 System 370 Concepts and Facilities 3 0 3
A study of the hardware and software components of the IBM System/370 Model 125 DOS/VS computing system plus an introduction to job control. **W**

6.961 COBOL I 3 6 5
An introduction to ANS COBOL. Codes and documents simple business-oriented programs emphasizing the language structure, data formats, card and sequential disk files, table processing, problem statements, and documentations. Equivalent to BA231. **W**

6.963 COBOL II 3 6 5
An intermediate course in ANS COBOL. Codes and documents business-oriented programs emphasizing table processing and indexing, sort features, subprograms, segmentation, and sequential and indexed sequential files. **Sp**

6.964 COBOL III 3 6 5
An advanced course in ANS COBOL. Codes and documents complete business application packages emphasizing efficiency coding, file backup and restore procedures, systems planning, modular programming, VSAM files, systems documentation, data management techniques, independent research, and problem solving. **W**
Prerequisite: COBOL II 6.963.

6.969 Assembler I 3 6 5
An introduction to assembler language. Codes simple programs using standard and decimal instruction set linked to precoded I-O routines. **F**

6.971 OS Concepts and Facilities 3 0 3
A study of the concepts and facilities of the IBM OS/VS1 operating system. Introduces IBM OS job control language. Students run exercises on the IBM System 370, Model 125, at the college computer center. **W**

6.975 DOS/VS Utility and and Librarian Programs 3 0 3
Students use utility programs to create and modify files as well as dumping files to the printer. Special purpose utilities copy and restore disk packs and initialize disk packs with label information. Librarian programs manage and update all system libraries. Designed for computer operations students. **Sp**
Prerequisite: 6.956 or consent of instructor.

6.976 Data Communications 2 0 2
Concepts of data communication and real time data collection. Includes systems as related to programming and operations management. **W**

6.979 Keypunch I 1 4 3
Keypunch machine operation including the preparation and use of drum cards and extensive keypunch practice. **F, W, Sp**
Prerequisite: 2.606 or consent of instructor.

6.980 Keypunch II 1 4 3
A continuation of Keypunch I with emphasis on speed building and accuracy. **F, W, Sp**
Prerequisite: 6.979 or consent of instructor.

6.983 RJE Operation 2 0 2
An introduction to the concepts and applications of the use of remote terminals for file inquiry and update and program processing. Studies of the characteristics of different terminals. **W**

6.988 RPG for Programmers 3 3 4
A study of the features of the RPG II language. Students write computer programs, using RPG II that print reports, and build and maintain files. **Sp**

6.991 Computer Center II 0 9 3
A laboratory course taken concurrently with 6.951. Experience in the college computer center using an IBM/370 Model 125 computing system. **W**
Prerequisite: 6.950 or consent of instructor.

6.992 Computer Center III 0 9 3
A laboratory course taken concurrently with 6.952. Experience in the college computer center using an IBM/370 Model 125 computing system. **Sp**
Prerequisite: 6.951, 6.993 (or 6.991) and 6.956.

6.993 Computer Center Lab II 0 18 6
See 6.991. **W**

6.994 Computer Center Lab III 0 18 6
See 6.992. **Sp**

6.995 Fire Science I 3 2 4
The physical and chemical properties of substances, chemical bonds and reactions, ionization, covalent substances. Laboratory time for clarifying demonstrations and experiments. Must be taken in sequence. **Sp**
Prerequisite: 5.103.

6.996 Fire Science II 3 2 4
Characteristics and behavior of fire, fundamentals of physical laws, and chemical reactions occurring in fire and fire suppression. Analysis of factors contributing to fire—its cause, rate of burning, heat generation and travel, by-products of combustion and its confinement, control and extinguishment. **F**

7.113 Administration of Child Care Centers 3 0 3
An exploration of areas of administrative responsibility in child care centers. Finances, budget, sources of income, standards and regulatory agencies (local, state, federal), personnel, philosophy, staffing patterns, job descriptions, interviewing, evaluation, in-service training, over-all program planning, parent/community attitudes, and relationships. **W, Sp**
Prerequisite: Second year standing in early childhood education, or consent of instructor.

7.115 Child Nutrition 3 0 3
Functional knowledge of human nutrition, emphasizing the needs of the young child. Includes development of sound attitudes and habits toward food and planning adequate meals and snacks for preschool children. **F**

7.117 Children's Literature 3 0 3
Introduction to literature for the preschool child, including 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. **W**
Prerequisite: Second year standing in early childhood education, or consent of instructor.

7.119 Development in Childhood I 3 0 3
Basic principles of growth and development, prenatal through age two. Emphasizes physical, intellectual, emotional, and social development in children. **F, occasionally Sp**

7.120 Development in Childhood II 3 0 3
A continuation of 7.119. Basic principles of growth and development, ages three through eleven. Emphasizes physical, intellectual, emotional, and social development. in preschool children. **W, occasionally F**
Prerequisite: 7.119.

7.121 Directed Participation I 3 12 7
Supervised teaching of children in the child development center, 12 hours per week. **F, W, Sp**
Prerequisite: Second-year standing and 7.135.

7.122 Directed Participation II 3 15 8
A continuation of 7.121 with a different age group of young children. Supervised teaching of children in the child development center, 15 hours per week. **F, W, Sp**
Prerequisite: Second-year standing and 7.121.

7.123 Environments for Young Children 3 0 3
Planning and evaluating environments for preschool children. Includes play, room arrangement, outdoor areas, equipment selection and sources, children's furniture, and "scrounging" for materials usable in a preschool environment. **F**
Prerequisite: 7.124.

7.124 Learning Experiences for Young Children 3 0 3
Developing, presenting, and evaluating various concepts and activities for preschool children including science, creative expression, nature study, language arts (stories, books, finger plays, dramatic play), numbers, space and time, field trips and visitors, and sensory perception. **Sp**
Prerequisite: 7.119 and 7.120.

7.125 The Exceptional Child 3 0 3
Understanding the characteristics and "world" of the preschool child who deviates from the average or normal in mental characteristics, sensory abilities, neuromuscular or physical characteristics, social or emotional behavior, communication abilities, multiple handicaps, and cultural or economic differences. Includes community resources, curriculum considerations and parent involvement. **W, Sp**
Prerequisite: 7.119 and 7.120 or consent of instructor.

7.126 Home, School, Community 3 0 3
Establishing and maintaining school and community programs for parent education. Learning techniques and skills for developing rapport and communication with parents and families. Using conferences, meetings, and community resources as tools for fostering parent-child relations. **F**
Prerequisite: 7.134 and second-year standing in early childhood education, or consent of instructor.

7.127 Family Living 3 0 3
Patterns of family living in modern society, including the varying roles and interaction of family members and factors affecting family life. **Sp**

7.129 Introduction to Early Childhood Education 2 2 3
A beginning course in early childhood education focusing on its historical development, basic philosophies, types of programs for children, and career possibilities in the field. Field trips include observation of preschools, nursery schools, kindergartens, day care centers, Head Start and parent cooperatives. **F, W, Sp**

7.130 Music for Young Children 3 0 3
 An introduction to music and related activities appropriate for pre-school children. Includes rhythm and dance, songs and games, use of instruments, use of music for concept formation, enjoyment and appreciation. **W**
Prerequisite: Second-year standing in early childhood education, or consent of instructor.

7.131 Observing and Recording in the Preschool 2 2 3
 A beginning course focusing on the value and use of observations as a teaching tool. Emphasizes self-awareness as it relates to the study of children. Includes weekly lecture-discussions and weekly observations at child development centers. **F, occasionally Sp**

7.132 Observing and Guiding Behavior 2 2 3
 A continuation of the experiences gained in observing and recording in the preschool. Emphasizes the role of the teacher, guidance, and classroom management techniques, and improving and utilizing recording and reporting. Includes weekly observations at child development centers. **W, occasionally F**
Prerequisite: 7.131.

7.134 Supervised Field Experience I 1 6 3
 Working with young children in an organized setting and assisting with supervision of various daily activities in a preschool program. **F, W, Sp**
Prerequisite: 7.131, 7.132, 7.119, and 7.120.

7.135 Supervised Field Experience II 1 9 4
 Continuation of 7.134. Includes some planning, executing, and evaluating of curriculum materials appropriate for children. **F, W, Sp**
Prerequisite: 7.134.

7.136 Creative Activities 2 2 3
 Examination of and experience with various media and activities that promote creative growth in young children. Includes understanding the value of various activities, experiencing them in a laboratory, how to present them to children and appropriate selection and timing of activities. Includes art activities and materials, puppets, finger plays, flannel boards, and the use of nature. **Sp**
Prerequisite: 7.119, 7.120 or consent of instructor.

7.137 Personal Dynamics 3 0 3
 Principles and techniques for establishing and maintaining effective human relationships, including fundamentals of relationships, listening skills, ways to communicate feeling, verbal and nonverbal communication, problem solving, handling conflicts and creating a healthy emotional climate. Workshop course incorporates parent effectiveness training skills. **W**

7.139 Child Abuse and Neglect 3 0 3
 Abnormal child rearing practices, including physical injury, child neglect, failure to thrive, and emotional abuse. Emphasis on "how to" and "what to do" in dealing with pro-

blems relating to child abuse. Includes treatment alternatives for abusive parents or custodians. **W**

7.140 Kindergarten Education 3 0 3
 Focuses on the kindergarten child and how he/she learns. Developing, planning, and implementing an appropriate kindergarten curriculum. Includes evaluation of materials and methods of kindergarten, current issues of kindergarten, education, and making the transition to elementary school. **F, Sp**

7.145 STEP—Systematic Training for Effective Parenting 3 0 3
 STEP is a realistic approach to parent-child relationships. Students share experiences of common concern, identify typical responses to family problem situations, and learn to practice specific child-training principles and techniques. **Offered as needed.**

9.298 Small Business Management I 2 7 0
 Basic economic management principles and their practical application in each cooperating family's business operation. **One year course beginning fall term.**
Prerequisite: Admission to small business management program.

9.298A Small Business Management II 2 7 0
 Second year continuation of 9.298. **One year course beginning fall term.**

9.298B Small Business Management III 2 7 0
 Continuation of 9.298A. **One year course beginning fall term.**

9.500 Elements of Supervision 3 0 3
 A survey of the basic duties, responsibilities, and the role of a supervisor in a state or local government agency. **F, W, Sp, Su**

9.501 Written Communications 3 0 3
 Assists employees to look critically at their writing styles and skills, develop new skills, and apply them on the job. **F, W, Sp**

9.503 Oral Communications 3 0 3
 A study of communications systems in organizations and the communications skills required of supervisors. Includes extensive skill practice exercises. **F, W, Sp**

9.512 Work Analysis/Simplification 3 0 3
 Concepts and techniques of work simplification for employees. Approach to increased productivity through improved use of time and available resources. **F, W, Sp**

9.540 Economic Security and Individual Life Insurance (CLU—HS301) 4 0 4
 The role of life and health insurance in meeting economic security needs, types of individual and special life and annuity contracts, individual health insurance contracts and the mathematics of life insurance as related to premiums,

reserves, nonforfeiture values, surplus, and dividends. **F, 1979**

9.541 Life Insurance Law and Mathematics (CLU—HS302) 4 0 4
 Legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, disposition of life insurance proceeds and settlement options. Also covers mathematics of insurance such as probability concepts, premiums, policy reserves, non-forfeiture values, and surplus and dividends. **W, 1980**

9.542 Group Insurance and Social Insurance (CLU—HS303) 4 0 4
 Analysis of group life and group health insurance, including products, marketing, underwriting, reinsurance, premiums and reserves. Discusses socio-economic problems related to death, old age, unemployment, and disability. **F, 1979**

9.543 Pension Planning (CLU—HS308) 4 0 4
 Basic features of pension plans including cost factors, funding instruments and tax considerations involved in private pensions, profit-sharing plans, and tax-deferred annuities. Covers thrift and savings plans and plans for the self-employed. **W, 1981**

9.544 Income Taxation (CLU—HS307) 4 0 4
 The federal income tax system with particular reference to the taxation of life insurance and annuities. The income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates. Includes the income taxation of transactions involving annuities and life and health insurance. **F, 1980**

9.545 Investments and Family Financial Management (CLU—HS306) 4 0 4
 Various aspects of investment principles and their application to family management. Includes yields, limited income securities, growth factors, analysis of financial statements, family budgeting, property insurance, mutual funds, common stocks, real estate, variable annuities and aspects of other investment media. **W, 1982**

9.546 Accounting and Finance (CLU—HS305) 4 0 4
 Basic accounting principles including data accumulation systems, income measurement, valuation of assets and liabilities, and financial analysis. The accounting process from the recording of a business transaction in the books of account to the final preparation of financial statements. Various sources of short-term, intermediate-term, and long-term funds available to a business enterprise. **F, 1980**

9.547 Economics (CLU—HS304) 4 0 4
 An introduction to economics. Covers operation of mixed economy, measurement of national income, business cycles and forecasting, money, banking, monetary policy, fiscal policy/employment stability, supply/demand, competition, trust, and international trade. **W, 1980**

9.548 Business Insurance (CLU—HS309) 4 0 4
Business uses of life and health insurance, including proprietorship, partnership and corporation continuation problems, and their solutions through the use of buy-sell agreements properly funded to preserve and distribute business values. Includes other business uses of life and health insurance, such as key man insurance, non-qualified deferred compensation plans, and split-dollar plans. **F, 1981**

9.549 Estate Planning and Taxation (CLU—HS310) 4 0 4
Estate and tax planning, emphasizing the nature, valuation, disposition, administration, and taxation of property. The use of revocable and irrevocable trusts, testamentary trusts,

life insurance, powers of appointment, wills, lifetime gifts, and marital deductions. The role of life insurance in minimizing the financial problems of the estate owner.

9.820 Farm Business Management I 2 7 0
A program for farm operators on basic economic principles. Assists in establishing a complete record keeping system including enterprise accounting. **One year course beginning fall term.**
Prerequisite: Admission to farm business management program.

9.821 Farm Business Management II 2 7 0
Application of economic principles and analysis of

previous years' farm records to make sound management decisions. Uses enterprise records to assist in making marketing decisions. Classes cover a variety of management related topics. **One year course beginning fall term.**
Prerequisite: 9.820.

9.822 Farm Business Management III 2 7 0
Continuation of records analysis including enterprise analysis and cost of production. Assists cooperating farm families in farm business reorganization based on previous years' records. Includes estate planning to assist in the reorganization and future transfer of operation. **One year course beginning fall term.**
Prerequisite: 9.821.

Chemeketa Board of Education

NAME	ZONE	TERM EXPIRES
Michael Holland, Salem, Chairperson	One	6/30/83
Cornelius Bates, Salem, Vice Chairperson	Five	6/30/80
J. Art Hebert, Sheridan	Two	6/30/80
Wayne E. Feller, Silverton	Four	6/30/80
Robert Marsh, Dallas	Seven	6/30/82
William Miller, Salem	Three	6/30/82
Glenn W. Middleton, Salem	Six	6/30/83

Administrative and Professional Staff

Adams, Ruth	Instructor, Science
Adelman, Richard	Articulation Counselor
Anderson, Frank	Assistant Director, Evening, Weekend, and Summer Courses
Anderson, Robert	Director, Automated Management Information
Anderson, Ronald	Instructor, Adult Basic Education/GED
Asher, Gregory	Instructor, Social Science
Barnes, Nancy	Diagnostician, Counseling
Barrett, Arthur	Instructor, Electronics/Radio TV
Bates, Mary	Counselor
Bay, Brian	Instructor, Fire Science
Beckerman, Cecile	Instructor, Secretarial/Clerical
Beebe, Janell	Instructor, Secretarial/Clerical
Bennett, Earl	Instructor, Trades
Benson, June	Instructor, Study Skills
Berg, Betty	Director, Business and Management
Berger, Gerald	Dean, Student Personnel Services
Bergeson, Mark	Assistant, Cooperative Work Experience
Berman, Arthur	Instructor, Business and Management
Betterton, Roe	Instructor, Real Estate
Bibler, Robert	Instructor, English and Humanities
Binnie, Arthur	President
Blank, Frank	Director, Registration, Records, and Admissions
Blodget, James	Specialist, Videomedia
Blodget, Kristine	Instructor, Science
Bode, Elizabeth	Instructor/Coordinator, Medical Assisting
Bodtker, Diana	Instructor, Science
Bodtker, Egon	Director, Public Services
Bothwell, Bruce	Instructor, Electronics/Radio TV
Boyington, Gary	Instructor, Electronics/Radio TV
Briedwell, John	Director, Community Education
Briggs, Frances	Instructor, Nursing
Brooks, Bobbie	Program Specialist
Brooks, W. David	Instructor, Accounting/Management
Brown, June	Instructor, Office Skills
Bunch, A. Ray	Instructor, Data Processing
Burris, Jean	Instructor, Educational Aide
Butters, Carolyn	Coordinator, Stayton
Buttles, George	Instructor, Human Resource Technology
Byers, Maxine	Instructor, Study Skills
Canning, Dawn	Instructor, Early Childhood Education
Caster, John	Instructor, Community Services
Caughran, Clarence	Specialist, Community Development
China, Cheryl	Counselor
Circle, Mel	Instructor, Electronics/Radio TV
Close, Jimmie	Instructor, Accounting/Management
Clyde, John	Outreach Counselor
Cochrane, Edward	Instructor, Social Science
Cockrell, Barbara	Instructor, Secretarial/Clerical
Cockrell, James	Instructor, Insurance
Concepcion, Paul	Instructor, Human Resource Technology
Concepcion, Sandra	Instructor, English and Humanities
Connor, Marilyn	Instructor, Communication Skills
Cooter, Stephan	Instructor, English and Humanities
Coskey, Jack	Instructor, Cadastral Surveying/Forestry
Couse, Lyle	Instructor, Accounting/Management
Cox, Drexel	Director, Personnel
Cornutt, Delvin	Instructor, Social Sciences
Davey, Don	Instructor, Civil Engineering
Davey, Stan	Director, Facilities and Operations
Davies, Henry	Instructor, Forestry
Davis, L. Anne	Counselor
de la Cerda, Maria	Facilitator, Bilingual Projects
Dethloff, Ralph	Instructor, Automotive
Dill, Cecil	Instructor, Public Service
Dixon, Robert	Instructor, Welding/Machine Mechanical
Dodge, Thomas	Instructor, Welding/Machine Mechanical
Dobay, Deborah	Instructor, Early Childhood Education
Doeneka, Molly	Instructor, Social Science
Durinski, Fred	Assistant Director, Food Services
Ekeruo, Jeannette	Instructor, Humanities and Social Sciences
Eldred, Carolyn	Counselor
Elling, Kay	Instructor, Science
Elliott, Laverne	Instructor, Nursing
Emerson, Willard	Instructor, Fire Science
Eppstein, Robert	Instructor, Building Inspection
Erovick, Joyce	Instructor, Nursing
Farrell, Cathey	Instructor, Emergency Medical Technology
Faust, Dorothy	Instructor, Mathematics

Felton, Maureen Instructor, Early Childhood Education
 Fenske, Helen Instructor, Human Resource Technology
 Ferguson, Ernest Instructor, Surveying
 Field, David Instructor, Welding/Machine Mechanical
 Fishfader, Randy Instructor, Early Childhood Education
 Fitzgerald, George Instructor, Science
 Ford, Ed Instructor, Physical Education
 Ford, Lowell Director for Student Activities and Evaluation
 Forest, Jacques Instructor, Accounting/Management
 Foster, Charles Director, Targeted Services
 Frank, R. Bruce Instructor, Civil Engineering
 French, Marjorie Instructor, English as a Second Language
 Galbraith, Joan Coordinator, Senior Program
 Gilbert, Jeremy Instructor, Social Science
 Gill, Tom Director, Humanities and Social Sciences
 Gillette, David Instructor, Mathematics
 Gollersrud, David Instructor, Well Drilling
 Grant, Linda Instructor, Early Childhood Education
 Green, Constance Assistant, Cooperative Work Experience
 Greenbaum, Ken Instructor, Dental Assisting
 Gustafson, Jean Assistant Director, Library
 Guthrie, Paul Specialist, Institutional Systems
 Hale, Robert Instructor, Physical Education
 Hanby, Steve Instructor, Welding/Machine Mechanical
 Hardin, Brian Director, Financial Services
 Hargreaves, Hal Instructor, English and Humanities
 Harris, Lois Instructor, Nursing
 Harris, Ralph Instructor, Mathematics
 Hatfield, Gladys Director, Allied Health
 Heater, Steve Instructor, Welding/Machine Mechanical
 Held, Leonard Instructor, English and Humanities
 Hellerman, James Instructor, Small Business Management
 Henry, Max Director, Science and Mathematics
 Hickok, Nell Instructor, Nursing
 Hilgemann, Vickie Instructor, Communications
 Hodges, Gary Instructor, Automotive
 Hofmann, Ron Associate Dean, Curriculum and Evaluation
 Hoobler, James Instructor, Science
 Houck-Lowery, Midge Director, Work Related Experience and Financial Aid
 Jackson, Lynn Instructor, Machine Mechanical
 Jaworsky, John Instructor, Forestry
 Jepsen, Leland Instructor, Mathematics
 Johnson, Donald Instructor, Drafting and Graphics
 Johnson, Linda Catalog Librarian
 Jolly, Dale Instructor, Social Science
 Jones, Ben Counselor
 Jones, Lee Instructor, Mathematics
 Judd, Connie Instructor, Adult Basic Education/GED
 Judd, Roger Instructor, Mathematics
 Keesee, Raymond Instructor, Automotive
 Kelley, Janette Counselor
 Kelly, Randal Instructor, Human Resource Technology
 Kimmel, Fred Instructor, Drafting and Graphics
 King, James Instructor, Educational Aide and Human Resource Technology
 Kirk, Barbara Instructor, Science
 Kirksey, Nancy Coordinator, Woodburn
 Kizziah, John Instructor, Welding
 Knittel, Rebecca Instructor, Social Science

Koch, Alan Instructor, Journalism
 Koontz, Everett Specialist, Media Production
 Lane, Donna Associate Dean, Developmental Learning
 Langley, Gerald Instructor, Automotive
 Larkin, Hugh Instructor, Commercial Food Production
 Latham, Bob Instructor, Technology
 Lauck, Albert Instructor, Chemical Technology
 Leach, Al Dean, Community and Continuing Education
 Leavitt, Judy Director, Bookstore and Auxiliary Services
 Lee, Roberta Assistant to the President for Policy, Planning, and Evaluation
 Longshore, Glen Assistant Director, Audiovisual
 Lopez, Alberta Faith Associate Dean, Curriculum and Evaluation
 Lytle, Pat Coordinator, South Salem Program
 Machunze, Diane Instructor, Criminal Justice
 Maguren, Janet Assistant Director, Nursing
 Marckx, Elaine Instructor, Nursing
 Martin, Mike Coordinator, Corrections
 McDonough, Thomas Coordinator, Planetarium
 McHargue, Ruth Instructor, Nursing
 McLain, Roger Instructor, Criminal Justice
 McNicholas, Mike Instructor, Science
 McNicholas, Suzanne Instructor, Human Resource Technology
 Merola, Joe Instructor, Drafting and Graphics
 Meyers, Dianne Instructor, Nursing
 Miller, Maryann Instructor, Community Services
 Mills, Keith Instructor, Accounting/Management
 Mitchell, Margaret Instructor/Coordinator, Continuing Education for Allied Health
 Mock, John Instructor, English and Humanities
 Moehlman, Jean Reference Librarian
 Moore, George Associate Dean, Occupational Education
 Morris, Martin Assistant, Cooperative Education
 Mount, Joan Instructor, Adult Basic Education
 Myers, James Instructor, Social Science
 Mylan, Irene Coordinator, Community Events
 Nagle, Priscilla Instructor, Adult Basic Education/GED
 Nava, Andy Assistant Director, Security, Custodial, and Transportation
 Neuendorf, Mary Specialist, Public Information
 Nichols, Van Instructor, Drafting and Graphics
 Nordal, Dorothy Instructor, Nursing
 Nunnelle, Lewis Instructor, Science
 O'Harra, Kris Instructor, Communication Skills
 Owens, Chris Instructor, Health
 Owings, Colleen Instructor, High School Completion
 Paldanius, Ward Director, Physical Education and Athletics
 Panasuk, Eugene Instructor, Farm Business Management
 Pennock, Pat Coordinator, Monmouth
 Pilcher, Imon Instructor, Electromechanical
 Pinckney, Dale Instructor, Social Science
 Pohl, Leslie Instructor, Machine Mechanical
 Portlock, Patrick Instructor, Criminal Justice
 Reagan, Lucille Instructor, Secretarial/Clerical
 Reed, Donald L. Instructor, Student Development
 Rhodes, Sandra Instructor, Adult Basic Education
 Rice, Leonard Instructor, Drafting and Mechanical Design
 Ringo, Al Dean, Administrative Services
 Ringwald, Beverley Instructor, Office Occupations
 Robinson, Marilyn Instructor, Mathematics
 Rollings, Ron Instructor, Automotive

Roner, Bennie	Instructor, Electronics/Radio TV	Stubbs, Hazel	Instructor, Nursing
Rosa, Raphael	Specialist, Affirmative Action	Suter, Paul	Instructor, Communications
Ross, Gertrude	Instructor, Drafting	Tabor, Patrick	Instructor, Social Science
Rude, John	Specialist, Project Development	Terhes, John	Instructor, Communications
Russell, Margaret	Instructor, Secretarial/Clerical	Tigner, Neal	Instructor, English and Humanities
Salter, Merlin	Instructor, Mathematics	Toman, William	Instructor, Allied Health
Samson, Elmer	Instructor, Criminal Justice	Trapp, Barbara	Coordinator, Silverton
Sansone, Steven	Instructor, Physical and Health Education	Traxler, Mary	Instructor, Nursing
Sauter, Betty	Instructor, Community Services	Triplett, Geary	Counselor
Schaefer, William	Instructor, Chemical Technology	Trumbo, Mark	Coordinator, McMinnville
Scherf, Joan	Coordinator, Dallas	Varnum, Sara	Coordinator, North Salem Programs
Scheer, Sara	Instructor, Clinical Nursing	Vaughan, Joyce	Instructor, Dental Assisting
Segura, Bill	Director, Counseling	Vejlupek, Lillis	Instructor, Early Childhood Education
Sharp, Grady	Instructor, Criminal Justice	Wade, DeVon	Instructor, Accounting/Management
Shaw, John	Instructor, Data Processing	Waldroff, Helen	Instructor, Nursing
Shaw, Robert	Instructor, Visual Communications	Wall, David	Instructor, Science
Shortridge, M. Shirley	Instructor, Nursing Education	Ward, Harmony Jill	Facilitator, Deaf/Blind Program
Shotts, Phyllis	Instructor, Secretarial/Clerical	Wasson, Barbara	Instructor, Student Development
Showers, Keith	Instructor, Science	Webster, Margaret	Instructor, Commercial Food Production
Skirvin, Charles	Counselor	Welch, Ray	Director, Center for Alternative Learning
Slonecker, William	Director, Technology	Wells, Melinda	Assistant, Cooperative Work Experience
Slosser, Joseph	Instructor, Social Science	West, Susan	Instructor, Physical Education
Smith, Joseph	Instructor, Trades	White, Howard	Assistant for Apprenticeship, WRE
Smith, Phyllis	Instructor, Nursing Skills	White, Robert	Instructor, Electronics/Radio TV
Smith, Warren	Instructor, Communications	White, Vernon	Instructor, Forestry
Smith, William	Instructor, Emergency Medical Technology	Wigginton, Barbara	Instructor, English and Humanities
Soderstrom, Duayne	Counselor	Wintermeyer, Larry	Instructor, Accounting/Management
Spurgeon, Roy	Specialist, Alternative Learning	Woodnutt, Tom	Assistant, Placement
Stafford, Sandra	Instructor/Coordinator, Early Childhood Education	Wright, Larry	Instructor, Accounting/Management
Stam, Bruce	Instructor, Early Childhood Education	Zacharias, Patricia	Instructor, Medical Assisting/Health Records
Steiner, Jerry	Instructor, Mathematics	Zeitoun, Farhery	Instructor, Agriculture

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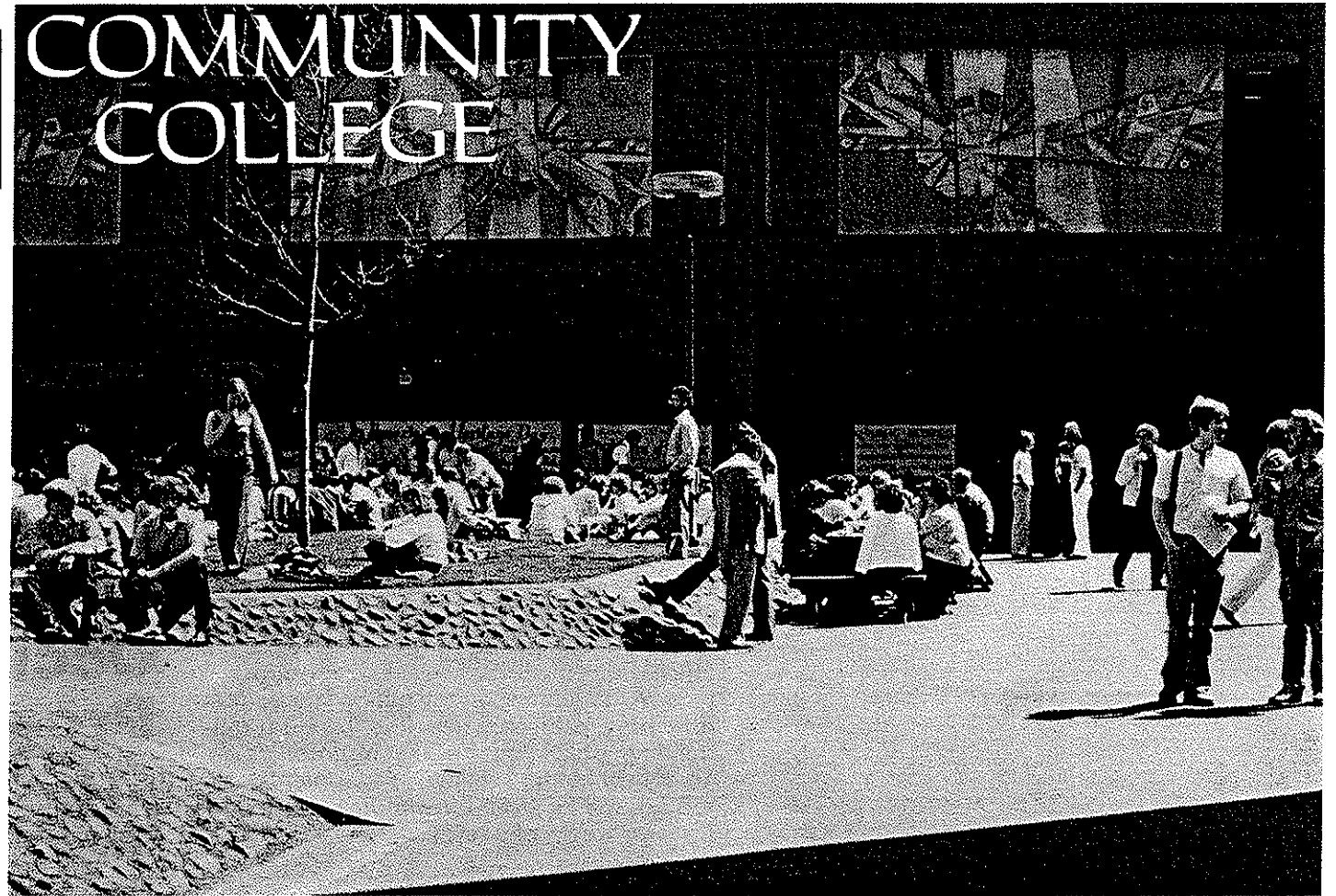
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CHEMEKETA COMMUNITY COLLEGE



1979-81 Catalog Supplement

We'd like to add . . .

Because Chemeketa is a dynamic and ever-changing community college, our catalog can never be complete.

Since the publication of our 1979-81 catalog in June, 1979, we have made numerous changes. In this supplement, we have listed major revisions and additions made through March 15, 1980. As other changes have occurred since that date, we encourage you to contact your academic advisor or a counselor for up-to-date information.

The page numbers listed with the headings in the supplement refer to pages in Chemeketa's 1979-81 catalog.

If you wish more information, please call Chemeketa's information center, 399-5155.

About Chemeketa . . .

Late Registration Fee

Beginning summer term 1980, no late registration fees will be charged.

Withdrawal from College (page 8)

Students who decide to withdraw from Chemeketa may obtain forms from the registrar, staff offices or the counseling center.

Beginning summer term 1980, students who return the completed forms to the registrar's office within the first two weeks of the term will receive full refunds on the tuition and lab fees they have paid provided they have no outstanding obligations to the business office, library or other college departments. No refunds will be given for withdrawals after the first two weeks of a term.

Occupational Programs

The Forest Products Technology and Well Drilling programs will not be offered in 1980-81. Inquiries about these programs may be directed to the associate dean for vocational education, 399-5075.

Changes in requirements for graduation have been made in the following programs. Please check these changes with the information in the 1979-81 catalog.

Automotive Technology and Auto Parts Sales

(page 28)

An Associate in Science degree now requires 94 credits rather than 93.

Course No.	Course Title	Credit Hours
------------	--------------	--------------

Term 4 (both options)

Change:

3.325	Automatic Transmissions	3
	to	
3.325	Automatic Transmissions	4

Educational Aide (page 41)

Students in Educational Aide programs are required to demonstrate competencies in reading, writing, speaking, typing, and mathematics equivalent to the following courses: 1.110, Wr121 or 1.101, Sp125, SS121, 4.200.

Term 1

Ed131	Teaching Techniques	3
Ed133	Instructional Media and Materials	3
Ed207	Seminar: Educational Aide Orientation	3
Ed209	Practicum: Introductory Observation and Experience	3
Wr121	English Composition—Exposition	
	or	
1.101	Communication Skills I	
	or	
	Approved Elective	3

Term 2

Ed123	Tutoring and Instructional Practices for Paraprofessionals I	3
Ed110	Psychology of Learning	3
Ed210	Education Practicum, Theory and Practice	6
5.513	Multimedia First Aid	1
Sp125	Interpersonal Communication	
	or	
	Approved Elective	3

Term 3

Ed124	Tutoring and Instructional Practices for Paraprofessionals II	3
Ed111	Contemporary Education	3
Ed211	Advanced Practicum	6
4.200	Basic Mathematics	
	or	
	Approved Elective	3
SS121	Typing I	
	or	
	Approved Elective	2

Second Year Options

General Courses for all options:

Add:

	Approved General Education Electives	18
Psy299	Growth and Development	3

Delete:

7.125	The Exceptional Child	3
-------	-----------------------	---

In each of the second year options, the following change has been made:

Add:

Ed1212	Practicum Specialized Education	6-18*
--------	---------------------------------	-------

Delete:

Ed210	Practicum	6-18
-------	-----------	------

* In the Vocational-Technical Education Aide program, the credit hours for Ed210 are 9-18.

Electromechanical Technology (page 42)

Term 1

Add:

6.195	Properties of Materials	3
-------	-------------------------	---

Delete:

6.370	Applied Physics	4
-------	-----------------	---

Term 2

Add:

6.370	Applied Physics	4
-------	-----------------	---

Delete:

6.371	Applied Physics	4
-------	-----------------	---

Term 3

Add:

6.371	Applied Physics	4
-------	-----------------	---

Delete:

6.195	Properties of Materials	3
-------	-------------------------	---

Electronic Engineering

(page 43)

The Associate in Science degree now requires 110 credits rather than 113.

Term 1

Add:

4.260	Introduction to Electronics	1
-------	-----------------------------	---

Delete:

6.275	Introductory Chemistry	4
-------	------------------------	---

Emergency Medical Technology (page 45)

The Associate in Science degree now requires 101 credit hours rather than 97.

Term 1

5.129	EMT I	6
5.142	Rescue Fundamentals	3
5.615	Body Structure and Function I	3

	or	
Bi121	Human Anatomy and Physiology	4
5.600	Medical Terminology I	3
	Communication Elective	3

Term 2

5.138	EMT II	2
5.144	Dispatching and Radio Communications	2
5.616	Body Structure and Function II	3

	or	
Bi122	Human Anatomy and Physiology	4
5.610	Medical Terminology II	3
4.200	Basic Mathematics	3
5.139	EMT III, Part A	3

(Continued next page)

Emergency Medical Technology, cont.

Term 3

5.140	EMT III, Part B	5
5.120	Fire Service Rescue Practices	4
BA101	Business Environment	4
5.145	Introduction to Emergency Medical Services Systems	3
	Social Science Elective	3
5.611	Medical Law and Ethics	3

Term 4

5.146	Ambulance Service in the Community	3
5.605	Introduction to Medical Science	3
	Business Elective	3
5.133	EMT III, Part C	6

Term 5

5.134	EMT III, Part D	5
5.700	Health Occupations Overview	1
BA206	Business Management Principles	3
	or	
BA250	Small Business Management	3
He262	CPR Instruction	1
5.143	Emergency Response Driving	1
	Psychology Elective	3

Term 6

5.141	EMT IV	6
FE205	Job Search Techniques	1
	Business Elective	3
	Business Elective	3
5.147	Crisis Intervention	3

Social Science Electives

Add:

5.149	Disaster Planning	3
-------	-------------------	---

Business Electives

Add:

FE201	Special Studies— Cooperative Work Experience	up to 6
-------	---	---------

EMT Electives

AH199C	EMT Issues	1
AH199D	EMT Issues	2
AH199E	EMT Issues	3
AH199F	EMT Issues	4

Fire Protection (page 47)

Fire Suppression Option

The Associate in Science degree now requires 106 credit hours rather than 98.

Term 1

	General Education Elective	3
4.200	Basic Mathematics	3
5.100	Introduction to Fire Protection	3
5.122	Fire Related Experience	3
5.135	EMT I, Part A	2
PE185 FM	Fitness Appreciation	1
1.101	Communication Skills I	3
	or	
Wr121	English Composition—Exposition	3

Term 2

4.202	Introduction to Algebra and Geometry	3
5.103	Elementary Science for Firefighters	4
5.104	Fire Service Hydraulics	4
5.123	Fire Related Experience	3
5.136	EMT I, Part B	3
PE185 FM	Fitness Appreciation	1

Term 3

1.104	Communication Skills II	3
	or	
Sp111	Fundamentals of Speech	3
6.995	Fire Science I	4
5.105	Fire Pump Construction and Operation	3
5.120	Fire Service Rescue Practices	4
5.124	Fire Related Experience	3
PE185 FM	Fitness Appreciation	1

Term 4

6.996	Fire Science II	4
5.113	Fire Fighting Tactics and Strategy	3
1.106	Report Writing	3
	or	
Wr227	Technical Writing	3
5.101	Fundamentals of Fire Protection	3
5.108	Hazardous Materials	3
5.125	Fire Related Experience	3
PE185 CA	Body Conditioning	1

Term 5

5.109	Hazardous Materials II	3
5.126	Fire Related Experience	3
5.131	Building Construction for Fire Suppression	3
PE185 FM	Fitness Appreciation	1
	Technical Electives* (5.106, 5.116, 5.162)	6

Term 6

Psy101	Psychology of Human Relations	3
5.127	Fire Related Experience	3
PE185 FM	Fitness Appreciation	1
	Technical Electives* (5.107, 5.112, 5.151, 5.128)	9

*Technical Electives:

Add: 5.128 Aircraft Crash/Fire Rescue, 5.162 Fire Fighters Law, 6.120 Mechanical Code and Inspection I, He262 Cardiopulmonary Resuscitation Instruction.

Delete: 5.125, 5.126, 5.127 Fire Related Experience.

Forest Products (page 49)

For information about this program, see Occupational Programs, page 1 of this supplement.

Nursing Education (page 57)

Second Level Nursing

Registered Nurse

In the final paragraph, change Nur113 to Nur111 and Nur228 to Nur211. However, the course description for Nur113 applies to Nur111 and the description for Nur228 applies to Nur211.

Office Occupations

(page 58)

Change SS121A,B,C Typing I to 2.606A,B,C Typing I.

Change SS122A,B,C Typing II to 2.607A,B,C Typing II.

Real Estate (pages 59, 60)

Appraisal Option

The Associate in Science degree requires 101 credits.

Term 1

	English Variable	
	or	
	General Education Elective	3
4.201	Business Mathematics	3
BA101	Business Environment	4
BA260	Real Estate Principles I	3
BA211	Financial Accounting I	
	or	
6.923	Accounting Procedures I	4

Term 2

SS121	Typing I	3
Mth10	Beginning Algebra	4
BA264	Real Estate Finance	3
2.437	Legal Descriptions, Platting and Map Reading	2
BA131	Introduction to Data Processing	3
BA263	Real Estate Law	3

Term 3

2.405	Applied Mathematics in Real Estate	3
BA262	Real Estate Practices	3
BA214	Business Communications	3
BA226	Business Law I	3
2.408	Real Estate Appraisal I	3
Ec100	Outline of Economics	
	or	
Ec201	Principles of Economics	3

Term 4

BA232	Introduction to Business Statistics	3
2.409	Real Estate Appraisal II	3
2.423	Escrow Procedures I	3
2.415	Real Estate Investment Analysis I—Principles	3
BA261	Land Use Economics	3
	CWE or Approved Elective	3

Term 5

2.414	Appraisal Report Writing	3
2.418	Elements of Design and Construction	3
2.416	Real Estate Investment Analysis II—Taxation	3
2.411	Real Estate Appraisal III	3
	CWE or Approved Elective	3

Term 6

2.425	Zoning, Subdivision, and Community Planning	3
2.412	Real Estate Appraisal IV	3
Psy101	Psychology of Human Relations	3
6.121	Dwelling Construction Under the UBC	3
	CWE or Approved Elective	3

Brokerage Option

The Associate in Science degree requires 101 credits.

Term 1

	English Variable	
	or	
	General Education Elective	3
4.201	Business Mathematics	3
BA101	Business Environment	4
BA260	Real Estate Principles I	3
BA211	Financial Accounting I	
	or	
6.923	Accounting Procedures I	4

Term 2

BA212	Financial Accounting II	
	or	
6.924	Accounting Procedures II	4
2.405	Applied Mathematics in Real Estate	3
SS121	Typing I	3
BA264	Real Estate Finance	3
2.437	Legal Descriptions, Platting, and Map Reading	2
BA263	Real Estate Law	3

Term 3

BA214	Business Communications	3
BA262	Real Estate Practices	3
	Approved Elective	3
BA226	Business Law I	3
2.408	Real Estate Appraisal I	3
Ec100	Outline of Economics	
	or	
Ec201	Principles of Economics	3

Term 4

2.430	Real Estate Effective Selling	3
2.409	Real Estate Appraisal II	3
2.423	Escrow Procedures I	3
2.415	Real Estate Investment Analysis I—Principles	3
	CWE or Approved Elective	3
BA261	Land Use Economics	3

Term 5

2.424	Escrow Procedures II	3
2.418	Elements of Design and Construction	3
2.416	Real Estate Investment Analysis II—Taxation	3
2.411	Real Estate Appraisal III	3
	CWE or Approved Elective	3

Term 6

2.426	Escrow Procedures III	3
2.425	Zoning, Subdivision and Community Planning	3
2.417	Real Estate Investment Analysis III—Exchange	3
6.121	Dwelling Construction Under the UBC	3
	CWE or Approved Elective	3

Well Drilling (page 72)

For information about this program, see Occupational Programs, page 1 of this supplement.

Course Descriptions

KEY TO COURSE DESCRIPTIONS

course number	+ college transfer course	*offered in alternate years	course name	class hours/week	lab hours/week	credit hours/term
Ch205	+	F W Sp Su	General Chemistry	3	6	5

term course is usually offered (fall, winter, spring, summer)

Chemeketa now offers these courses in addition to those listed in the 1979-81 catalog.

Add:

AH199C-F + EMT Issues Variable
Focuses on important current topics in emergency medical technology such as laws, practices, equipment, techniques, and recent developments. **Offered as needed.**
Prerequisite: Consent of instructor.

Anth199 + Introduction to Semantics 3 0 3
The function of language and its symbols. Includes consideration of how adequately language can represent man's total environment and whether analysis of language use can increase our understanding of human behavior. **Offered as needed.**

Art244 + Stained Glass 0 6 3
Basic techniques for creating stained and leaded glass objects. Includes working with copper foil, staining, cutting, soldering, and finishing. **F, W, Sp, Su**

BA200G Tourism Geography 3 0 3
A basic geography for travel agents or tourists. Highlights the physical geography, economics, major cities, hotels, tours, and sightseeing attractions of different countries. **F**

BA200H Travel Agent Basics 3 0 3
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**

BA219 + Computer Augmented Accounting 3 TBA 3
A basic course in the development of computer data processing as applied to accounting cycles. **W, Sp**
Prerequisites: BA212, Financial Accounting II, or consent of instructor.

BA243 + Introduction to Consumer Behavior 3 0 3
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**

Bi200 + Principles of Ecology—Field Biology 2 4 3
A study of the broad concepts of ecology. Includes class discussions and field trips. **Sp, Su**

CJ233 + Introduction to Community Based Corrections 3 0 3
Discusses pretrial intervention, work release programs, halfway houses, juvenile offenders, the roles of volunteers and para-professionals, probation, and parole. **W**

DE20 Discovering Success 3 0 3
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, Su**

Ed113 + Discrimination: The Law and the Oregon Educator 3 0 3
A study of the ramifications, requirements, and impact of state and federal laws prohibiting discrimination in the educational system on the basis of sex, race, handicap, national origin, marital status or age. Designed to inform the interested public and to fulfill teacher certification requirements under ORS 342.123. **F, W, Sp**

Ed134 + The Mexican-American and the Schools 3 0 3
A course for persons working, or planning to work, with Mexican-American students. Focuses on the learning problems some of these students may have because of conflicts between their ethnic-based values and those of other students. **Sp**

Ed199A + Spanish Language Development for the Spanish Speaker 3 0 3
The first of three courses to help Spanish-speaking teacher aides improve their communication skills. Development of oral language skills. **F**
Prerequisite: Admission to Educational Aide Program or consent of instructor.

Ed199B + Spanish Reading for the Spanish Speaker 3 0 3
The second of three courses to help Spanish-speaking teacher aides improve their communication skills. **W**
Prerequisite: Admission to Educational Aide Program or consent of instructor.

Ed199C + Spanish Composition for the Spanish Speaker 3 0 3
The third of three courses to help Spanish-speaking teacher aides improve their communication skills. **Sp**
Prerequisite: Admission to Educational Aide Program or consent of instructor.

Ed211 + Advanced Practicum 1 15 6
Practical experience for educational aide students in their areas of specialization. **Offered as needed.**

Ed212 + Practicum Specialized Education 1 15 6
For second year students working in classrooms with children of specialized populations so they may use the knowledge, methods, and skills they have gained from education courses. Seminars on classroom experiences, problem solving, and special teaching techniques. **Offered as needed.**

FE199 Job Interviewing 1 0 1
How to prepare and effectively manage job interviews. Emphasizes development of constructive attitudes, non-verbal communication, handling stress and anxiety, understanding the interviewer's perspective, and predicting and preparing for interview questions. Students are videotaped during mock interviews and critique these interviews. **F, W, Sp, Su**

GS119	+ Solar Energy	3 0 3	PS214	+ Political Power and Political Action	3 0 3	2.606A	Typing I	0 2 1
An introduction to solar radiation, flat plate collectors, active and passive solar heating systems, solar thermal electric generating schemes, and photovoltaic devices. F, Sp			A survey of political processes with specific emphasis on the government and politics of Oregon. Identifies strategies, laws, and concerns of groups attempting to affect the political process. F			Presentation of alphabetic keys. 25 net words per minute for one minute = A. Identification and operation of major typewriter parts. F, W, Sp, Su		
GS199A	+ Introduction to Astronomy	3 0 3	PSA199A	+ Issues in Human Resources Technology	3 0 3	2.606B	Typing I	0 2 1
Fundamentals of astronomy for non-science majors with little or no preparation in mathematics or physical science. F, W, Sp			An in-depth study of current problems and topics in human services. Offered as needed.			Presentation of number and symbol keys. 30 net words per minute for 2 minutes = A. How to center vertically and horizontally and type tables and memoranda. F, W, Sp, Su Prerequisite: 2.606A.		
GS200	+ Computer Application in Science and Technology	3 2 4	Psy199	+ Introduction to Industrial Psychology	3 0 3	2.606C	Typing I	0 2 1
How to use the BASIC programming language to write and debug programs to solve scientific and technological problems. Sp			Applied psychological concepts stressing interpersonal communication skills, work values, habits, and attitudes. Offered as needed.			40 net words per minute for three minutes = A. How to type letters, envelopes, and manuscripts, and make corrections and carbon copies. F, W, Sp, Su Prerequisite: 2.606B.		
HS10	Health Care Skills	0 2 1	Sp126	+ Awareness of Communication in Relationships	3 0 3	2.607A	Typing II	0 2 1
One-to-one and small group tutoring for students in health-related programs who want to develop skills for working with patients and clients. How to observe, interview, and communicate with patients and how to use first aid and emergency medical techniques. Offered as needed. Prerequisite: Enrollment in dental assisting, emergency medical technology, medical office assistant, or nursing program.			A practical, integrated approach to improving communication in personal relationships. Introduces specific skills people may use to examine and change relationships. W, Sp			Presentation of three styles of tables and two letter styles and their variations. 45 net words per minute for three minutes = A. F, W, Sp, Su Prerequisites: 2.606A, B, C.		
Mth 9A	Basic Operation of Whole Numbers	0 5 1	Sp199	+ Effective Listening	3 0 3	2.607B	Typing II	0 2 1
Fundamental mathematics—addition, subtraction, multiplication, and division of whole numbers. F, W, Sp, Su			Explores ways to break bad listening habits and improve listening abilities. Sp			Presentation of book manuscript, itinerary, and reports. 50 net words per minute for three minutes = A. F, W, Sp, Su Prerequisite: 2.607A.		
Mth 9B	Basic Operation of Fractional Numbers	0 5 1	SSc102	+ The Minority Experience in Contemporary America	3 0 3	2.607C	Typing II	0 2 1
Fundamental mathematics—addition, subtraction, multiplication, and division of fractions. F, W, Sp, Su			Explores the experiences of minority groups in contemporary America. Representatives from various ethnic groups in the college present specific issues. Students become aware of issues facing members of minority groups, their response to these issues, and their perception of the dominant culture. Sp			Presentation of four new letter styles, three different stationery styles, and typing on printed forms. 55 net words per minute for three minutes = A. F, W, Sp, Su Prerequisite: 2.607B		
Mth 9C	Basic Operation of Decimals	0 5 1	1.109	Basic Reading Tactics I	3 0 3	2.820	Forms Management	2 2 3
Fundamental mathematics—decimals. F, W, Sp, Su			Individualized instruction to help students improve their reading abilities and study habits. F, W, Sp, Su			How to establish and operate a forms management program and its relationship to records management. Includes how to analyze and design forms as an efficient means of recording, transmitting, and processing information. Covers the development of forms specifications, flow process charting procedures, responsibility and work process charting, and the application of the survey approach to forms design. F		
Nur114	+ Nursing Care of the Elderly	3 0 3	2.412	Real Estate Appraisal IV	3 0 3	4.260	Introduction to Electronics	0 2 1
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 the health needs of the elderly, planning for patient care, implementing plans for care, and evaluating care. F, W, Sp			Continuation of 2.411 Sp Prerequisite: 2.411 or qualified professional appraisal experience.			An introduction to the tools and materials used in the field of electronics. Covers basic maintenance procedures and the proper use of materials. Stresses identification components and their symbols. Gives an overview of the electronics field and its opportunities. Some homework in electronic laboratories required. F, W		
Nur250	+ Introduction to the Operating Room	5 12 8	2.414	Appraisal Report Writing	3 0 3	5.128	Aircraft Crash/Fire Rescue	1 3 1
Fundamentals of nursing practices in the operating room including circulating, scrubbing, sterilization, patient support, surgical techniques, and instrumentation. F, Sp Prerequisite: Be a Licensed Registered Nurse or Licensed Practical Nurse or be eligible for and have applied for licensure or be enrolled in an accredited nursing educational program.			How to write appraisal reports easily understood by clients and their representatives. W Prerequisites: 2.408 and 2.409 or consent of instructor.			Pre-planning activities for on-airport and off-airport emergencies. Approach, positioning, rescue procedures, and the application of control techniques. Sp Prerequisites: 5.122, 5.123, 5.124, 5.125, 5.126 or consent of instructor.		
OL51	+ First-Year Chinese, Term 1	4 0 4	2.430	Real Estate Effective Selling	3 0 3			
Introduction to spoken and written Mandarin Chinese. F			Positive approaches and methods of handling the functions and requirements of real estate sales, especially residential property. Lectures, class discussions, visual aids, films, tapes, case studies, and role playing help students develop and improve their sales abilities. F					

(Continued on back)

Course Descriptions, cont.

5.133 **Emergency Medical Technician III,
Part C** 3 11 6

A continuation of 5.140. Includes clinical experience in the following areas: emergency room, intensive care unit, operating room, mobile intensive care unit, coronary care unit. **F**

5.134 **Emergency Medical Technician III,
Part D** 2 11 5

A continuation of 5.133. **W**

6.958 **Computer Hardware and
Software Concepts** 4 0 4

A study of the hardware and software components of modern computer systems and an introduction to job control language. **W**

7.142 **Child Care for
Elementary School Children** 3 0 3

A developmental approach to providing child care for elementary school children 6 to 11 years of age. Includes child development, needs, guidance, programs, environment, equipment, parent and community involvement, staffing, administration, finances, and state and federal standards. **F, other terms as needed**

9.249 **Speaking to Communicate** 1 0 1

How to prepare and present speeches with a specific message for a specific audience in order to achieve a specific response. **Sp**

9.250 **Teller Training and Development** 3 0 1

A course to help bank tellers develop and improve abilities and knowledge deemed essential in the performance of their duties. Emphasizes tellers' responsibilities in dealing with customers and in carrying out normal banking procedures. **F, Sp**

Prerequisite: Students must be employed by a bank and be recommended by their supervisors.

Chemeketa Community College

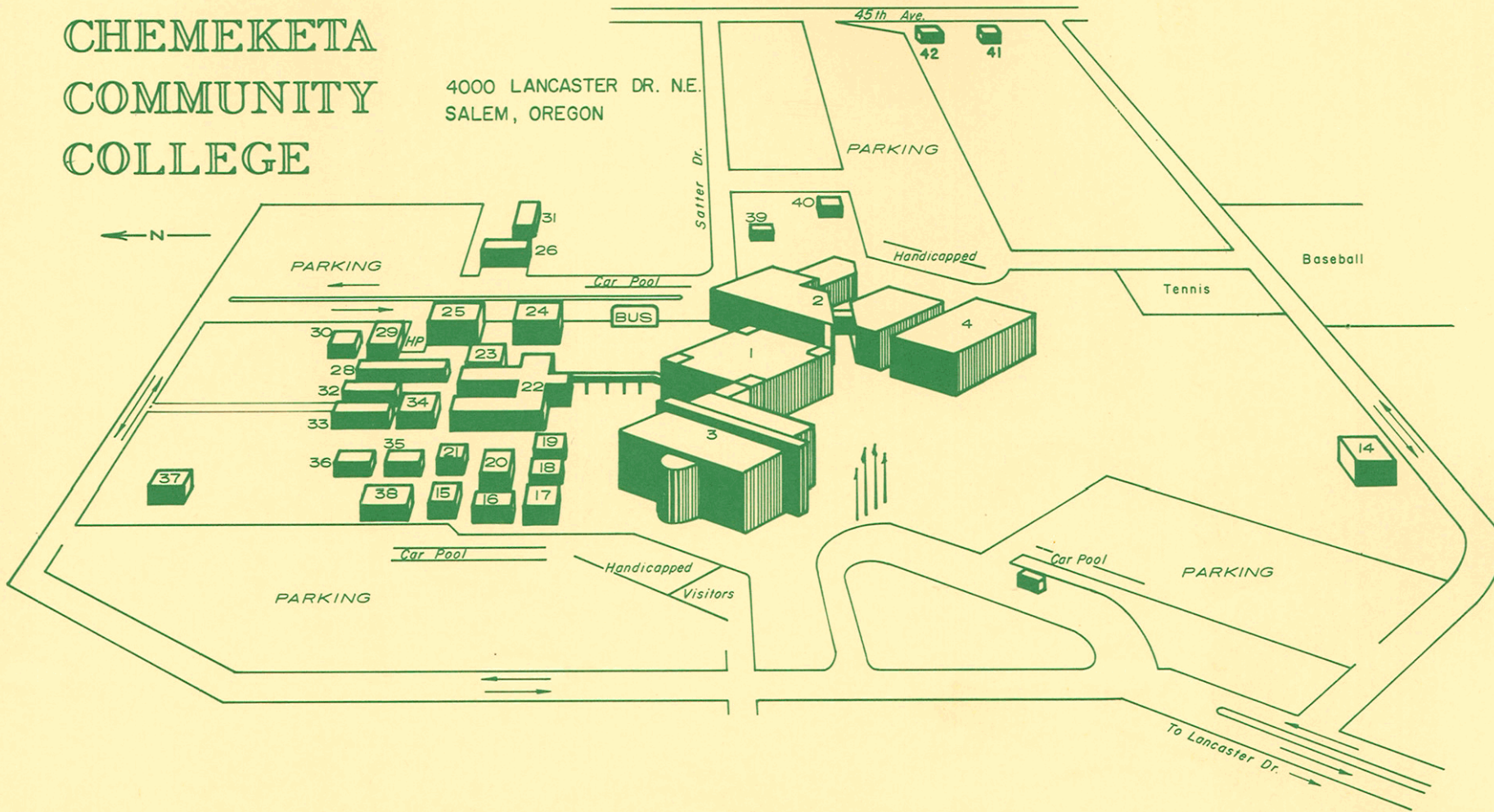
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