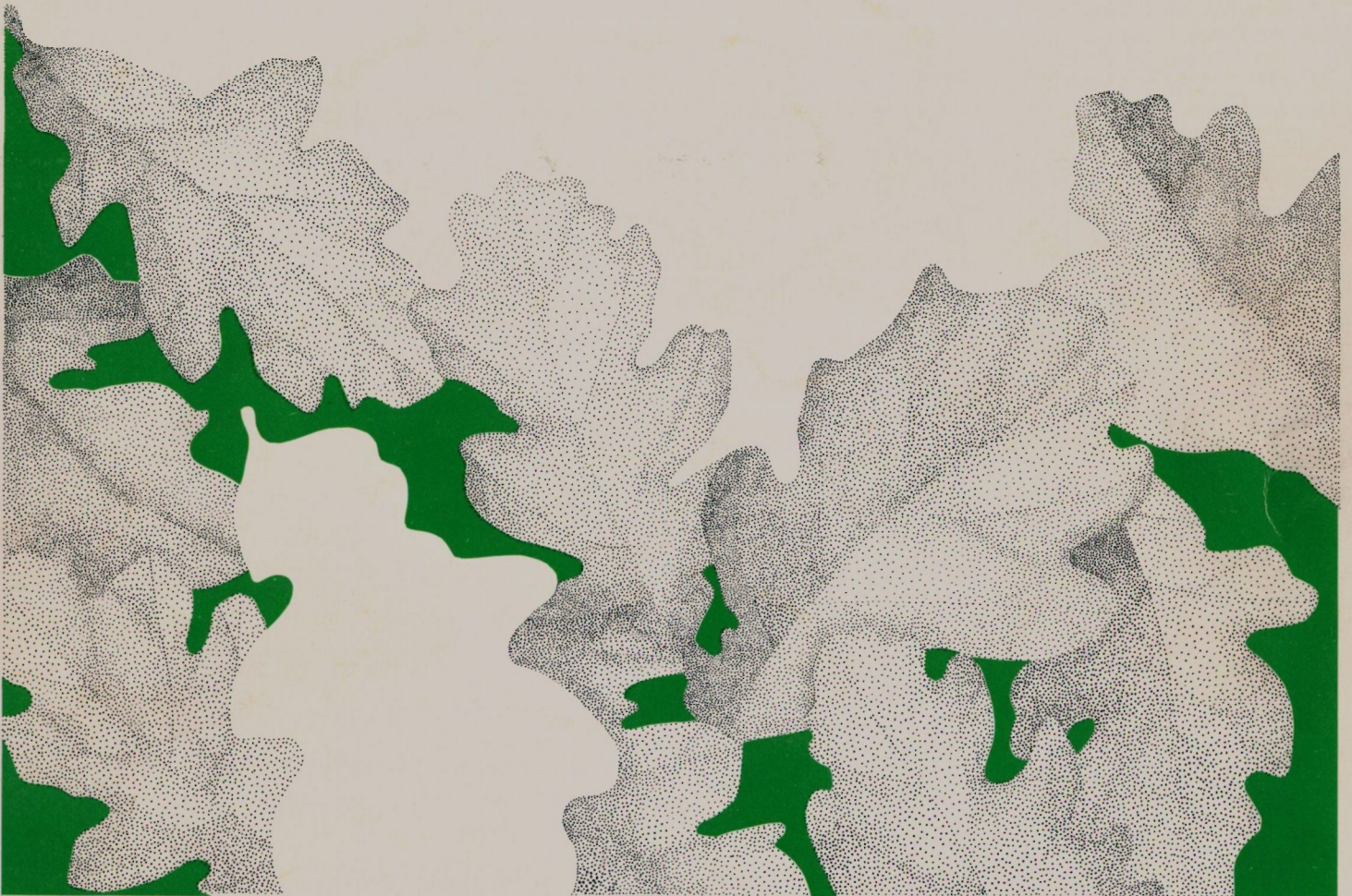


Pam Mitchell  
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# Linn-Benton Community College 1983-84 General Catalog



# ACADEMIC CALENDAR (1983-1984)

	SUMMER 1983	FALL 1983	WINTER 1984	SPRING 1984
Registration Begins	Jun 13	Sep 12	Dec 5	Mar 5
Classes Begin	Jun 20	Sep 26	Jan 3	Mar 26
Last Day to Register For 12 or more credits	Jun 24	Sep 30	Jan 9	Mar 30
Late Fee Begins (12 or more credits)	Jun 20	Sep 26	Jan 3	Mar 26
Last Day to Register For 11 or fewer credits	Jul 8	Oct 14	Jan 20	Apr 13
Late Fee Begins (11 or fewer credits)	Jul 5	Oct 10	Jan 16	Apr 9
Last Day to Drop Without W	Jul 1	Oct 7	Jan 13	Apr 6
Last Day to Withdraw and Qualify for a Refund (full-term classes)	Jul 8	Oct 14	Jan 20	Apr 13
Last Day to Request P/NP Option	Aug 19	Dec 9	Mar 9	Jun 1
Last Day to Officially Withdraw	Aug 19	Dec 9	Mar 9	Jun 1
Final Exams	Aug 22-26	Dec. 12-14	Mar 12-14	Jun 4-6
Last Day of Term	Aug 26	Dec 16	Mar 16	Jun 8
Holidays	Indep Day Jul 4	Veterans Day Nov 11 Thanksgiving Nov 24-25		Memorial Day May 30

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School  
closed  
Monday  
May 28



Linn-Benton Community College  
1983-84 General Catalog

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# THE COLLEGE



Magnolia trees add color and fragrance to the college's inner courtyard.

**L**inn-Benton Community College is a two-year public college serving the educational needs of residents in its two-county district. The college is supported by tuition, local property taxes and state revenue and is directed by an elected, seven-member board of education. Admission to LBCC is open to any district resident beyond high school age.

Recognizing the diverse needs of its students, the college offers general education courses, occupational and technical preparatory training, lower division college transfer courses and skills upgrading for those already employed.

The Cooperative Work Experience program provides students with practical experience in jobs related to their fields of study.

Special programs are offered in adult basic education and high school continuation for the vocationally disadvantaged and the handicapped.

The college's Community Education Division offers a wide variety of credit and non-credit classes on the Albany campus, in the Corvallis, Lebanon and

Sweet Home centers and at other locations throughout the district. Non-credit classes that do not qualify for reimbursement from the state are required by the college to be self-supporting. Tuition rates for these classes are higher to cover all instructor and facility costs.

A full range of student services, including career counseling, academic and personal guidance, financial aid and job placement are provided in addition to supportive learning services.

## LBCC Board of Education:

Wayne Chambers, Chair, Albany  
Kenneth B. Haevernich, MD, Vice-Chair, Lebanon  
Alan Terrell, Philomath  
Herb Hammond, Corvallis  
Robert Hyland, Sweet Home  
Carol Moore, Corvallis  
Joseph Novak, Albany

## State Superintendent of Public Instruction:

Verne A. Duncan

## Oregon Board of Education:

Clifford L. Freeman, Chair, Portland  
Gene Stunz, Vice-Chair, Nyssa  
Joyce Holmes Benjamin, Portland  
Frank Dost, Corvallis  
Thelma Elliott, Portland  
Wally McCrae, Pendleton  
Elizabeth Meyers, Salem

## PHILOSOPHY

Linn-Benton Community College's programs and activities are based on the following statement of philosophy:

1. Individuals have different potentials for growth and self-fulfillment.
2. Learning provides the means for men and women to develop their potential, expand their knowledge and skills and become contributing members of a free society.
3. Learning opportunities should be available to the greatest number of people with minimum restrictions, based on individual and community needs.
4. Entry to LBCC should be based on an open door policy, so as to accommodate high school graduates and other adults who are capable of profiting from the instruction offered. Through proper guidance and testing, students will be able to select appropriate courses of study.
5. Appropriate standards of performance should be maintained within each course of study.
6. Educational scope of college programs should be as broad and flexible as possible, with priorities established on the basis of available resources. Within these limits the programs should be responsive to local, state and national needs.
7. Tuition and fees should be maintained at a reasonable level.

8. Local direction and control are maintained through the elected board of education, consistent with local, state and federal laws and policies.

## HISTORY

The endeavor to establish Linn-Benton Community College began in 1963 through the cooperative efforts of the Linn County Chamber of Commerce and community leaders in Benton County. In 1964, a study prepared by the University of Oregon's Bureau of Educational Research documented the need for a community college in the two-county area.

In 1966, through a local election, the Linn-Benton Community College District was formed. A year later, 2800 students enrolled in the college's first classes, held in rented facilities throughout the district.

Following voter approval of a \$6.1 million bond issue in 1970, the college moved from its headquarters at 203 W. First Avenue in Albany to the present college site. Classes were held in trailers and modular buildings during construction of permanent facilities.

As the campus has grown, so has the student body. Currently, over 28,000 persons take one or more classes through LBCC each year, or a full-time equivalent of approximately 5,000 full-time students, making LBCC the fifth largest of Oregon's 13 community colleges.

## THE CAMPUS

The 104-acre campus is centrally located in the mid-Willamette Valley, two miles south of Albany and 11 miles east of Corvallis. The main campus complex is formed by 13 contemporary brick buildings, connected by covered walkways and encircling a landscaped open courtyard. These buildings have been constructed gradually since 1970, in accordance with a master building plan that was completed with the opening of Takena Hall in 1979. Takena is the "front door" to LBCC and centralizes all student services.

Many of the college's more than 120 classrooms, shops and instructional laboratories are geared to individualized learning. Shop and laboratory equipment is designed to train students for employment in today's businesses and industries.

On-campus dining facilities include a cafeteria and the Santiam Room, a student-operated restaurant in the College Center, and the Camus Room in Takena Hall.

A barn, small greenhouse, solar-heated energy center, arboretum site, learning resource center, bookstore, 500-seat theater and physical education and sports facilities are included in the campus complex.

All main campus facilities are designed with the needs of the handicapped in mind, including special parking areas and easy access to buildings and classrooms.

The main community education centers, and other facilities throughout the district, are used to make educational opportunities easily accessible to all men and women in the area.

## ACCREDITATION

Linn-Benton Community College has been accredited by the Accrediting Commission of the Northwest Association of Schools and Colleges. Courses are approved by the Oregon State Board of Education and lower division courses have been approved for transfer to Oregon State System of Higher Education colleges and universities. A variety of Linn-Benton programs qualify for Veterans benefits with approval of the Veterans Administration.

## NON-DISCRIMINATION POLICY

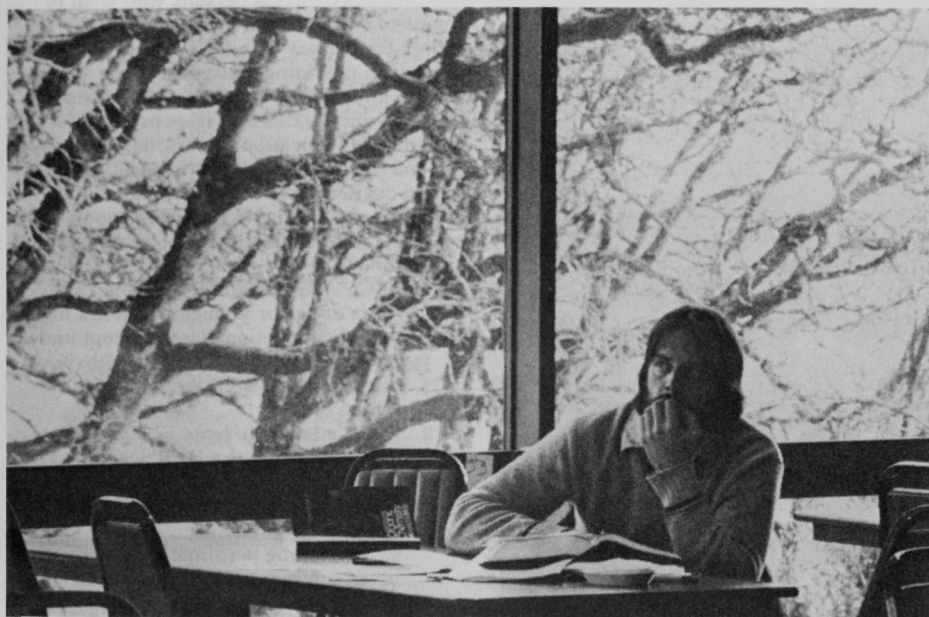
Linn-Benton Community College maintains a policy of non-discrimination and equal opportunity in employment and admissions without regard to sex, race, color, creed, national antecedents, handicap, economic need or age. Questions or concerns related to affirmative action, non-discrimination or equal opportunity should be directed to Assistant Director of Human Resources Carroyl Kleine; Linn-Benton Community College; 6500 SW Pacific Blvd.; Albany, OR 97321. Telephone: 928-2361, ext. 258.

## CATALOG INFORMATION

The information contained in the current LBCC catalog and quarterly schedule of classes reflects an accurate picture of Linn-Benton Community College at the time of publication. However, conditions can and do change. Therefore, the college reserves the right to make any necessary changes in the matters discussed herein, including procedures, policies, calendar, curriculum, course content, emphasis and cost. Students enrolling in LBCC classes shall be subject to rules, limits and conditions set forth in the current catalog, schedule of classes and other official publications of the college.



# GENERAL INFORMATION



The Commons in the College Center Building is a popular spot for lunch, meeting friends or last-minute studying.

responsibility of this office. The office is located in CC 109 or may be reached at 928-2361, ext. 322.

## STUDENT HEALTH INSURANCE

LBCC makes available a comprehensive hospitalization and accident insurance policy for students who desire such coverage. This policy is available at group rates and includes provisions for coverage of the student's dependents. The Counseling Center may be contacted for information.

## CHILD CARE

A limited child care facility is available on campus in conjunction with the parent education program. Children must be 2½ years of age and a fee is charged. Priority is given full-time students on a first-come, first-served basis. For additional information contact Community Education, Takena Hall 119 or phone 967-6108.

Child care is also available through the Linn, Benton, Lincoln Community Coordinated Child Care Council. This agency functions as a cooperative to provide affordable child care options for student parents. Additional information is available from the LBL 4-C Council, 757-8842, or the LBCC Financial Aid office.

## HOUSING

The college does not provide on-campus housing for students, but does maintain current listings of housing available in private and commercial dwellings in the area. Information may be obtained at the Student Organizations office in CC 213.

## PARKING

Parking is provided for students, staff and visitors on a first-come, first-served basis. Certain areas of the campus are designated for specific parking uses, such as motorcycle parking, bicycle parking and parking for handicapped persons.

Parking and traffic rules are available in the Security office in CC 109. Parking permits for handicapped persons must be obtained from an Oregon Department of Motor Vehicles office. Cars improperly parked are subject to fine.

## CAMPUS SECURITY

Campus safety and security is maintained by the coordinator of First Aid, Safety and Security and a staff of student aides. Administering emergency first aid, patrolling buildings and parking areas, and investigating hazardous situations is the

## STUDENT COMPLAINTS AND RIGHTS, FREEDOMS AND RESPONSIBILITIES

The college's board of education has established policy relating to student rights, freedoms, responsibilities and due process. This policy includes opportunity for the students to file complaints and outlines the due process procedure. In addition, rules for student conduct are included in the policy. Individuals who wish a copy should contact the Counseling Center in Takena Hall 103, or may call 928-2361, ext. 143.

## ACADEMIC CALENDAR

The college operates on a term or quarter system, with the fall term beginning late September and ending before Christmas. The winter term begins early January and runs until mid-March. The spring term begins late March and ends mid-June. A summer term is held for a 10-week period from mid-June until late August.

## CREDIT HOURS

Generally, a class which meets one hour per week for one term will yield one credit; a class meeting three hours per week, three credits. A lab class usually yields one credit for each two hours of lab time. Full-time attendance equals 12 credit hours.

# ENTERING THE COLLEGE



To get the classes they want, students line up early outside Takena Hall, the college's centralized location for student services.

## ADMISSIONS

Jon Carnahan, Director of Admissions and Academic Support Services  
967-6105  
Takena Hall 115

### Admission Requirements

High school graduates or non-high school graduates 18 years of age or older are eligible for admission to Linn-Benton Community College.

LBCC maintains an "open door" policy on admissions; however, special admissions standards may be imposed for specific instructional programs to effectively and responsibly administer the resources of the institution. Such standards are set to ensure each student a reasonable chance of success in a program and shall constitute the minimum standards consistent with the demands of that program. A student will always be able to qualify for admission to any program by demonstrating a mastery of the material contained in appropriate high school courses. Admissions to all instructional programs shall otherwise be on a first-come, first-serve basis.

Students applying to enter an occupational program must be 18 years of age and, in the judgment of the administration, able to benefit from instruction offered. Admission to occupational programs varies slightly, but

most are available on a first-come, first-served basis. Date of application and completion of admission procedure is an important consideration in many programs. The college reserves the right to give higher priority to enrollment of district residents in specific occupational programs.

Linn-Benton Community College provides assistance to persons who wish to complete a high school education. The college cooperates with local high school districts in providing assistance to the youth of Linn and Benton counties. LBCC supports the law which states that responsibility for providing an education to persons 17 years of age and younger rests with the local (K-12) school districts. As a result, admission requirements for high school completion programs for students under 18 years of age are as follows:

1. LBCC does not admit students 15 years of age or younger to attend high school completion classes except under unusual circumstances and with specific approval of the local high school district.
2. LBCC admits students 17 years of age or younger into the High School Continuation program or other college classes who are concurrently enrolled in a local high school:
  - a. as evening part-time students;
  - b. as summer school students; or
  - c. as part-time students, before 2 pm on a school day, upon completion of LBCC's simultaneous enrollment form and approval by the director of Admissions and Academic Support Services.
3. LBCC admits, on a selective basis, students 16 and 17 years of age into a full-time Adult High School Diploma or GED program upon completion of LBCC's referral information form and recommendation from the local high school. Behavior patterns, length of time out of school, probability of completion and recommendation of the high school weigh heavily in the college's decision to admit students.

## Admission Procedure

### Full-time Students

Those seeking admission as full-time students (12 or more credits) must complete the following steps:

1. Fill out an application for admission.
2. Provide the Admissions office with a copy of a high school transcript if applying for admission directly from high school or within one year of graduation from high school.
3. Take the Comparative Guidance and Placement (CGP) examination or provide a copy of a college transcript showing a minimum of 15 recently completed credits. Applicants who have taken the Scholastic Aptitude Test (SAT) with a standard score of 450 on each part or the American

# ENTERING THE COLLEGE

## CHOOSING A CAREER OR PROGRAM

An important beginning step in enrolling at Linn-Benton Community College is selection of a program or major. Typically, students attend LBCC to obtain employment training, to improve existing employment skills, to begin a four-year college program or for life enrichment through learning. The Counseling and Career Information Center staff is available to assist potential students of the college in making decisions regarding community college studies. Those wanting to enroll at LBCC often make consultation with a counselor a first step. The Counseling and Career Information Center is located on the first floor of Takena Hall.



## ENTERING THE COLLEGE

Council of Testing exam (ACT) with a standard score of 19 on each part will be exempt from taking the CGP examination.

4. Forward official copies of transcripts directly to LBCC's Admissions office if wanting to receive credit for college work at another institution.

### Part-time Students

Students enrolling part time (11 or fewer credits) and those enrolling for non-credit classes need only register for desired classes at the appropriate time. Those part-time students who plan to complete a certificate or degree from LBCC are encouraged to complete the admission procedure for full-time students. The process must be completed before a certificate or degree is granted.

### Limited Enrollment Admission

Students who have not completed the application process one week prior to the beginning of classes and students who wish to enroll for a one-term program may be admitted to the institution for one term only on limited enrollment status by completing the following procedure:

1. Fill out an application for admission.
2. Sign a limited enrollment agreement.

Extension of limited enrollment status must be petitioned through the director of Admissions and Academic Support Services.

### Foreign Student Admission

Linn-Benton Community College intends to serve educational needs of residents of the Linn-Benton Community College district. College programs and services are planned primarily to serve students who live permanently in the local area. Therefore, foreign student enrollment at LBCC is limited and selection is based upon fulfillment of specific admission requirements and availability of space. No student visas (I-20's) to attend Linn-Benton Community College will be issued to students still in their native countries. Nor will students possessing tourist or visitor visas be considered eligible for admission. The deadline for foreign student applications is one month prior to the beginning of the term in which the student plans to attend. Questions about specific requirements may be directed to the director of Admissions and Academic Support Services.

### Admission to Health Occupations and Other Technical Programs

Because admission to new classes each year is limited by present college staff and facilities, individuals are selected for enrollment based on completed date of application and, in selected programs, on the basis of academic and personal qualifications.

Programs in Associate Degree Nursing, Dental Assistant and Nursing Assistant, as well as other technical programs, have established waiting lists. Students interested in one of these programs should complete the application process outlined.

A student must maintain a grade point average of at least 2.00 in all specific major requirements in order to continue in any program. A student dropped under this requirement may petition the department for reinstatement. Some programs may have a more restrictive requirement which will be indicated in the college catalog under that program.

For additional information on any selective admission program, contact the Admissions Office.

### Associate Degree Nursing

Applicants for the two-year program beginning fall term, 1983, must: (1) have application and transcripts on file by a specified date, available in the Admissions office; (2) complete the National League for Nursing Pre-Nursing and Guidance Examination (dates for administration of this exam are available through the Admissions office); (3) have the total application file reviewed by the admissions committee; (4) be available for an admission interview; (5) if accepted, have a complete physical exam. Also, a negative tuberculin skin test or chest X-ray is required. ADN applicants will be notified of the disposition of their applications by June 1.

The admission procedure is reviewed annually for the ADN program and therefore subject to change. The Admissions office may be contacted for more information.

### Emergency Medical Technology

Admission to the Emergency Medical Technician certificate program is limited and based on date of application. Applications may be submitted beginning October 1. Applicants must be a high school graduate or have completed a GED and be in good physical health, as demonstrated by a physical examination prior to entry into the program.

### Dental Assistant

The Dental Assistant program is offered once each year, beginning in the fall term and ending the following summer term. Dental Assistant applicants must: (1) have application and transcripts on file in the Admissions office; (2) complete the Comparative Guidance and Placement Examination; (3) be available for an admission interview.

Applicants will be notified of the disposition of their applications in early September, following an application deadline of September 1. The Admissions office may be contacted for more information.

### Nursing Assistant

Those wanting to be admitted to the six-week Nursing Assistant program must: (1) have application and transcripts on file in the Admissions office; (2) be available for an admission interview.

Individuals are encouraged to apply at least one month prior to the beginning of the class into which they seek admission. Five classes are taught each year, two each fall and winter terms, and one spring term. Students admitted to the program are required to complete the standard physical examination form and questionnaire available through the Admissions office. The Admissions office may be contacted for more information.

### Data Processing

Applicants to the Data Processing program must demonstrate ability to enroll in WR 121 English Composition based on completion of WR 120 Basic Writing Skills with a "C" or better or demonstrated ability as verified by the Comparative Guidance and Placement Test.

Applicants must declare interest in the Data Processing program by filling out an application form at the Admissions office.

### Electricity/Electronics

Students wanting to enroll in Electricity/Electronics must take the CGP Test and demonstrate ability to enroll in Technical Math 6.551 or College Algebra MT 101 and WR 120 Basic Writing Skills. A student who has completed the prerequisite course with a grade of "C" or better is exempt from taking the CGP.

Interest in the Electricity/Electronics program must be demonstrated by filling out an application form on which students declare by the appropriate code electricity/electronics as their major.

Notification of admission to the program will be made in late summer.

### Classification of Residency

Oregon Revised Statutes 341.625 provides that a community college district shall establish tuition rates and fee schedules, subject to approval of its board of education. Different tuition rates and fee schedules may be established for students who reside in the operating district; students who do not reside in the operating district, but in the state of Oregon; and students who do not reside within the state. An additional rate may be established for foreign students.

A resident, for tuition and fee-paying purposes at Linn-Benton Community College, is a student who has lived in the Linn-Benton Community College district as a permanent resident for no less than 90 continuous days immediately preceding the first day of classes for the quarter in which residency is in question. The same rule applies to

students who qualify as non-residents of the district, but residents of the state of Oregon. Permanent residence is defined as the home to which one intends to return after any absence and in which one's dependents reside for an unlimited period of time. A non-resident of the district, but an Oregon resident, is a student who satisfies the above requirements within the state.

To qualify as a resident of the district or of the state, a student must be 18 years of age or older. If under 18 years of age, the student must have a permanent residence independent of that of his or her parent(s) or legal guardian; otherwise the residency of the student shall be the same as his or her parent(s) or guardian. An affidavit of non-support will be required for students under 18 years of age to show proof of emancipation.

The following instances will be used to define extraordinary circumstances in determining residency status for either the district or the state of Oregon:

1. A veteran who has established a permanent residence inside the community college district or the state within 90 days of separation or discharge from the service.
2. A person on active military duty or a government employee whose place of work is assigned within the district or state; i.e., Defense Department and foreign embassy.
3. A student whose non-resident parent or legal guardian moves to the community college district or state and establishes a permanent residence during the school term will be entitled to register as a resident student at the beginning of the next term.
4. A released Oregon state prisoner living in the district will be considered a resident regardless of the person's residency prior to his or her sentencing.
5. An incarcerated student paroled to an agency within the college district, or paroled in order to attend Linn-Benton Community College specifically.
6. A senior citizen, age 62 years or older, who has established a permanent residence in the college district.

Verification of residency will be determined from information provided by the applicant to the college. Based on the student's current, permanent and parent addresses, and/or recent schools attended, a residency determination initially will be made and a classification assigned. Evidence of proof is then upon the student to establish his or her residency status. A request form for change of residency and two documents establishing residency either in the district or in the state of Oregon must be submitted to change his or her classification. Examples of such documentation include valid Oregon driver's license, voter's registration in the district or the state of Oregon, rent receipts, vehicle registrations, proof of property ownership, state income tax returns for the most recent year, etc.

All foreign students enrolled on student visas and who have not obtained immigrant visas will not be allowed to change residency status during the duration of their enrollment at LBCC.

The guidelines outlined are general in nature and may require additional clarification. Questions concerning residency status in the Linn-Benton Community College district and/or the state of Oregon should be directed to the director of Admissions.

## Reciprocal Agreements

Residents of the Chemeketa Community College district and the Lane Community College district are permitted to enroll at Linn-Benton Community College in specific programs not available at those institutions. Students must be enrolled in the curriculum full time and pay the same fees as district residents. Priority may be given resident students when applications exceed available space.

Programs in which Chemeketa residents may enroll under this agreement are:

Animal Technology  
Refrigeration, Heating & Air Conditioning  
Turf Management  
Auto Body Repair  
Heavy Equipment Mechanics/Diesel  
Construction Technology  
Metallurgy Technology  
Cabinetmaking  
Small Engine Repair  
Water/Wastewater Technology  
Farrier Science  
Graphic Design

Programs in which Lane residents may enroll under this agreement are:

Animal Technology  
Nursing Assistant  
Agriculture  
Horticulture  
Refrigeration, Heating & Air Conditioning  
Civil Engineering Technology  
Science Lab Technology  
Educational Secretary  
Graphic Design  
Legal Secretary  
Printing Technology  
Water/Wastewater Technology  
Metallurgy Technology

Linn-Benton Community College district students are eligible for admission to programs at Chemeketa and Lane under this reciprocal agreement. For a list of programs subject to this agreement students may contact the Admissions office. The list of programs is approved annually by the board of education and is subject to change.

## REGISTRATION

Jon Carnahan, Director of Admissions and Academic Support Services  
967-6105

Takena Hall 115

## Registration for Credit Classes

1. Complete all admission requirements.
2. Pre-registration advisor conferences are required for:
  - a. all new students registered for 12 or more credit hours;
  - b. students sponsored by a special program, such as CETA, DVR, etc.;
  - c. students on probation or in danger of failure; and
  - d. students changing their majors or those who have questions regarding their majors.
3. All continuing students in the following vocational-technical programs should register during the continuing student registration period to insure a space in classes; spaces remaining after continuing student registration will be made available to both new and continuing students for programs in:
  - Auto Body Repair
  - Automotive Technology
  - Construction Technology
  - Civil Engineering Technology
  - Drafting Technology
  - Electricity/Electronics Technology
  - Machine Tool Technology
  - Refrigeration, Heating & Air Conditioning
  - Science Lab Technology
  - Small Engine Repair
  - Water/Wastewater Technology
  - Welding Technology
4. Full tuition payment is required at the time of registration. The Financial Aid office may be contacted for assistance in tuition payment. Students sponsored by one of the special programs or attending under a grant or scholarship must process an authorization form at the Financial Aid office prior to registering.
5. Registration materials are available in the Admissions office lobby. When all forms are completed, they are to be presented at the registration windows with full tuition payment or payment authorization from the Financial Aid office.

A Social Security number is required for positive identification of records. An identification number may be requested from the registration office for students not possessing a Social Security number.



## ENTERING THE COLLEGE

### Registration for Community Education Classes

Registration materials for community education classes, both credit and non-credit, are available in class during the first and second class meetings. Students may pre-register at the campus Registration office or the off-campus Community Education centers.

### Schedule Changes

A student taking 12 or more credits may add a course only during the first week of class. A student taking 11 or fewer credits may add a course during the first week or, with the instructor's written permission, during the second or third week.

A student may officially withdraw from a class up to the last regular day of class each term.

Students changing to another section of a course due to cancellation of a class or for other reasons must officially add the new section.

### Auditing Classes

Students may audit on a space available basis after the first day of classes. Charges for auditing are the same as for regular credit enrollment. A completed audit request form must be on file in the Registration office.

### TUITION AND FEES

#### Tuition Schedule

Tuition and fee charges for credit and non-credit classes have not been established for the 1983-84 school year. The following tuition schedule was effective during Fall term, 1982, and is subject to change by the LBCC Board of Education

Credit Classes	District	Out-Of-District	Out-Of-State	Foreign
Per credit minimum (2 credit minimum charge)	\$ 17	\$ 31	\$ 71	\$ 79
Full-time Tuition (12-20 credits)	\$204	\$372	\$852	\$948
Tuition for over 20 credits (non-refundable)	\$ 17	\$ 31	\$ 71	\$ 79

### Non-Credit & Community Education Classes

Contact Hours	Reimbursable	*Non-Reimbursable
1 - 9	\$ 7	\$ 8
10 - 18	15	17
19 - 24	22	27
25 - 40	29	36
41 - 50	43	52
51 - 60	58	68

\* An additional supply and lab fee may be charged.

#### Special Fees

Course Add	No charge
Course Drop	No charge
Credit by Examination	\$3/credit
Career Guidance and Placement Examination	\$5
Late registration	
Twelve credit hours or more, beginning first week	
(\$10 maximum charge)	\$2/day
Eleven credits or fewer, beginning third week	\$1
Official copy of LBCC transcript	\$1.50
Unofficial copy of LBCC transcript	\$.50
Physical education activity fees (some courses)	variable

#### Service Fee

Each student is assessed a \$1 per credit charge, to a maximum of \$12, as a service fee. The service fee is included in the \$17 per credit tuition and fee charge listed above. Non-credit students wishing to receive the benefits and services of the Linn-Benton Community College identification card may pay a special service fee of \$2 per term. Income derived from the fee is used to support a variety of extracurricular activities and programs, including athletics, artist and lecturer guest appearances, clubs and organizations, and a variety of campus recreational and social activities. More information regarding activities supported by the service fee is available in the Admissions and Academic Support Services office.

#### Refunds

To receive a refund students must submit a schedule change form to the Registration office within the first three weeks of the term. Refunds will be mailed after the fourth week of classes.

Official withdrawal by a student carrying 12 or more credits: full refund less \$15.

Official withdrawal by a student with 11 or fewer credits: full refund less \$5.

Official withdrawal by a student enrolled in non-credit community education classes: full refund less \$2.50.

Reduction of credit load: difference in tuition, to the minimum charge.

Classes cancelled by the college: full refund or enrollment in another class, provided the student notifies the Registration office.

The refund period for short courses scheduled to meet for less than the full term will be during the first 25 percent of class duration.

## ACADEMIC REGULATIONS

### Transferring LBCC Credits

Lower division credits may be transferred to most colleges throughout the United States. Lower division students may transfer up to 108 credit hours to schools in the Oregon State System of Higher Education. Even though D grades are passing, many schools will not accept credits for which a D has been earned. This is especially true if the course is in the student's major field. P credits may be limited or recalculated for GPA purposes upon transfer.

Students planning to transfer credits to another institution are encouraged to work with an LBCC advisor in planning an appropriate transfer program. It is also recommended that students contact the college or university to plan a transfer program of classes.

### Student Credit Load and Full-time Status

Students are considered full time if registered for 12 or more credit hours. Students may mix schedules by registering for some general studies courses and some vocational-technical courses. If students must work part time while attending the community college, they should bear in mind that most classes require one or two hours of preparation for each class hour and should adjust work schedules accordingly or register for fewer class hours. In most areas, there are suggested curriculums to cover one or two years of study; working students may schedule a two-year-equivalent curriculum over an extended period of time.

Students in lower division studies should plan to schedule an average 15 credits per term to accumulate 90 credits in a six-quarter (two-year) period. No more than 20 credits may be taken in any single term without additional charge of tuition for each credit, except when required by the student's major department. This additional charge is non-refundable. Students registering for 19 or more credit hours may be required to have an advisor's signature.

### Waiver

WR 115 Basic Writing and 1.110 Elements of Algebra may be waived as graduation requirements based on individual competency, assessed through a college testing procedure. Petition for waiver forms are available in the Admissions and Academic Support Services office.

## Challenge

Students may demonstrate mastery of specified LBCC course content, at the prerogative of the individual department and/or division. Students must be formally registered in courses they challenge.

## Credit By Examination

Credit by examination may be earned in specific LBCC classes by applying at the Registration office and paying a \$3 per credit fee. Concurrent course enrollment is not required. Examinations are administered and graded by the division in which the course is taught. The Registration office maintains a current list of classes available for credit by examination.

## College Level Examination Program

LBCC is an approved open center for administration of the College Level Examination Program (CLEP). In addition, LBCC accepts CLEP scores for college credit, which may be posted to transcripts under "advanced standing." CLEP examinations are administered through the Testing Center.

## Advanced Placement Tests

Students who complete college level work in high school under the Advanced Placement Program sponsored by the College Entrance Examination Board and who receive satisfactory grades (3, 4 or 5) in examinations administered by the Board may, on admission to LBCC, be granted comparable credit towards a degree. All examinations are subject to review and approval by the appropriate college division. Acceptable credit will be recorded as a pass grade (P) on the LBCC transcript.

Students must request that Advanced Placement scores be forwarded to the Admissions office.

## Grading System

A: Exceptional and outstanding work; 4 grade points per credit.

B: Above average college work; 3 grade points per credit.

C: Average work; 2 grade points per credit.

D: Barely passing work; 1 grade point per credit.

F: Failing work, no credit given; 0 grade points per credit.

I: Incomplete work.

W: Withdrawal\*; 0 grade points per credit.

P: Pass; credit earned (not computed in GPA).

NP: No pass; 0 grade points per credit.

NE: No entry; 0 grade points per credit.

AU: Audit; 0 grade points per credit.

\* A "W" is not recorded for individuals who withdrew prior to or during the first two weeks of the quarter.

Incomplete Rule: Uncompleted work must be completed by the end of the following term, with the exception of summer quarter, or "I" automatically is changed to a "W" if a change of grade form with an earned grade is not submitted by the instructor.

## Instructor Withdrawal

Students are expected to attend each class meeting for which they have registered. When absence does occur, it is the obligation of the student to contact the instructor to determine if make-up work is possible.

An instructor may submit a withdrawal for a student who does not attend class for a one-week period and has not made specific arrangements.

## Pass/No-Pass Option

Certain courses listed in the schedule have an "OPT" designation, indicating students have the option of taking the course for letter grade or on a pass/no-pass (P/NP) basis. The maximum number of "P" credits allowed toward an LBCC degree is 16, not including those with an obligatory "P" grade. Requests for "P" grades are processed through class instructors.

It is not advisable for a student to choose the "P" grade for major course work in his or her field of study. Students planning transfer to a four-year institution should check that institution's requirements regarding "P" grades.

## Probation

Students registered for 12 or more credits at the beginning of the third week of the quarter are subject to probation regulations.

New students are placed on probation if, during the first quarter of attendance, the grade point average drops below 1.7; or if, during the second and subsequent quarters, the accumulative grade point average drops below 2.00.

Transfer students who are on probation or who have been suspended from another institution of higher education are automatically placed on probation when admitted to Linn-Benton Community College. At the completion of one quarter of 12 or more credits a transfer student's probationary status is based only on the grade point average earned at Linn-Benton Community College.

Students are expected to complete those courses for which they have registered. A student is placed on probation upon non-completion of 50 percent of the credits registered for at the beginning of the third week of the term.

A student who has been on probation for three consecutive terms is subject to suspension.

## Honor Roll

Students who obtain a grade point average of 3.33 or better and have carried a 12-credit load or more of graded work are placed on the Honor Roll list for that quarter.

## Records Information

In accordance with the Family Education Rights and Privacy Act, LBCC considers the following to be directory and therefore public information: student's name, address and telephone listing; major field of study; participation in officially recognized activities and sports; weight and height of athletic team members; school or division of enrollment; and degrees and awards received. Students who do not wish to have any of the above information released by the college must complete a directory deletion form in the Registration office.

## Transcripts and Records

LBCC official student transcripts may be obtained from the Admissions office at a cost of \$1.50 each. Unofficial copies are available for 50 cents each. Students have access to transcripts and records as outlined in "Policy on Students Rights, Freedoms, Responsibilities and Due Process."

It is the policy of the LBCC Board of Education that records belonging to a student who has failed to repay an emergency loan, deferred tuition payment or other debt or obligation shall not be released. No official or unofficial copy of any part of the student's record shall be released, either to the student or another institution, as long as such obligations are outstanding.

## Withdrawal from School

Individuals who find they can no longer attend should officially withdraw from school. Students who withdraw on or before Friday of the third week may expect a tuition refund (see "Refunds").

## FINANCIAL AID

Rita Lambert, Director  
967-6104  
Takena Hall 105

Financial aid at Linn-Benton Community College is intended to provide opportunity for students to attend college who cannot pay the full cost of a college education. Funds are intended to supplement family and student resources through loans, grants and/or part-time employment.

The Financial Aid office provides information to students and prospective students regarding availability of financial aid, eligibility requirements for receiving aid and application procedures for financial assistance.

Certification and administration of veteran's educational benefits are also provided through the Financial Aid office.

## Application Procedures

LBCC relies on the College Scholarship Need Analysis Service (CSS) to determine the amount a family and student can contribute to the cost of college training. The use of CSS assures every applicant of equal treatment. The CSS form is used to apply for federal and state grants, work programs and loans. A processing fee is charged, which must accompany the CSS application form. The CSS requires about six weeks to process, after which financial aid eligibility can be determined.

In addition, the CSS financial aid form may be used to determine a student's eligibility for a Pell Grant (formerly called Basic Grant). For students wishing to apply only for the Pell Grant, a separate, free application form is available.

Application forms are available from the LBCC Financial Aid office, high school counselors or agency personnel. The applicant fills out and mails the application form to CSS, which will forward information to the Pell Grant Office and LBCC. When information is received from CSS, the LBCC Financial Aid staff may request additional information from the applicant, such as proof of independence or information regarding aid received at other institutions.

Applications for aid may be made throughout the year; however, since financial aid funds are limited, students applying after April 1 may find some programs no longer have funds. Applicants are notified by mail concerning eligibility for aid.

## STUDENT COSTS

Individual costs vary according to course of study, transportation requirements, housing and other factors. Examples of average student costs for nine months (three school terms) are:

### SINGLE (living with parents)

*Tuition & Fees	\$600
*Books & Supplies	225
Rent & Food	1100
Personal Expenses	675
Transportation	750
Day Care	--

### MARRIED (one dependent child)

*Tuition & Fees	\$600
*Books & Supplies	225
Rent & Food	4800
Personal Expenses	1200
Transportation	750
Day Care	1200

\* Tuition estimates are provided here so total costs can be compared. Current tuition rates may be found in the quarterly schedule of classes.

Books and supply costs vary greatly. Check with the Admissions office for current estimates in individual programs.

## DEFERRED PAYMENTS

Full-time students may apply to have up to two-thirds of their tuition deferred for a five-week period. Under the deferred tuition plan, students pay one-third at the time of registration plus any late fee assessed, with the balance payable before the end of the fifth week of the school term. Ten percent simple annual interest is charged users of the deferred payment plan.

## TYPES OF ASSISTANCE

### PELL GRANTS

Grant awards are available to students who enroll for six or more credits in any term. Awards usually range from \$200 to \$1000 for an academic year. The federal government determines the amount of award based on the applicant's financial need.

### SUPPLEMENTAL OPPORTUNITY GRANTS

The Supplemental Opportunity Grant (SEOG) is an award made to students with exceptional financial need. Grants vary from \$200 to \$1500 per academic year, depending on need of the applicant.

### STATE NEED GRANTS

State Need Grants are made from state and federal funds, awarded by the Oregon State Scholarship Commission to eligible Oregon residents. A recipient must have applied for the Pell Grant, be enrolled as a full-time student and not have earned a baccalaureate degree. Oregon Need Grants are transferrable to other Oregon institutions and renewable for a maximum of 12 quarters.

## COLLEGE BOARD SCHOLARSHIPS

A minimum of 27 full-tuition scholarships to Linn-Benton Community College are awarded annually to presently enrolled high school seniors in Linn and Benton counties. Applicants must have an overall GPA of 3.00. Special consideration will be given individuals who have shown outstanding ability in a subject area which they will pursue in college. In addition to full academic year awards, many one-quarter awards are also granted. Additional information is available from high school counselors or the LBCC Financial Aid office.

## TALENT RECOGNITION AWARDS

Full and partial tuition awards are made available annually to high school seniors and other prospective students who have demonstrated outstanding ability in a given area. Students with talent in athletics, drama, music (vocal and instrumental), agriculture or business may apply. Interested students should contact the appropriate LBCC division director.

## NURSING STUDENT AID

Students accepted into the Associate Degree Nursing program who will be attending LBCC full time may apply for Nursing Loan monies. Awards are based on financial need and availability of funds. Application procedures are the same as those for other forms of financial aid. This is a federal program and faces possible reduction or elimination due to budget cuts. For current information, contact the Financial Aid office.

## STUDENT PART-TIME EMPLOYMENT

A federally supported Student Work Program provides on-campus employment for students with financial need. Work schedules are assigned by supervisors and students are paid the federal minimum wage for work performed. Higher wages are paid to returning student workers and for jobs requiring special skills. Employment during the school term may not exceed 20 hours per week. When possible, the student is placed in a job compatible with his or her career goal.

## NATIONAL DIRECT STUDENT LOANS

The National Direct Student Loan is a federally supported loan program provided by the college to needy students. Application is made through the CSS form. Eligibility is based upon need, other resources and availability of funds. Loan repayment and interest charges begin six months after the borrower ceases half-time enrollment. Additional information regarding eligibility, annual interest deferment and cancellation provisions is available at the Financial Aid office.



## GUARANTEED STUDENT LOANS

Loans of up to \$2500 per academic year are available to students through local banks. A separate application is required for this program. Students dependent upon parents whose income exceeds \$30,000 a year must complete a needs test to determine eligibility. At the time of application, an origination fee is charged. Loan repayment and interest charges begin six months after the borrower ceases full-time enrollment. Application forms and additional information regarding deferment and cancellation provisions are available at the Financial Aid office.

Eligibility and interest rates on the National Direct and Guaranteed Loan programs are determined by the federal government and are subject to change.

## PLUS LOAN

This is a loan designed for parent(s) with dependent undergraduates. The maximum a parent could borrow is \$3,000 and the current interest rate is 12 percent. Parent(s) would begin repayment within 60 days of the loan's disbursement.

## COMMUNITY SCHOLARSHIPS

Several community service organizations and business establishments offer scholarship assistance for LBCC students. Interested individuals may contact the Financial Aid office or a high school counselor for additional information.

## REPAYMENT AND STUDENT-OWED REFUNDS TO GRANT AND LOAN PROGRAMS

If a student receiving financial aid withdraws from school during the regular, five-week refund period, the total refund due will be returned to financial aid programs. In addition, students receiving cash payments from financial aid programs (not including the Student Work Program) who withdraw from school or stop attending classes may be required to repay a portion of the aid received.

A student has responsibility for contacting the Financial Aid office if no longer attending classes. No additional financial aid will be paid a student who owes repayment for early withdrawal.

## ACADEMIC STANDARDS AND ELIGIBILITY

Students receiving financial aid and/or veterans' benefits must fulfill the standards of satisfactory progress outlined in this catalog to remain eligible for aid or continued certification:

1. Satisfactory progress toward educational goals is required of veterans and financial aid recipients. Progress is measured by credit completion and the number of terms of attendance.
2. Satisfactory credit completion will be determined by the student's academic load (half, three-quarter or full time) at the time of original certification or term the student originally received aid. Students awarded aid or certification as full-time students will be required to complete 12 or more credits with a minimum 2.0 grade point average. Three-quarter-time students will be required to earn a minimum of nine credits with a minimum grade point average of 2.0. Half-time students will be required to complete six credits with a minimum grade point average of 2.0.
3. At the conclusion of any term in which a student fails to meet minimum criteria, the Financial Aid office or Veterans Affairs office will review the student's progress and, at its option, terminate aid or certification, or allow the student not more than one additional term to correct the deficiency. Any student failing to meet minimum criteria for two terms will be denied aid or certification, except where there is demonstration of extenuating circumstances as determined by the Financial Aid or Veterans Affairs office.
4. Students awarded aid on a full-time basis will be allowed eight terms of attendance for program completion. After the eighth term of attendance, student progress will be reviewed and, upon approval by the Financial Aid, the student may be given one additional term. Students awarded aid on a three-quarter-time basis will be allowed 12 terms of attendance with a one-term extension possible upon review. Students awarded aid on a half-time basis will be allowed sixteen terms of attendance, with one term of extension upon approval. Total credits earned by students enrolled on a three-quarter-time or half-time basis also will be considered when reviewing maximum term of attendance.
5. Official records will show all transactions of withdrawals or drops beginning the third week of any term. The last day of attendance also will be listed on the withdrawal form.

6. Students certified as veterans will be allowed to enroll for 30 credits designated as "deficiency courses" and no more than four full-time terms in the Adult Basic Education/General Education Development program. Additional deficiency courses may be approved upon request.
7. Each student receiving financial aid or certified as a veteran will be given a copy of the college's policy concerning satisfactory progress at the time of the initial award or certification.
8. Based on extenuating circumstances, requests for exceptions to the Linn-Benton Community College "Standards of Satisfactory Progress" may be made to the Instructional Standards Subcommittee for Academic and Financial Aid Suspension.

Additionally, any student not in good standing with the institution will be ineligible for further aid or certification until such time as the student has been returned to good standing.

# SERVICES FOR STUDENTS



Students have several opportunities each year to participate in LBCC Performing Arts Department theater productions.

## SERVICES FOR STUDENTS

### STUDENT DEVELOPMENT

Robert Talbott, Director of Student Development  
928-2361, ext. 143  
T 103

### Counseling

Students wanting career, educational or personal counseling may contact the Counseling Center. Regular contact with a counselor can help the student clarify goals and progress smoothly through the college system. A counselor may help with personal or family problems, with meeting the new demands of college life or with selecting appropriate course work.

Classes offered by the counseling staff are designed to provide students with a

special kind of assistance. Career planning, stress management, assertiveness training, human potential and other courses are intended to help the student clarify goals and develop life management skills.

Counselors also are available part time at the Benton, Lebanon and Sweet Home Centers.

### Career Information Center

928-2361, ext 277  
T 107

The Career Information Center provides assistance to district residents who want to make a career decision. Interest testing, career counseling and printed materials are available. The Career Information System (CIS) computer terminal provides current information on job outlook, pay ranges and hiring practices throughout Oregon. An extensive collection of college catalogs also is available for use in the Career Information Center.

### ACADEMIC ADVISING

The academic advising program at LBCC helps students plan and carry out programs of study. At orientation each student is assigned an academic advisor from the instructional staff of the program in which he or she is enrolled. Students who have not selected a major or who will spend a term or more in developmental skills classes are assigned an advisor from the counseling staff.

Part-time students also are encouraged to meet with a counselor periodically for academic advising.

The Counseling Center may be contacted for more information.

### HANDICAPPED SERVICES

Handicapped students will find buildings and classrooms at LBCC readily accessible. Transportation to and from campus is available through the local shuttle system from Albany and Corvallis. Buses running from the Albany area have facilities to transport wheel chairs.

The director of Counseling and Student Support Services is an advocate for handicapped students and assists them with special needs or concerns. Career, academic and personal counseling is available at the Career Center.

The college provides specially marked handicapped parking areas. Handicapped parking permits may be obtained at your local Oregon Department of Motor Vehicles office. Student Organizations assigns storage lockers for the use of handicapped students.

### STUDENT PLACEMENT / COOPERATIVE WORK EXPERIENCE SERVICES

967-6102  
T 101

Student Placement Services assist current students, graduates and alumni of the college in obtaining part-time, full-time, temporary and permanent employment. In addition, help is offered in resume writing, interviewing skills and job search strategies.

Information provided includes labor market forecasts, current Oregon Civil Service job announcements and position descriptions, microfiche listings of current job openings and local employment information. The center staff assists students in writing cover letters, letters of inquiry, letters of application, thank you letters, letters of acceptance and letters of withdrawal. An annual employer fair is conducted to help acquaint all students with the employment needs of local industries.

Students also have the opportunity to gain college credit through work experience. This service is coordinated by Cooperative Work Experience faculty. For more information on CWE, see the description in the "Programs of Study" section of this catalog.

## INSTRUCTIONAL SUPPORT SERVICES

928-2361, ext 299  
LRC 200

Instructional Support Services provide a cluster of services designed for students, staff and community residents. Because it offers such broad services, it forms a bridge between instructional areas and student services. These developmental or growth programs provide for:

1. developing learning skills of all students;
2. identifying difficulties students face in learning; and
3. providing solutions to those difficulties.

The Instructional Support Services maintain an open door policy. All students are encouraged to take advantage of center offerings and may do so with or without earning credit. Many courses are individualized so that a student may begin or end studies at any time during the quarter.

Students may decide for themselves to improve skills or may be referred by instructors or counselors. Referrals by counselors are often based upon the results of the entrance exam or the student's previous school performance.

## TESTING SERVICES

928-2361, ext 293  
LRC 201

Instructional Support Services offer a variety of tests for currently enrolled students, prospective students and members of the community. It administers:

1. the General Education Development (GED) test for the certificate of high school equivalency;
2. the Comparative Guidance and Placement exam (CGP) for all new, full-time students;
3. the College Level Exam Program (CLEP) test for college credit by examination;
4. special admission tests for various programs on campus, such as the National League for Nursing (NLN) Pre-Nursing and Guidance Exam used by the LBCC nursing program;
5. skills tests, such as those for reading and writing;
6. vision and hearing screening; and
7. individualized testing for on-campus courses.

## TUTORIAL SERVICES

928-2361, ext 443  
LRC 203

Free, individualized tutoring is available to students who desire additional help with course work. This assistance is available in most subject areas taught at the college and may be given on a drop-in or regular basis.

## WRITING LAB

928-2361, ext 298  
LRC 213

Individual help is available to students wanting assistance with writing. Specific difficulties such as punctuation or sentence structure may be addressed or students may receive help with constructing papers. The lab is open to students who wish to drop in and those wanting to study on a regular basis.

## READING LAB

928-2361, ext 295  
LRC 213

Individual help is available to students wanting assistance with specific reading problems. Help with difficulties such as reading comprehension, speed or vocabulary improvement may be received from lab instruction. The lab is open to students who wish to drop in and those wanting to study on a regular basis.

## MATH LAB

928-2361, ext 294  
LRC 205

The Math Lab is an open study area where equipment, resources and assistance are available to help students with math difficulties. Students may check out filmstrips or video-tape programs designed to develop understanding in a particular subject area. Instructor assistance and supplemental material for math courses also are available.

One-to-one personal contact is an important feature in the lab. Assistance is available from instructional technicians during all hours that the lab is open. Stationed in strategic places, the instructional technicians help students by answering math questions, grading tests and offering encouragement.

Special tests have been created to help identify students' learning difficulties in mathematics and provide placement in courses to overcome these difficulties.

## SPECIAL INSTRUCTIONAL PROGRAMS

Mel Gilson, Coordinator  
967-6107  
CC 121

Vocational and related training is available to disadvantaged and handicapped persons aided by public and private agencies and unable to benefit from the regular college curriculum. Training programs are individually developed in order to maximize each person's training potential.

Special Instructional Programs offers specially designed programs, including those for handicapped, CETA-eligible or displaced homemaker students.

## SPECIAL NEEDS PROGRAM

This program is designed for handicapped students with special needs or those who work with special needs students. The assistance available includes assessment, tutoring services, reading for the blind, interpreters and note takers for the deaf, and a special, vocational study skills class.

Whenever possible, students are enrolled in regular vocational classes. When necessary, specially designed, individual training programs are developed using community resources and community training sites. Some special classes available are Living Skills, Therapeutic Activities for the Blind, and Sign Language. Students in the program must meet particular enrollment requirements. Specific information is available from the Special Instruction Programs office.

## VETERANS AFFAIRS

Al Barrios, Coordinator  
967-6104  
T 105

The Veterans Affairs coordinator is an LBCC staff member who provides assistance to veteran students and eligible dependents regarding college-related matters. A list of LBCC courses approved for benefits is available in this office, as well as information regarding certification and general payment policies. The coordinator will assist veterans and eligible dependents in applying for benefits. Academic advising, counseling for veterans and referral assistance also is available. The Veterans Affairs coordinator is located in the Financial Aid office.

## LIBRARY

Stanley N. Ruckman, Director of the Learning Resource Center  
928-2361, ext 335  
LRC 101

The Library has approximately 43,000 volumes and subscribes to approximately 400 periodicals and newspapers. It provides a basic reference collection, general index materials and current books and periodicals in the liberal arts and technical and vocational fields. The Library also uses a computer for reference information.

Library materials not available through LBCC often may be obtained through interlibrary loans within the state of Oregon and through the OCLC, a national library network. Students may receive help in learning to use the library from the college librarians on a drop-in basis, or may enroll in LI 127, a one-credit class designed to help students use the library more effectively.

The Library includes a good selection of non-print instructional and informational materials, such as audio tapes, video tapes, filmstrips and slide sets. Equipment for using these materials is located in the Library and



## SERVICES FOR STUDENTS

staff is available to provide assistance. Some equipment is available for short-term checkout.

## AUXILIARY SUPPORT SERVICES

Robert Miller, Director  
967-6101  
CC 214

The Auxiliary Support Services office maintains the lounge and recreational facility on the second floor of the College Center building. Additionally, the office has responsibility for assigning rooms for meetings and collecting lost and found items. Cultural and educational events held on campus throughout the year are arranged by the Auxiliary Support Services staff and tickets and information are available through this office.

## FOOD SERVICE

Stuart Eugene Neville, Manager  
967-6101  
CC 214B

The cafeteria is located on the second floor of the College Center building. Service is available from 7:30 am to 3:30 pm Monday through Friday.

The Santiam Room is a student-run restaurant located in CC 201. Daily menus are planned, prepared and served by Culinary Arts students from 8:30 to 10:00 am and 11:00 am to 12:30 pm daily.

The Camus Room, a snackbar located on the first floor of Takena Hall, serves a selection of soups, sandwiches, fruit and other items daily. Service is available from 8 am to 9 pm Monday through Thursday and 8 am to 3:30 pm on Friday.

In addition, the Food Service operation caters within the LBCC facility for special activities sponsored by the college or community. The Food Service manager may be contacted for more information.

## BOOKSTORE

928-2361, ext 187  
CC 111

The Bookstore sells texts and supplies for all LBCC courses. Art and school supplies, stationery, novelty items, magazines and general interest books also are available. Profits from the Bookstore help support the extra-curricular activities and programs at the college.

The Bookstore is open from 8 am to 5 pm Monday through Thursday, and 8 am to 4:30 pm on Friday. Evening hours are scheduled each term for the convenience of part-time students and additional hours are scheduled the first two weeks of each term. Used texts may be sold back during designated hours each finals week. Textbooks also may be purchased at the community education centers off-campus for courses taught at those locations.

## STUDENT ACTIVITIES

Blaine Nisson, Coordinator  
928-2361, ext 150  
CC 213

The college encourages activities which will complement the academic program by providing students with opportunities for leadership, cooperative planning and development of social and cultural interests. Student activities, organizations and sports are open to all students.

## Student Representative Council

The Student Representative Council provides opportunities for students to serve on college committees and earn credit for participating in leadership activities which enhance student life. The LBCC Council of Representatives is a student organization which serves as a representative and advisory group to faculty, administration and the board of education.

The council is composed of two student representatives from each academic division, plus one at-large representative. Any student enrolled in at least one credit class at LBCC is eligible to hold a representative position.

Clubs and organizations offer extra-curricular affiliation in such areas as welding, engineering, wastewater technology, nursing, drama, animal technology, business management, karate, pottery and religious organizations. For information concerning present clubs and organizations, or the establishment of new clubs, the Student Organizations office may be contacted.

## MUSIC

The college offers several opportunities for student participation in vocal and instrumental performing arts, including swing choir, concert choir and jazz ensemble. Interested students may contact the Performing Arts Department or the Humanities and Social Science Division, HSS 101, for more information.

## DRAMA

LBCC's Performing Arts Department provides several opportunities each year for students and community members to participate in drama productions. Those interested in theater and drama may contact the Performing Arts Department or the Humanities and Social Science Division, HSS 101, for more information.

## PUBLICATIONS

The students of LBCC are responsible for publishing the college newspaper, "The Commuter," which has won several awards for excellence. During much of the year the paper is published weekly. Students interested in participating may contact the Graphic Communications and Journalism Department or the Humanities and Social Science Division, HSS 101.

## RECREATIONAL SPORTS

A comprehensive recreational sports program is available to LBCC students during the academic school year. Sports programs presently established include basketball, volleyball, slow pitch softball, billiards and tennis. Interested students may contact the Activities Center, AC 102.

## INTERCOLLEGIATE ATHLETICS

Dick McClain, Athletic Director  
928-2361, ext 109  
AC 102

Linn-Benton Community College has developed a comprehensive program of inter-collegiate athletics in affiliation with the Oregon Community College Athletics Association. Programs projected for the coming school year include men's and women's cross-country, women's volleyball, men's and women's basketball, men's and women's track and men's baseball.

Athletic programs are funded through student fees.

# PROGRAMS OF STUDY



Each year, 12 second-year Construction Technology students gain "hands-on" experience in the college-sponsored house construction project.

Data Processing  
Drafting Technology  
Educational Secretary  
Electricity/Electronics Technology  
Graphic Design  
Printing Technology  
Heavy Equipment Mechanics/Diesel  
Horticulture  
Legal Secretary  
Machine Tool Technology  
Marketing  
Medical Receptionist  
Metallurgy Technology  
Real Estate  
Small Engine Repair  
Refrigeration, Heating and Air Conditioning  
Supervisory Training  
Water/Wastewater Technology  
Welding Technology

## ASSOCIATE OF ARTS DEGREES

This degree is awarded to those students who complete the requirements of a specified, two-year lower-division (transfer) program. Associate of Arts degrees are offered in:

Advertising and Promotion  
Anthropology  
Archaeology  
Business Administration  
Criminal Justice  
Dance  
English  
Fine Arts  
General Social Science  
Graphic Arts  
History  
Journalism  
Liberal Studies  
Music  
Political Science  
Pre-Elementary Education  
Pre-Secondary Education/Art  
Pre-Secondary Education/Business  
Pre-Secondary Education/Language Arts  
Pre-Secondary Education/Industrial Education  
Pre-Secondary Education/Music  
Pre-Secondary Education/Physical Education  
Pre-Secondary Education/Social Science  
Pre-Secondary Education/Speech-Theater  
Psychology  
Sociology  
Theater/Acting

## ASSOCIATE OF GENERAL STUDIES DEGREES

This degree is awarded to those students who complete a non-specified, two-year curriculum which may include transfer and/or non-transfer credit course work.

## DEGREES, CERTIFICATES AND DIPLOMAS

LBCC offers Associate of Science, Associate of Arts and Associate of General Science degrees, vocational certificates and diplomas for high school completion.

## ASSOCIATE OF SCIENCE DEGREES

This degree is awarded to those students who complete the requirements of a specified, two-year vocational-technical (non-transfer) program. Associate of Science degrees are offered in:

Accounting Technology  
Administrative Secretary  
Agriculture  
Animal Technology  
Associate Degree Nursing  
Auto Body Repair  
Automotive Technology  
Banking and Finance  
Business Management  
Civil Engineering Technology  
Construction Technology  
Criminal Justice  
Culinary Arts and Restaurant Management

**A**ll credit offerings of the college, either lower-division transfer or vocational-technical non-transfer, are taught as college-level classes.

Courses with letter prefixes (for example, WR 121, BI 103) have been approved for transfer to four-year colleges and universities. Courses numbered 100-199 are considered freshman-level courses and those numbered 200-299 are considered sophomore-level courses.

Courses with number prefixes (for example, 1.253, 6.024) are vocational-technical and generally will not transfer to four-year colleges and universities; however, there are some exceptions to this rule. Students should see an advisor concerning the transferability of vocational-technical courses.

## PROGRAMS OF STUDY

## CERTIFICATES

Certificates are awarded by the college to those students who complete specific requirements within a vocational major, on recommendation of instructional staff within that field.

**One-year certificates are offered in:**

Advanced Supervisor Development  
Agriculture  
Cabinetmaking  
Dental Assistant  
Emergency Medical Technician  
Horticulture  
Medical Transcriptionist  
Secretarial Services  
Supervision  
Water/Wastewater Plant Operations  
Welding

**General certificates are offered in:**

Farm Management  
Farrier School  
Nursing Assistant  
Supervision

## DIPLOMAS

In cooperation with local high schools, LBCC has three programs for students who wish to obtain a high school diploma or high school equivalent:

1. High School Continuation: The High School Continuation program is offered in cooperation with high schools in the LBCC district and is designed for presently enrolled high school students who need to make up deficiencies in high school credits. A high school student, 16 years of age or older, can obtain a high school diploma by attending classes at LBCC with the approval of the high school (simultaneous enrollment). Instruction is based on individual requirements and individual study, with the high school evaluating the student's educational records and determining which courses the student must take to meet graduation requirements. The diploma is issued by the local high school district.
2. Oregon Competency Based Adult High School Diploma: The primary purpose of this program is to assist individuals 18 years of age or older, or high school age students released from compulsory attendance under ORS 339.30, in completing credits required of all high school graduates in Oregon. LBCC evaluates the student's educational records and life experiences and assists in planning a study program that will meet individual needs.
3. General Education Diploma: LBCC offers the GED high school certificate through the Developmental Skills Center.

## GRADUATION REQUIREMENTS

Requirements for degrees, certificates and diplomas are subject to approval of the board of education, as well as the Oregon State Department of Education, Division of Community Colleges. Students qualifying for an Associate of Science or Associate of Arts degree will not be allowed to apply for the Associate of General Studies degree. Students completing requirements must apply for graduation at the Admissions office in Takena Hall one term prior to expected graduation.

## REQUIREMENTS FOR THE ASSOCIATE OF SCIENCE DEGREE

To receive an Associate of Science degree from LBCC, the student must:

1. Complete required courses as outlined in a vocational or technical program (see department and/or subject listings), with a minimum of 90 to 96 credits. Individual programs, by exception from the dean of instruction, may require hours in excess of 96.
2. Earn at least 24 credits at Linn-Benton Community College and be enrolled during the term degree requirements are completed.
3. Maintain an accumulative grade point average of at least 2.00.
4. Complete indicated general education courses in basic skills areas. (Note: Where options exist, students should see an advisor for specific program requirements. Some technical programs require a higher level of math than the minimum shown. In these programs, entry-level math may be substituted for the institutional math requirement. Some math and composition course requirements may be waived based on test scores on the CGP, SAT or ACT.)

## General Education Requirements . . . . .20

<input type="checkbox"/> Composition . . . . .	(6)
WR 120 Basic Writing . . . . .	3
WR 121 English Composition . . . . .	3
<input type="checkbox"/> Speech (Select one) . . . . .	(3)
1.103 Occupational Speech Communication . . . . .	3
SP 111 Interpersonal Communication . . . . .	3
SP 112 Fundamentals of Speech . . . . .	3
<input type="checkbox"/> Math (Select one) . . . . .	(4)
1.110 Elements of Algebra . . . . .	4
2.515 Business Math . . . . .	4
4.202 Math II . . . . .	4
<input type="checkbox"/> Health and PE (Select four credits) . . . . .	(4)
0.571 CPR . . . . .	1
HE 112 First Aid: Multi-Media . . . . .	1
HE 250 Health . . . . .	3
HE 252 First Aid . . . . .	3
PE 185 Activity Courses . . . . .	1
<input type="checkbox"/> Electives . . . . .	(3)

Additional courses selected from other than major area.

## REQUIREMENTS FOR THE ASSOCIATE OF ARTS DEGREE

To receive an Associate of Arts degree from LBCC, the student must:

1. (Declared majors) Complete required courses as outlined in a lower-division program (see department and/or subject listings) with a minimum of 90 to 96 credits. (Non-declared majors) Complete requirements as outlined with a minimum of 90 credits, to include the 45-credit general education requirements plus 45 elective lower-division credits.
2. Earn at least 24 credits at Linn-Benton Community College and be enrolled during the term degree requirements are completed.
3. Maintain a cumulative grade point average of at least 2.00.
4. Complete the indicated general education courses in basic skill areas. (Note: Where options exist, students should see an advisor for specific program requirements).

## General Education Requirements . . . . .45

<input type="checkbox"/> Composition . . . . .	(6)
WR 122 and WR 122 or WR 123 English Composition . . . . .	3
<input type="checkbox"/> Speech (Select one) . . . . .	(3)
SP 111 Interpersonal Speech Communications . . . . .	3
SP 112 Fundamentals of Speech . . . . .	3
<input type="checkbox"/> Health and PE (Select six credits) . . . . .	(6)
HE 112 First Aid: Multi-Media . . . . .	1
HE 250 Health . . . . .	3
HE 252 First Aid . . . . .	3
PE 185 Activities Courses . . . . .	1
<input type="checkbox"/> Humanities* (Select nine credits) . . . . .	(9)
Courses in fine art, creative writing, dance, foreign languages, literature, music, philosophy, religion, speech (except SP 112), theater . . . . .	



- ☐ Social Science\* (Select nine credits) ..... (9)

Courses in anthropology/archaeology, criminal justice, economics, geography, history, political science, psychology, sociology 3

- ☐ Math/Science\* (Select 12 credits) ..... (12)

Courses in mathematics, biology, chemistry, geology, botany, physical science

\* All courses must be for transfer credit, of 3 credits or more, and numbered 100 or above. Courses numbered 199 and 299 will not satisfy group requirements.

## REQUIREMENTS FOR THE ASSOCIATE OF GENERAL STUDIES DEGREE

To receive an Associate of General Studies degree at LBCC, the student must:

1. Complete a minimum of 90 credits, including required general education courses.
2. Earn at least 24 credits at Linn-Benton Community College and be enrolled during the term degree requirements are completed.
3. Maintain an accumulative grade point average of at least 2.00.
4. Complete the indicated general education courses in basic skill areas.

### General Education Requirements . . . . 14

- ☐ Composition ..... (3)  
WR 121 English Composition 3

- ☐ Speech (Select one) ..... (3)

1.103 Occupational Speech 3

SP 111 Interpersonal Speech 3

Communication 3

SP 112 Fundamentals of Speech 3

- ☐ Math (Select one) ..... (4)

1.110 Elements of Algebra 4

2.515 Business Math 4

4.202 Math II 4

- ☐ Health and PE (Select four credits) ..... (4)

0.571 CPR 1

HE 112 First Aid: Multi-Media 1

HE 250 Health 3

HE 252 First Aid 3

PE 185 Activity Courses 1

- ☐ Humanities, Social Science, Math/Science (Select 21 credits from the following areas) ..... (21)

The Humanities group includes such courses as art, drama, foreign languages, literature, music, philosophy and speech.

The Social Science group includes such courses as history, psychology, sociology, political science, anthropology, economics and geography.

The Math/Science group includes such courses as mathematics, biology, geology, physics, botany and physical science.

## REQUIREMENTS FOR THE CERTIFICATE

Generally, students must complete, with an accumulative grade point average of at least 2.00, a minimum of 36 credits to qualify for the one-year certificate. General

certificates require a specified number of credit hours. Refer to department listings for specific requirements.

## REQUIREMENTS FOR THE HIGH SCHOOL DIPLOMA

Refer to "Diplomas" in this section of the catalog.

# SPECIAL TRAINING PROGRAMS

## COOPERATIVE WORK EXPERIENCE

Cooperative Work Experience is an instructional program providing opportunity for students enrolled in LBCC programs to earn up to 14 hours of college credit for what they learn on the job.

CWE 280/1.280 Cooperative Work Experience is a course which allows the student to work at a job that closely parallels his or her field of study while enrolled in school.

Through work experience, the student may test interest in and suitability for an occupation while learning, being exposed to work methods not taught in the classroom and having access to equipment not normally available in the college laboratory. The student is prepared for the ever-changing needs in industry, government and service agencies, making transition from school to work under the guidance of a coordinator.

WE 202/1.201 CWE Seminar is required for all students enrolled in Cooperative Work Experience and is designed to provide opportunity to share work-related experiences with the CWE coordinator and fellow CWE students.

Course content includes career planning and preparation, writing performance objectives and job-search techniques. The seminar meets for two hours every other week and the student can earn one credit.

A student interested in building Cooperative Work Experience into a program at LBCC should discuss it with major area instructors and the CWE coordinator to plan the best term for registration and to allow ample time for locating a training station.

## RESERVE OFFICER TRAINING CORPS

### Aerospace Studies (Air Force ROTC)

Students interested in obtaining an

officer's commission in the Air Force upon graduation may join the Air Force ROTC unit at Oregon State University. Credit earned at OSU may be transferred to LBCC as electives. The student may complete a degree in any field while in the program. There is no cost to the student, and classes are arranged to fit the individual student's schedule.

**Four-Year Program.** Freshmen or sophomores may enroll in the General Military Course without obligation. The course consists of a one-hour class and one-hour leadership laboratory each term. Previous military experience may allow a waiver of all or part of the General Military Course. Before completion of the second year of the course, sophomores may apply to enter the Professional Officer Course (junior and senior years).

**Two-Year Program.** Sophomores interested in a two-year program may make application during the fall term of the sophomore year. Those selected attend a six-week summer field training before their junior year. Upon successfully completing summer camp at government expense, they may enter the Professional Officer Course in the junior and senior years.

**Scholarships.** Four-, three- and two-year scholarships are available on a competitive basis to qualified students. Each scholarship pays full tuition, laboratory fees, textbooks and a \$100 allowance per month.

For further information about Air Force ROTC opportunities, contact the Air Force ROTC, (503) 754-3291, McAlexander Fieldhouse, Room 308, Oregon State University, Corvallis, OR 97331.

## Army ROTC

A similar program also is available with the Army ROTC program at Oregon State University. For further information about Army ROTC opportunities, contact the Army ROTC office, Oregon State University, Corvallis, Oregon 97331.

# CURRICULUM GUIDE FOR TRANSFER STUDENTS

The information outlined in this section is intended to help students determine which general education courses to take at LBCC, based on the four-year college or university to which the courses will be transferred. Students are urged to plan programs with the assistance of an advisor. Oregon four-year colleges and universities accept up to 108 credits in lower-division transfer courses.

# CURRICULUM GUIDE FOR TRANSFER STUDENTS

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## OREGON STATE UNIVERSITY

(from the 1982-83 Bulletin: General Catalog)

To earn the Bachelor of Arts degree (BA) or Bachelor of Science degree (BS), a student must complete general institutional requirements and requirements of the department and school or college. Departments, schools or colleges may restrict courses used by their major students to satisfy each general educational component. For example, a department, school or college may elect not to accept a studio course to satisfy the humanities and/or arts component. General institutional requirements follow:

### General Requirements .....51

- ☐ Composition ..... (3)

WR 121 English Composition  
(minimum grade of "C")

- ☐ Physical Education ..... (3)

Activity courses. (Students over 30 years of age not required to take physical education. Only one activity course each term will be counted toward the three-term requirement).

- ☐ Humanities and/or arts ..... (12)

Art, English, foreign languages and literatures (except for first-year language courses), history, music, philosophy, religious studies, theater arts, speech communication

- ☐ Social sciences ..... (12)

Anthropology, economics, geography, political science, psychology, sociology

- ☐ Physical, biological and/or mathematical science ..... (15)

Biology, botany, zoology, mathematics, chemistry, physical science, physics

- ☐ Written and oral English communication ..... (6)

(in addition to WR 121) LBCC courses which may fulfill this requirement include JN 216, 217 Reporting I, II; SP 112 Fundamentals of Speech; WR 122, 123 English Composition; WR 227 Technical Report Writing; WR 241 Introduction to Imaginative Writing; RL 101, 102, 103 or RL 105, 106 First Year Spanish (entire sequence)

## PORTLAND STATE UNIVERSITY

(from the 1981-83 General Catalog)

All students working toward a bachelor's degree must complete (1) the general University requirements, (2) the B.A. or B.S. requirements, and (3) either the appropriate distribution and major requirements or General Studies Option II requirements. Note: General Studies majors see footnote 1 under out-of-major requirements.

### General Requirements .....14

- ☐ Composition ..... (6)

WR 121, WR 123 English Composition

- ☐ Health and Physical Education .. (8)

Five different activity courses taken in five separate terms and one health education course (HE 250). (See PSU catalog for alternative ways of meeting these requirements).

### BA or BS requirements

#### For the BA Degree:

Students must complete a minimum of 36 credits chosen from foreign languages, literature and/or philosophy. These 36 credits must include two-years study of a foreign language at college level or demonstration of equivalent proficiency. For students who have received their secondary education in another language competence in English language satisfies the foreign language requirement; but Eng 110, part of the English as a Second Language program, does not count as part of the 36 credits required for a BA degree.

#### For the BS Degree:

Students must complete a minimum of 36 credits from the College science or a minimum of 36 credits from the College of Social Science.

### Out-of-major Requirements .....54

- ☐ College of Arts and Letters<sup>2</sup> ..... (18)

Art, English, foreign languages, journalism, music, philosophy, speech, theater arts

- ☐ College of Science<sup>3</sup> ..... (18)

Biology, chemistry, earth sciences, engineering and applied science, general science, mathematics, physics

- ☐ College of Social Science ..... (18)

Anthropology, economics, general social science, geography, history, political science, psychology, sociology, women's studies.

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<sup>1</sup>General studies majors have different distribution requirements. See PSU catalog.

<sup>2</sup>WR 120, 121, 122, 123 are not accepted for arts and letters distribution requirements.

<sup>3</sup>MT 95 is not accepted for science distribution requirements.

## SOUTHERN OREGON STATE COLLEGE

(from the 1982-83 General Catalog)

The arts and sciences at Southern Oregon State College are centered in three schools (humanities, science-mathematics and social science) and in the departments within those schools.

Two types of degree programs are available to students: the general studies degree, which involves a broad program calling for the student to major in one of the school areas or in an interdisciplinary pattern; and the subject matter degree, which involves a more specialized program calling for the student to major in one of the departmental fields.

The Bachelor of Arts and Bachelor of Science degrees in subject matter fields are currently offered in art (with options in applied design or general art), biology, chemistry, communication, criminology, economics, English, geography, geology, history, mathematics-computer science, music, nursing, physics, political science, psychology, sociology-anthropology and Spanish.

### General Requirements .....63

- ☐ Oral and Written Communication (9)

Speech (courses numbered 100 or 200)  
WR 121 and WR 122

- ☐ Humanities ..... (18)

English, modern languages, journalism, music, philosophy and religion, speech-communication, theater arts (hours completed beyond three in speech or six in writing will apply toward the 18-hour requirement in the humanities)

- ☐ Science and mathematics ..... (18)

Biology, chemistry, general science, geology, mathematics-computer science, physics

- ☐ Social science ..... (18)

Anthropology, criminology, economics, general social science, geography, history, political science, psychology, sociology, social work

63

## UNIVERSITY OF OREGON

(from the 1982-83 General Catalog)

### Basic Courses

- ☐ Written English ..... (6)  
 WR 121 and WR 122 or WR 123 (with a grade of C or better)  
☐ Health Education ..... (3)  
 HE 250

### Group Requirements

To promote breadth in students' education, all students are required to complete work in each of three groups representing comprehensive fields of knowledge; the three groups are Arts and Letters, Social Sciences and Sciences.

Two separate sets of group requirements will be in effect academic year 1982-83.

The new requirements will apply fall 1982 and thereafter to new students entering the University with fewer than 30 credit hours; the new requirements will apply to all students fall 1985 and thereafter.

#### Group Requirements: Plan I

Effective fall term, 1982, students admitted to the University of Oregon with 0-29 credit hours must satisfy group requirements from the courses listed in Plan I. Effective fall term 1985, all entering students, including transfer students, must satisfy the new group requirements in Plan I. Note: Students formally admitted and enrolled with 30 or more credit hours 1982-84 should see U of O catalog for Plan II.

Group-satisfying requirements are determined by the college or school in which the degree is granted.

#### Plan I: For students in professional schools and colleges except Business Administration:

(1) Twelve approved group-satisfying courses distributed among the three groups (Arts and Letters, Social Sciences, Sciences) with no fewer than three courses in each group. All group-satisfying courses must be at least 3 credit hours and must be selected from the following list.

(2) The twelve courses must include two approved clusters (three related one-term courses) selected from two groups and from outside the student's major department at the time of graduation.

#### Plan I: For students in the College of Arts and Sciences and the College of Business Administration:

(1) Eighteen approved group-satisfying courses distributed among the three groups with six in each group. All group-satisfying courses must be at least three credits and must be selected from the list below.

(2) The eighteen courses must include three approved clusters (three related one-term courses) selected from outside the student's major department at the time of graduation; there must be one cluster from each group.

Each additional major in the College of Arts and Sciences will reduce the student's

required number of clusters by one; however, the total number of group satisfying courses will not be reduced.

No more than three courses from any one department may be used to satisfy the group requirement.

LBCC courses which may satisfy group requirements are listed below:

- Art and Letters  
 Art History, AR 201, 202, 203  
 Comparative Literature  
 English, Writing (except courses numbered below 200 or other courses used for satisfaction of written English requirements)  
 Music, MU 201, 202, 203  
 Philosophy, PH 204  
 Romance Languages (except first-year foreign languages)  
☐ Social Science  
 Anthropology (except those listed under science)  
 Economics  
 Geography (except those listed under science)  
 History  
 Philosophy, PH 202, 203  
 Political Science  
 Introduction to Psychology (minimum of 4 hours required)  
 Religious Studies  
 Social Psychology  
 Sociology  
 Women's Studies  
☐ Science  
 Anthropology, AN 101  
 Biology  
 Chemistry  
 General Science  
 Geography, GE 105  
 Geology  
 Mathematics  
 Physics

## WESTERN OREGON STATE COLLEGE

(from the 1982-83 General Catalog)

To earn the Bachelor of Arts degree or Bachelor of Science degree, a student must complete general institutional requirements and requirements of the department. LBCC courses which may satisfy general and distribution requirements are listed below:

### General Requirements .....21

- ☐ Composition ..... (9)  
 WR 121, 122, 123 English Composition 3  
☐ Speech ..... (3)  
 SP 111 Speech  
☐ Physical Education ..... (5)  
 PE 110 (not available at LBCC)  
 PE activity from at least three different areas: rhythms, gymnastics and self-testing, aquatics, individual and dual sports, team sports (transfer students may satisfy the requirement with 5 hours of activity courses approved by the PE Department)  
☐ Math ..... (4)  
 MT 100 Intermediate Algebra  
 (MT 121, 122, 123, not available at LBCC, required for elementary education majors)

### Distribution Requirements .....48

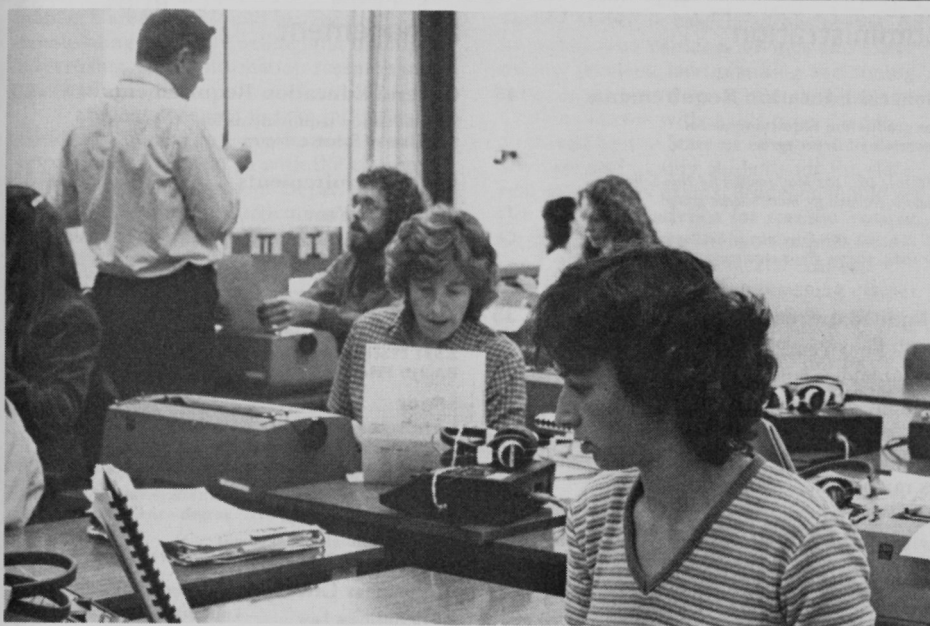
- ☐ Creative Arts (select three hours each from three areas ..... (9)  
 Art History  
 Dance  
 Introduction to Music Literature  
 Theater Arts, TA 124, 161, 162, 185  
 (maximum of 3 hours of performance courses is allowed)  
☐ Literature (Select one sequence) ..... (9)  
 EN 104, 105, 106 Intro to Lit sequence  
 EN 107, 108, 109 World Lit sequence  
 (transfer students may satisfy this requirement with any literature sequence approved by the Humanities Department)  
☐ Philosophy or Religion ..... (3)  
☐ Psychology ..... (3)  
 PY 201  
 (PY 255, not available at LBCC, is recommended for education majors)  
☐ Natural Sciences\* and Mathematics (Select one sequence) ..... (12)  
 GS 104, 105, 106 Physical Science  
 BI 101, 102, 103 General Biology  
 CH 104, 105, 106 General Chemistry  
 G 201, 202, 203 Geology  
 P 201, 202, 203 General Physics  
 MT 161, 162, 163 Mathematics for Non-Science majors  
 MT 101, 102, 200, 201, 202 Mathematics (as appropriate from entry level)  
☐ Social Science ..... (12)  
 HS 101, 102, 103 History of Western Civilization  
 One other approved social science elective (transfer students may substitute the history sequence with any social science sequence approved by the Social Science Department)

\*BI 101, GS 104, GS 105 or GS 106 recommended for elementary education majors



# BUSINESS DIVISION

DIRECTOR: Phillip V Clark



A hearing-impaired student receives instructions from his signing interpreter in the typing lab.

**T**he Business Division provides students with the professional training necessary for successful careers in today's business and technical fields. Both lower division college transfer courses and courses leading to a two-year degree are offered. Associate level degrees are available for both courses of study.

Culinary arts and restaurant management, computer programming and operations and accounting are offered in addition to the traditional secretarial and management programs.

Students may, upon recommendation of the faculty advisor and the Cooperative Work Experience staff, receive transfer or non-transfer college credit by participating in the CWE program. Further information may be found in the "Cooperative Work Experience" section of the catalog.

## BUSINESS MANAGEMENT

### Faculty:

Maynard N Chambers, Department Chair  
Gerry Conner, Mike Kauffman, Ward Ledbetter, Rich Lenhart, J T Peterson, Larry Schuetz

The Business Management Department offers programs in business administration for students transferring to four-year colleges and universities and associate degree programs in accounting technology, banking and finance, business management, marketing, real estate and supervisory training.

Each quarterly schedule of classes published by LBCC lists the advisors for each of these programs. Students are encouraged to consult with those advisors when planning their program of study.

## ACCOUNTING TECHNOLOGY

This two-year program is designed to prepare students for career positions in accounting. Accounting positions exist in public accounting firms; retail, industrial and manufacturing businesses; and in various government agencies. Career opportunities

include accounting clerk, full-charge bookkeeper, junior accountant, internal auditor and management trainee.

Students wishing to take individual courses to qualify for specific employment opportunities may do so with the consent of the Business Management Department Chair.

The Accounting Technology curriculum leads to an Associate of Science degree.

## ACCOUNTING TECHNOLOGY CURRICULUM

### Associate of Science in Accounting Technology

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

#### Major Requirements . . . . .66-67

##### Fall - First Year

2.530 Practical Accounting I	3
BA 101 Intro to Business	4
OA 121 Typing I	3

##### Winter

2.130 Business Quantitative Methods	3
2.531 Practical Accounting II	3
BA 210 Prin of Management	3

##### Spring

2.516 Business Statistics	3
2.532 Practical Accounting III	3
BA 223 Prin of Marketing	4
EC 115 Outline of Economics	4

##### Fall - Second Year

2.510 Intro to Data Processing	3
2.595 Intermediate Accounting I	3
9.743 Income Tax Preparation	3

##### ☐ Business Law Option (Select one) (3-4)

2.518 Business Law	3
BA 226 Business Law	4

##### Winter

2.415 Human Relations in Business	3
2.534 Cost Accounting	3
2.596 Intermediate Accounting II	3

##### Spring

2.222 Financial Management	3
2.535 Payroll Accounting	3
2.597 Intermediate Accounting III	3
EC 216 Intro to Labor Economics	3

#### Electives . . . . .6

Additional business courses or approved CWE

92-  
93

## BANKING AND FINANCE

This two-year program was planned in cooperation with the Linn-Benton Chapter of the American Institute of Banking and is designed both for those seeking careers with financial institutions and for those already working for financial institutions. Career opportunities are found in banks, savings and loan firms, consumer finance companies and similar financial companies.

Students wishing to take individual courses to qualify for special employment opportunities may do so with the consent of the Business Management Department. The specialized banking courses will be offered evenings only during the school year.

The Banking and Finance curriculum leads to an Associate of Science degree.

## BANKING AND FINANCE CURRICULUM

### Associate of Science in Banking and Finance

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

#### Major Requirements . . . . .57-58

##### Fall - First Year

2.530 Practical Accounting I	3
BA 101 Intro to Business	4
OA 121 Typing I	3

##### Winter

2.130 Business Quantitative Methods	3
2.531 Practical Accounting II	3
BA 210 Prin of Management	3

##### Spring

2.516 Business Statistics	3
2.532 Practical Accounting III	3
BA 223 Prin of Marketing	4
EC 115 Outline of Economics	4

##### Fall - Second Year

2.510 Intro to Data Processing	3
9.768 Prin of Bank Operations	3

☐ Business Law Option (Select one) (3-4)

2.518 Business Law	3
BA 226 Business Law	4

##### Winter

2.415 Human Relations in Business	3
9.773 Money and Banking	3

##### Spring

2.222 Financial Management	3
9.770 Bank Management	3
EC 216 Intro to Labor Economics	3

#### Electives . . . . .15

Additional business courses	6
Additional banking and finance courses or approved CWE	9

92-  
93

## BUSINESS ADMINISTRATION

This two-year program is designed for students who plan transfer to a four-year university to complete a baccalaureate degree in business administration. It is important that students check with the business transfer curriculum advisor before enrolling in these classes.

The Business Administration curriculum leads to an Associate of Arts degree.

## BUSINESS ADMINISTRATION CURRICULUM

### Associate of Arts in Business Administration

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree

MT 161, 162, 163 Mathematics for Non-Science

Majors, required for math/science group requirement.

EC 201, 202, 203 Principles of Economics, required for social science group requirements.

#### Major Requirements . . . . .35

##### Fall - First Year

BA 101 Intro to Business	4
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##### Winter

BA 226 Business Law	4
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##### Spring

CS 101 The Nature of Digital Computers	4
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##### Fall - Second Year

BA 210 Prin of Management	4
BA 211 Prin of Accounting I	3
WR 227 Tech Report Writing	3

##### Winter

BA 212 Prin of Accounting II	3
BA 223 Prin of Marketing	4
BA 235 Intro to Business Statistics	4

##### Spring

BA 213 Prin of Accounting III	3
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#### Electives . . . . .10

Additional courses or approved CWE. 90

## BUSINESS MANAGEMENT

This two-year program is designed to meet the needs of persons preparing for employment in a variety of business occupations. The successful completion of this course of study should afford the graduate an entry level position and lead eventually to middle-management positions. Career opportunities include management positions in retail business, public utilities, insurance companies, real estate agencies, transportation firms and manufacturing industries. Specific variations in the curriculum are available for students interested in small-business management.

Students wishing to take individual courses to qualify for specific employment opportunities may do so with the consent of the Business Management Department.

The Business Management curriculum leads to an Associate of Science degree.

## BUSINESS MANAGEMENT CURRICULUM

### Associate of Science in Business Management

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

#### Major Requirements . . . . .54-55

##### Fall - First Year

2.530 Practical Accounting I	3
BA 101 Intro to Business	4
OA 121 Typing I	3

##### Winter

2.130 Business Quantitative Methods	3
2.531 Practical Accounting II	3
BA 210 Prin of Management	3

##### Spring

2.516 Business Statistics	3
2.532 Practical Accounting III	3
BA 223 Prin of Marketing	4
EC 115 Outline of Economics	4

##### Fall - Second Year

2.113 Personnel Management	3
2.510 Intro to Data Processing	3

☐ Business Law Option (Select one) (3-4)

2.518 Business Law	3
BA 226 Business Law	4

##### Winter

2.415 Human Relations in Business	3
9.250 Wage Administration	3

##### Spring

2.222 Financial Management	3
EC 216 Intro to Labor Economics	3

#### Electives . . . . .18

Additional business courses or approved CWE.

92-  
93

## MARKETING

The Marketing program is designed to prepare students for careers in sales to the public. Careers are found in retailing, wholesaling, specialty selling and buying, advertising, sales information research and purchasing.

Students wishing to take individual courses to qualify for specific employment opportunities may do so with the consent of the Business Management Department.

The Marketing curriculum leads to an Associate of Science degree.

### MARKETING CURRICULUM

#### Associate of Science in Marketing

##### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

##### Major Requirements . . . . .60-61

###### Fall - First Year

2.530 Practical Accounting I	3
BA 101 Intro to Business	4
OA 121 Typing I	3

###### Winter

2.130 Business Quantitative Methods	3
2.531 Practical Accounting II	3
BA 210 Prin of Management	3

###### Spring

2.516 Business Statistics	3
2.532 Practical Accounting III	3
BA 223 Prin of Marketing	4
EC 115 Outline of Economics	4

###### Fall - Second Year

2.110 Salesmanship	3
2.510 Intro to Data Processing	3

###### ☐ Business Law Option (Select one) (3-4)

2.518 Business Law	3
BA 226 Business Law	4

###### Winter

2.109 Public Relations	3
2.134 Retail Merchandising	3
2.415 Human Relations in Business	3

###### Spring

2.222 Financial Management	3
2.308 Advertising	3
EC 216 Intro to Labor Economics	3

##### Electives . . . . .12

Additional business courses or approved CWE.

92-

93

## REAL ESTATE

This program is designed to prepare people for entry-level jobs in real estate or a variety of jobs in associated businesses, such as commercial banking, savings and loans, escrow services, land planning and zoning services, appraisal services and site selection. Certain courses within this program are approved by the State of Oregon Real Estate Division and qualify students for the state real estate sales exams. Students should see the Real Estate advisor for specific State of Oregon Real Estate Division requirements.

Many of the specialized real estate courses are offered only as evening classes.

The Real Estate curriculum leads to an Associate of Science degree.

Note: This program may not be available, depending on current conditions and student demand. Check with the Business Division advisor regarding program status and course offerings.

### REAL ESTATE CURRICULUM

#### Associate of Science in Real Estate

##### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

##### Major Requirements . . . . .60-61

###### Fall - First Year

2.530 Practical Accounting I	3
BA 101 Intro to Business	4
OA 121 Typing I	3

###### Winter

2.130 Business Quantitative Methods	3
2.531 Practical Accounting II	3
BA 210 Prin of Management	3

###### Spring

2.516 Business Statistics	3
2.532 Practical Accounting III	3
BA 223 Prin of Marketing	4
EC 115 Outline of Economics	4

###### Fall - Second Year

9.283 Real Estate Practice	3
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###### ☐ Business Law Option (Select one) (3-4)

2.518 Business Law	3
BA 226 Business Law	4

###### ☐ Data Processing Option (Select one) . . . . . (3)

2.510 Intro to Data Processing	3
CS 101 The Nature of Digital Computers	3

###### Winter

2.415 Human Relations in Business	3
9.291 Real Estate Law	3

###### Spring

2.222 Financial Management	3
9.277 Real Estate Appraisal	3
9.283 Real Estate Finance	3

###### ☐ Salesmanship Option (Select one) (3)

2.110 Salesmanship	3
9.287 Real Estate Salesmanship	3

##### Electives . . . . .15

Additional business courses or approved

CWE

Additional real estate courses

95-

96

## SUPERVISION

This program is designed as a series of courses in supervisory methods and techniques, available to any individual currently in a supervisory position or preparing for such a position. The program also is designed primarily for evening students; supervisory training courses are offered only during the evening.

Three curriculum options are available. Students may complete an 18-credit program in supervision, a 45-credit program in advanced supervisor development or a 91-credit program in supervision leading to an associate degree. Students are encouraged to first complete the 18- and 45-credit programs before completing the associate degree program.

The Supervision and Safety curriculums lead to an Associate of Science degree in Supervision or a certificate in Supervision or Advanced Supervisor Development.

### SUPERVISION CURRICULUMS

#### Associate of Science in Supervisory Training

##### General Education Requirements . . . . .20

See graduation requirements of Associate of Science degree

##### Major Requirements . . . . .32

2.518 Business Law	3
2.530 Practical Accounting I	3
9.500 Elements of Supervision	3
9.502 Psychology for Supervisors	3
9.506 Human Relations in Business	3
9.508 Labor-Management Relations	3
9.514 Cost Accounting/Supervisors	3
9.555 Industrial Safety I	3
BA 101 Intro to Business	4
EC 115 Outline of Economics	4

##### Electives . . . . .39

Additional business courses

Approved CWE or credit for prior work experience

91

#### Certificate in Supervision

##### Major Requirements . . . . .13

9.500 Elements of Supervision	3
9.502 Psychology for Supervisors	3
9.506 Human Relations in Business	3
BA 101 Intro to Business	4

##### Electives . . . . .5

Additional business courses

18



## Certificate in Advanced Supervisor Development

### Major Requirements . . . . . 28

1.103 Occupational Speech Communication	3
9.500 Elements of Supervision	3
9.502 Psychology for Supervisors	3
9.506 Human Relations in Business	3
9.508 Labor-Management Relations	3
9.555 Industrial Safety I	3
BA 101 Intro to Business	4
WR 120 Basic Writing Skills	3
WR 121 English Composition	3

### Electives . . . . . 17

Additional business courses  
Approved CWE or credit for prior work  
experience

45

## BUSINESS COURSES

### 1.280 CWE Accounting

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to accounting. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 1.280 CWE Business Management

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to business management. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 1.280 CWE Marketing

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to marketing. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 2.111 Labor-Management Relations

(3 class hrs/wk 3 cr) Sp

Explores the nature of the collective bargaining system in the United States and the parties who have a vital interest in operation of the system.

### 2.113 Personal Management

(3 class hrs/wk 3 cr) F

Course deals primarily with the first-line supervisor, emphasizing the supervisor's relations with subordinates, colleagues, boss and the union in a wide variety of situations. Prerequisite: 2.119 Introduction to Management; BA 101 Introduction to Business.

### 2.119 Introduction to Management

(3 class hrs/wk 3 cr) F/W/Sp

Course allows opportunity to study management essentials of both merchandising and industrial organizations. Emphasizes the complex marketing problems of policies, purchasing procedures, financial requirements, budgeting, human relations, physical facilities and government regulations.

### 2.125 Income Tax Preparation (Basic)

(6 class hrs/wk 6 cr) F

Course designed to assist potential or established income tax return preparers in becoming more proficient in preparing personal income tax returns.

### 2.130 Business Quantitative Methods

(3 class hrs/wk 3 cr) W

Introduction to number and symbol vocabulary, manipulating symbols and numbers, algebraic equations and their solutions, equalities and inequalities, break-even analysis, inventory and production models, linear programming, queuing theory and network models.

### 2.131 Elements of Marketing

(3 class hrs/wk 3 cr) Sp

General survey of the nature, significance and scope of marketing. Emphasizes channels of distribution; marketing of consumer shopping, specialty and other goods; service marketing, middlemen, wholesaling, shipping and warehousing; standardization; grading and pricing; and government regulation of completion.

### 2.134 Retail Merchandising

(3 class hrs/wk 3 cr) W

Principles of efficient retail organization and management, including location and layout, types of store organization, personnel management, credit and collection, store protection and other operating activities.

### 2.135 Visual Merchandising

(5 class hrs/wk 4 cr) W/Sp

Application of line and display principles to interior and window display. Emphasizes practical problems of arrangement, improvisation, color lighting, signing, safety and seasonal displays. Students are given practice in creating displays in campus display areas and in various stores in the community.

### 2.140 Promotional Strategy

(3 class hrs/wk 3 cr) Sp

Course uses case problems to design marketing promotion. Includes consumer psychology, advertising, reseller stimulation and other communication tools as a part of the overall promotion mix.

### 2.196 Introduction to Real Estate

(3 class hrs 3 cr) F

This course is a general overview of the major factors involved in the purchase, sale, lease or exchange of real estate.

### 2.220 Personal Finance

(3 class hrs/wk 3 cr)

Study of home financing, installment buying, insurance, investments, will and other phases of managing family finances.

### 2.222 Financial Management

(3 class hrs/wk 3 cr) Sp

Topics covered deal with financing a business, emphasizing the tax environment, analysis of financial statements, working capital management, short- and long-term financial planning, budgeting and control. Prerequisite: 2.531 Practical Accounting II or BA 212 Principles of Accounting II.

### 2.308 Principles of Advertising

(3 class hrs/wk 3 cr) Sp

Introduction to the role of advertising in the distributive process. Emphasizes various media; copy, illustration and layout; retail advertising and promotion; advertising budget; and an advertising program.

### 2.415 Human Relations in Business

(3 class hrs/wk 3 cr) F/W/Sp

Assists the supervisor in understanding the people with whom he or she works, with emphasis on psychological aspects, perceptions, learning processes, emotions, attitudes and personalities.

### 2.420 Human Relations I: Your Attitude is Showing

(3 class hrs/wk 3 cr) F/W/Sp

Course uses text "Your Attitude is Showing" to give greater confidence for dealing with human relations problems. Includes philosophy, principles and guidelines to follow in dealing with human problems. Emphasizes positive attitudes and their contribution to career success.

### 2.516 Introduction to Business Statistics

(3 class hrs/wk 3 cr) Sp

Introduction to methods and terminology used in statistical reports generated in business and industry. Topics include descriptive statistics; probability; binomial, normal, "t" and chi-square distributions; linear regression and correlation; and hypothesis testing. Prerequisite: 2.130 Business Quantitative Methods or instructor approval.

### 2.518 Business Law

(3 class hrs/wk 3 cr) W/Sp

Introduction to study of law and business, legal reasoning and the evolutionary process of law, the legal environment of business and principles of contract law. Emphasizes the study of business agreements—their information, operation, performance and discharge.

### 2.530 Practical Accounting I

(5 class hrs/wk 3 cr) F/W/Sp

Fundamental principles of double-entry accounting, general journals and ledgers, business forms, simple financial statements and the completion of the accounting cycle. Emphasizes case receipts and payments, payroll accounting, purchases, sales, promissory notes and inventories.

### 2.531 Practical Accounting II

(5 class hrs/wk 3 cr) F/W/Sp

A continuation of 2.530 Accounting I, with an expansion of the accounting cycle to include special journals, ledgers and business forms. Emphasizes accounting for a partnership. Prerequisite: 2.530 Practical Accounting I.

**2.532 Practical Accounting III**

(5 class hrs/wk 3 cr) F/W/Sp

A third course in practical accounting, including entries requiring analysis and interpretation, unearned and accrued items, depreciation of assets, the voucher system, payroll records, property sales and taxes. Emphasizes accounting for a corporation. Prerequisite: 2.531 Practical Accounting II.

**2.534 Cost Accounting**

(3 class hrs/wk 3 cr) W

Course relates theory to practical problems in analysis and control of material, labor and overhead costs in manufacturing. Emphasizes the job cost system. Prerequisite: 2.531 Practical Accounting II or BA 212 Principles of Accounting II.

**2.535 Payroll Accounting**

(3 class hrs/wk 3 cr)

Course provides practice in all payroll operations, including recording of accounting entries involving payroll, preparation of tax returns and a review of state and federal laws affecting payrolls.

**2.585 Management Decision Simulation**

(3 class hrs/wk 3 cr)

Course uses a sophisticated management simulation program which provides practical experience with the decision-making process. Market, production and financial environments are simulated by computer to enable the student to move rapidly through what would normally take many years. Prerequisite: Instructor approval for second-year students with no business background.

**2.595 Intermediate Accounting I**

(3 class hrs/wk 3 cr) F

Advanced study of accounting theory and practice for measurement of income and valuation of assets in financial statement presentation. Reviews accounting concepts and alternative approaches to various problems. Prerequisite: 2.532 Practical Accounting III or BA 213 Principles of Accounting III, or instructor approval.

**2.596 Intermediate Accounting II**

(3 class hrs/wk 3 cr) W

Continuation of Intermediate Accounting sequence. Covers advanced concepts and procedures of valuation for various types of assets and liabilities, including special problems related to investments, plant, property and equipment, consolidations and corporate accounting. Prerequisite: 2.595 Intermediate Accounting I.

**2.597 Intermediate Accounting III**

(3 class hrs/wk 3 cr) Sp

Continuation of Intermediate Accounting sequence. Emphasizes fund flow analysis, financial errors, preparing statements from incomplete data, correcting errors in prior year statements and price level changes. Prerequisite: 2.596 Intermediate Accounting II.

**2.756 Reading and Conference: Business Management** (3 class hrs/wk 1-3 cr)

A course of supervised individual study related to knowledge and skills acquired in previous courses within the Business Division curriculum. Subjects, projects, class hours and credits must be approved by the Business Management Department.

**9.254 Small Business Bookkeeping**

(3 class hrs/wk 3 cr)

Students work with journals, ledgers and control systems and prepare income statements and balance sheets.

**9.500 Elements of Supervision**

(3 class hrs/wk 3 cr) F

Introduction to responsibilities of a supervisor in industry, such as organization, duties and responsibilities, human relations, grievance, training, rating, promotion, quality-quantity control and management-employee relations.

**9.502 Psychology for Supervisors**

(3 class hrs/wk 3 cr) Sp

Course assists in understanding the people with whom the supervisor works, emphasizing psychological aspects, perceptions, learning processes, emotions, attitudes and personalities.

**9.504 Employee Training**

(3 class hrs/wk 3 cr) Sp

Introduction to the supervisor's responsibility for developing employees through training, orientation and induction. Includes vestibule and on-the-job techniques, job instruction principles, apprenticeship training, technical training, supervisory training and management development, use of outside agencies and advisory committees.

**9.506 Human Relations (Developing Supervisory Leadership)**

(3 class hrs/wk 3 cr) Sp

A practical application of basic psychology in building better employer-employee relationships through human relations techniques.

**9.508 Labor-Management Relations**

(3 class hrs/wk 3 cr)

Surveys the history and development of the labor movement, including the National Labor Relations Act, the Taft-Hartley Act, the supervisor's responsibility for good labor relations, the union contract and grievance procedure.

**9.509 Applied Economics**

(3 class hrs/wk 3 cr)

Introduction to significant economic facts and development of a critical attitude toward industrial economics. Includes institutions and practices that determine the social environment and management-supervisor-employee relationships to economics and local industry.

**9.512 Methods Improvement for Supervisors** (3 class hrs/wk 3 cr) Sp

Introduction to the supervisor's responsibility for job methods improvement. Includes principles of work simplification, administration and the problems involved, and motion-study fundamentals for supervisors.

**9.514 Cost Control for Supervisors**

(3 class hrs/wk 3 cr) F

Introduction to cost control and its functions in industry and the supervisor's responsibility for costs. Includes the factors in cost control: costs, materials, waste, salvage, quality control and control of time.



Business Management students review for mid-term exams.

**9.516 Personnel Management**

(3 class hrs/wk 3 cr)

Surveys personnel techniques for which the supervisor is partially responsible, including selection, placement, testing, orientation, training, counseling, merit rating, promotion, transfer and training for responsibility.

**9.518 Organization and Management**

(3 class hrs/wk 3 cr) W

Introduction to the supervisor's responsibility for planning, organizing, directing, controlling and coordinating. Acquaints the supervisor with these basic functions of an organization and the responsibility for carrying them out in accordance with the organization's plan. Includes establishing lines of authority, function of departments or units, duties and responsibilities, policies and procedures, and rules and regulations.

**9.520 Wage Administration**

(3 class hrs/wk 3 cr)

Survey of the history of wages and inequalities in rates of pay; management and union movement toward a "fair wage" plan; the supervisor and the job descriptions, specifications, evaluations and classification; the wage laid down by the Department of Labor; the Federal Employment Service; and wage administration and the line organization.

**9.524 Management Controls and the Supervisor**

(3 class hrs/wk 3 cr)

Introduction to basic principles of management control, including delegation of responsibility through use of quality control, production control, control over materials, control over personnel and organization.

**9.555 Industrial Safety I**

(3 class hrs/wk 3 cr) F

Course stresses the supervisor's role in safe employment of people, including basic principles, safety training, employee safety participation, enforcement, human factors in safety and protective equipment.

**9.556 Industrial Safety II**

(3 class hrs/wk 3 cr) W

Introduces specific areas of industrial safety, including plant inspection, accident investigation, maintenance, material handling, hand tools, electrical hazards, machine guarding, falls, fire prevention and personal protective equipment.

**9.557 Industrial Safety III**

(3 class hrs/wk 3 cr) Sp

Covers Oregon Safety Employment Act for the development, administration and enforcement of safety and health laws and standards. The Occupational Safety and Health Act of 1970 also is reviewed. Includes employer and employee responsibilities, inspections, complaints, citations and penalties.

**9.743 Income Tax Preparation**

(3 class hrs/wk 3 cr)

Course covers the federal income tax laws, emphasizing the importance of adequate and suitable financial records. Helps the taxpayer compute required reports and taxes due. At class option, special interests, such as farming and manufacturing, may be discussed.

**9.768 Principles of Bank Operations**

(3 class hrs/wk 3 cr)

A descriptive orientation to fundamentals of bank functions. Helps the beginning banker acquire a broad operational perspective.

**9.769 Analyzing Financial Statements**

(3 class hrs/wk 3 cr)

Reviews basic accounting principles for those who have studied accounting and provides background for financial statement analysis by those with no accounting background. Course consists of two major sections: characteristics of financial statements and financial statement analysis.

**9.770 Bank Management**

(3 class hrs/wk 3 cr)

Survey of new trends in the philosophy and practice of management. Study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management.

**9.771 Law and Banking**

(3 class hrs/wk 3 cr)

Introduction to basic American law, presenting the rules of law which underlie banking. Topics include jurisprudence, the court system and civil procedure, contracts, quasi-contracts, property, torts and crimes, agencies, partnerships, corporations, sales of personal property, commercial paper, bank deposits and collections, documents of title and secured transactions. Emphasizes the Uniform Commercial Code.

**9.773 Money & Banking**

(3 class hrs/wk 3 cr)

Course stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student. Historical treatment is kept to a minimum. Emphasizes such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios.

**9.774 Agricultural Finance**

(3 class hrs/wk 3 cr)

Reflecting the rapid growth of the off-farm agri-business sectors, this course emphasizes general principles associated with evaluation of management and use of capital, rather than land and labor resources, which are more closely aligned with agriculture production.

**9.776 Home Mortgage Lending**

(3 class hrs/wk 3 cr)

Subject is presented from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. Includes the mortgage market, acquisition of a mortgage portfolio, mortgage plans and procedures and the mortgage loan officer's role in portfolio management.

**9.777 International Banking**

(3 class hrs/wk 3 cr)

Introductory course for those working in international departments, as well as for those involved in the domestic activities of their banks. Presents the basic framework and fundamentals of international banking: how money is transferred from one country to another; how trade is financed; what the international agencies are and how they supplement the work of commercial banks; and how money is changed from one currency to another.

**9.778 Marketing for Bankers**

(3 class hrs/wk 3 cr)

Course directed toward bank personnel who know little about marketing as it pertains to banking. Includes fundamental concepts and philosophy of marketing; market information and research; product distribution, promotion and pricing strategies; and market planning.

**9.780 Trust Functions and Services**

(3 class hrs/wk 3 cr)

Course presents a complete picture of services rendered by institutions engaged in trust business. Providing an introduction to the services and duties involved in trust operations, the course is intended for all bankers, not only those engaged in trust business, and endeavors to keep clear the distinction between business and legal aspects of trust functions.

**9.781 Banking Investments**

(3 class hrs/wk 3 cr)

Introduction to the nature of primary reserves and loanable funds and how their uses are determined. Analyzes the primary and secondary reserve needs of commercial banks, sources of reserves and their random and cyclical fluctuations and shows the influence of these factors on investment policy. Analysis is followed by a study of yield changes as they affect a bank's long-term holdings.

**9.782 Installment Credit**

(3 class hrs/wk 3 cr)

Introduction to techniques of installment lending. Emphasizes establishing credit, obtaining and checking information, servicing loans and collecting amounts due. The bank's installment credit operation is scrutinized, along with inventory development, advertising and public relations.

**9.783 Savings and Time Deposit Banking**

(3 class hrs/wk 3 cr)

Review of the economics of the savings process to clarify important differences between financial savings by individuals or organizations and real savings that appear as capital formation. Different types of financial savings are reviewed to describe the system of flow of income to capital investment.

**9.784 Bank Letters and Reports**

(3 class hrs/wk 3 cr)

Course designed for bank officers, supervisors and employees who dictate or review correspondence. Includes mechanical forms of bank letters and the psychological principles that help the letter writer achieve best results. Reviews letter forms, emphasizes principles underlying modern correspondence and examines different kinds of bank letters.



**9.785 Loan and Discounts**

(3 class hrs/wk 3 cr)

Presents essential facts about promissory notes, including calculating interest and discounting commercial paper; guaranties and general collateral agreements; examining and processing documents accompanying notes secured by stocks, bonds and savings account passbooks; and concepts of attachment, perfection, priority, default and foreclosure.

**9.787 Federal Reserve System**

(3 class hrs/wk 3 cr)

Examination of operations and policies of the Federal Reserve System during critical periods over the past 60 years. Course is topical rather than chronological, enabling students to compare and contrast Federal Reserve policies dealing with similar problems at different times. Attention is given to international monetary affairs and economic developments affecting the fiscal system.

**9.788 Safe Deposit Seminar**

(3 class hrs/wk 1 cr)

Course designed for both new and experienced bank employees who are interested in safe deposit operations and want to become more effective on the job. Includes safe deposit security, legal concerns, customer relations, record keeping and procedures for safe keeping. Note: Five-week course.

**9.789 Loan Officer Development Seminar**

(3 class hrs/wk 3 cr)

Course in practical lending skills for newly appointed lending officers. Includes six major subject areas: initial loan interviews, administrative decisions and techniques, documentation for the credit file, problem loans, conveying unpleasant information and managing loan portfolios.

**9.790 Federal Regulation of Banking**

(3 class hrs/wk 3 cr)

Comprehensive treatment of the "way" and "what" of federal banking regulation. Recommended for both beginning and advanced students and new and experienced bankers. Includes agencies regulating banks, bank charters, bank reports and examinations, federal limitations on banking operations and the regulation of bank expansion.

**9.791 Loss Prevention Seminar**

(3 class hrs/wk 1 cr)

Course focuses on check cashing, check swindling, bank holdups and security procedures. Note: Five-week seminar.

**9.792 Selling Bank Services**

(3 class hrs/wk 1 cr)

Course teaches tellers and new account personnel how to recognize and meet bank customer needs: checking accounts, savings, services, loan to individuals, safe deposit boxes, travelers checks and cross-selling. Note: Five-week seminar.

**9.793 Securities: Stocks and Bonds**

(3 class hrs/wk 1 cr)

Provides bank personnel, especially trust operations personnel, with knowledge about securities; stocks and bonds and how they function; how to transfer ownership; classes and kinds of stocks, bonds and government securities; and the newly developed CUSIP Securities Identification System. Note: Five-week seminar.

**9.794 Bank Cards**

(3 class hrs/wk 3 cr)

Course presents an overview of the bank card industry, with the dual objectives of helping the student understand the role of the bank card in the economy and the basic operational problems involved in successful management of a bank card plan.

**BA 101 Introduction to Business**

(4 class hrs/wk 4 cr) F/W/Sp

Survey course in business, emphasizing organization, operation and management. It is intended to orient students to the field of business and to help them determine their field of major concentration.

**BA 106 DECA Marketing-Management Organization**

(2 class hrs/wk 2 cr) F/W/Sp

Develops student leadership qualities, provides opportunities for student/community participation and provides a setting for self-improvement by students in conjunction with the DECA club.

**BA 131 Introduction to Business Programming**

(6 class hrs/wk 4 cr) F/W/Sp/Su

An introduction to the historical development of digital computers, how computers work, one conversational language, programs and flow charts, algorithms, and social and technological implications of computers. A symbolic machine-oriented language will be used to explain data flow and several problems will be solved utilizing a procedures-oriented language, called BASIC. Note: Requires registration in both lecture and lab.

**BA 210 Principles of Management**

(3 class hrs/wk 3 cr) W

Course designed for the student who will major in management at a four-year institution. Provides the foundation for later courses in administration, management philosophies and management science.

**BA 211 Principles of Accounting I**

(3 class hrs/wk 3 cr) F/W

Techniques of account construction and preparation of financial statements. Emphasizes application in problems of recording, measuring income, purchasing, sales, inventories, special journals and internal control of cash.

**BA 212 Principles of Accounting II**

(3 class hrs/wk 3 cr) W/Sp

Course includes accounting systems and management control, concepts and principles of depreciation, merchandise inventory, evaluation, partnership and corporate accounting, capital stock, investments and dividends. Prerequisite: BA 211 Principles of Accounting I or instructor approval.

**BA 213 Principles of Accounting III**

(3 class hrs/wk 3 cr) Sp

Introduction to control accounting for departments and branches, cost accounting for manufacturing plants, income taxes and their effect on business decision and analysis of financial statements. Prerequisite: BA 212 Principles of Accounting II or instructor approval.

**BA 217 Basic Accounting and Financial Analysis**

(3 class hrs/wk 3 cr)

A one-term terminal course for students not majoring in business. Introduction to the recording, summarization, presentation and interpretation of accounting data. Emphasizes basic accounting principles and terminology, the accounting cycle and analysis of financial reports.

**BA 223 Principles of Marketing**

(4 class hrs/wk 4 cr) F/W/Sp

General survey of the nature, significance and scope of marketing. Emphasis is on customers (marketing analysis and strategy); business marketing decisions in promotion, distribution, and pricing; and control of marketing programs.

**BA 224 Business Communications**

(3 class hrs/wk 3 cr)

Course develops ability to communicate within an organization on an interpersonal basis and in written and oral expression. Provides a means of increasing the effectiveness of the communications process in order to increase the value of information to the organization.

**BA 226 Business Law**

(3 class hrs/wk 4 cr) W/Sp

Introduction to the framework of the law as it affects a business, how the law operates, how it is enforced and how it is used in business. Includes the origins of law, the relations of business to society and the law, evolution of business within the framework of the law and the historical development and present-day applications of the law of contracts.

**BA 229 Personal Finance**

(3 class hrs/wk 3 cr) F

A thorough study of home financing, installment buying, insurance, investments, wills and other phases of managing family finances.

**BA 235 Introduction to Business Statistics**

(4 class hrs/wk 4 cr) W/Sp

A statistical analysis of business and economic data used in controlling an operation and in making sound business decisions. Special attention is given to assembling statistical inference and linear regression and correlation. Prerequisite: MT 100 Intermediate Algebra.

**BA 236 Introduction to Management Science**

(4 class hrs/wk 4 cr) Sp

Introduction to techniques of business mathematical models, including simulation, inventory control, production, capital budgeting, queuing and networking models. Prerequisite: BA 235 Introduction to Business Statistics.

**BA 238 Principles of Salesmanship**

(3 class hrs/wk 3 cr) W

Introductory course on business from the viewpoint of the sales-oriented firm. Includes characteristics of the customer, buying motives and approach, presentation, demonstration and overcoming objections in closing sales. Emphasizes advertising, pre-selling techniques, various media, copy, illustration and layout.

**BA 239 Principles of Advertising**

(3 class hrs/wk 3 cr)

An introductory course explaining the role of advertising in the distributive process. Emphasizes various media; copy, illustration and layout; retail advertising and promotion; advertising budget; and an advertising program.

**BA 250 Small Business Management**

(3 class hrs/wk 3 cr) F/W/Sp

Introduction to the role, organization and operation of small business in the American society. Emphasizes the spirit of free enterprise and the problems of the small business in meeting competition.

**BA 280 CWE Accounting**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to accounting. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**BA 280 CWE Business Management**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to business management. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**BA 280 CWE Marketing**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to marketing. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**EC 115 Outline of Economics**

(4 class hrs/wk 4 cr) F/W/Sp

Course designed for student majors other than business or economics, emphasizing such major economic activities as supply and demand, fiscal policies of the United States, Federal Reserve functions, unemployment and international trade.

**EC 201 Principles of Economics**

(3 class hrs/wk 3 cr) F

Introduction to micro-economic theory, policy and institutions. Includes principles of underlying production, exchange and distribution.

**EC 202 Principles of Economics**

(3 class hrs/wk 3 cr) W

Introduction to macro-economic theory, policy and institutions. Includes problems relating to money and banking, consumption, investment, unemployment and inflation. Prerequisite: EC 201 Principles of Economics.

**EC 203 Principles of Economics**

(3 class hrs/wk 3 cr) Sp

Introduction to international economics and economic development. Includes principles underlying international trade, trade regulations, exchange rates, economics in both developing and developed parts of the world. Prerequisite: EC 202 Principles of Economics.

**EC 215 Economic Development of the US**

(3 class hrs/wk 3 cr) F

A historical study of US economic institutions, including industry, agriculture, commerce, transportation, labor, finance and the economic program of the United States.

**EC 216 Introduction to Labor Economics**

(3 class hrs/wk 3 cr) W/S

A first, detailed look at the theory and policy of manpower economics, the role of trade unions, the causes of unemployment, the problems of maintaining full employment, negotiation techniques, and methods of settling labor disputes including grievance procedures, conciliation and arbitration.

**EC 220 Contemporary US Economic Issues**

(3 class hrs/wk 3 cr) S

Application of economic principles to selected issues affecting the US economy, including poverty, pollution and urbanization.

## CULINARY ARTS AND RESTAURANT MANAGEMENT

**Faculty:**

Charles Dallmann, Department Chair

The Culinary Arts and Restaurant Management curriculum offers courses in all areas of the industry: food preparation, dining room service, catering and management. The curriculum is designed for students just entering the food service industry and for food service workers who want to upgrade their knowledge and skills. Many first-year courses are individualized to enable full-time employees to study at their own pace and convenience.

The food production lab contains virtually all types of equipment found in

restaurant, hotel or cafeteria kitchens. It includes a separate a la carte restaurant; natural foods and fast foods kitchens; a bakeshop; and the cafeteria and banquet kitchen, with pantry, butcher, vegetable, entree, sauce, soup and stock stations.

The dining room lab enables students to learn American, French and buffet service, as well as cashiering and maitre d'hotel skills.

The management lab includes management stations for the restaurant, cafeteria and catering service; a conference area for seminars and daily management sessions; purchasing, inventory control and management simulations; a graphics station with equipment for preparing menu mock-ups and advertising and equipment layouts; and a resource area which includes the department library, audiovisual aids and closed-circuit TV from the food production lab.

Potential employers include restaurants, hotels, catering firms, cafeterias, clubs and resorts. Hospitals, school and college food services, convalescent and retirement homes, and airlines provide other employment opportunities. Additional openings exist in food service equipment design and sales of food and restaurant supplies. Entry-level salaries vary according to job location and student experience.

Personal accident insurance is recommended for students and non-slip work shoes are required. During the first two weeks of class students are required to purchase a French knife and two chef coats. Estimated first-year expenses are \$150 to \$175 for books, coats and knife. Second-year expenses range from \$125 to \$175. These costs do not include tuition, student fees or insurance.

Students should be able to read at a tenth- to twelfth-grade level or plan to improve their reading ability. Students must be able to work under pressure and should demonstrate manual dexterity, physical stamina and ability to work cooperatively with others.

First-year students take a core curriculum emphasizing sanitation, safety, short-order cooking and table service. They participate in preparation and service of cooked-to-order foods in the student-managed table service restaurant. Those completing the first-year program are qualified to enter the industry as cook's helpers, fry cooks, waiter/waitresses or management trainees.

Second-year students may enroll in the following cooking or food service management options:

**Chef Training** - Combines advanced cooking techniques with theory and application courses in menu planning and kitchen management. Students are enrolled on the basis of skill level, with approval of the department. Candidates must have completed the first-year core program or have had five years verifiable experience in commercial food preparation.

**Hotel and Restaurant Cooking** - Builds upon basic culinary skills and increases knowledge of soups, sauces, entrees and baked goods.

Restaurant and Catering Management - Emphasizes training for line management of restaurant and catering firms. Students refine dining room skills, manage the table service restaurant and the banquet and catering service, and increase their culinary skills in natural foods, regional American and selected European and Asian cuisines. Entry requires approval of the department. Candidates must have completed the first-year core program or have had five years verifiable experience in commercial food preparation.

Second-year students may enroll in more than one option with approval of the department.

The Culinary Arts and Restaurant Management curriculums lead to an Associate of Science degree.

## CULINARY ARTS AND RESTAURANT MANAGEMENT CURRICULUMS

### Associate of Science in Culinary Arts and Restaurant Management/Chef Training Option

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree  
2.515 Business Math is required.

#### Major Requirements . . . . .85

##### Fall - First Year

8.310 Professional Foodservice I	6
8.324 Practical Menu Plan A	1
8.336 Foodservice Sanitation	1
8.337 Stations, Tools, Culinary Techniques	3
8.338 Intl Food & Beverage Vocab	2
8.345 Techniques of Table Service	1
8.350 Banquet, Buffet & Catering Proc A	1
8.384 Orient to the Hospitality Industry	1

##### Winter

8.311 Professional Foodservice II	7
8.325 Practical Menu Plan B	1
8.339 M & P: Gardemanger—Salads	2
8.346 Dining Room Management	1
8.351 Banquet, Buffet & Catering Proc B	1
8.357 Work Analysis and Simplification	1
8.363 Management Techniques	1

##### Spring

8.312 Professional Foodservice III	7
8.326 Practical Menu Plan C	1
8.340 M & P: Vegetables & Entrees	3
8.352 Banquet, Buffet & Catering Proc C	1
8.358 Hiring & Training	1
8.359 Supervising Restaurant Personnel	1
8.360 Foods	1

##### Fall - Second Year

8.316 Intro to Commercial Kitchen Prod & Management	7
8.327 Adv Practical Menu Plan A	1
8.341 M & P: Stocks, Soups, Sauces	2
8.353 Banquet Buffet & Catering Mgmt A	1
8.368 Creating the Menu	1
8.371 Purchasing Foodstuffs & Controlling Food Costs	1
8.372 Scheduling Production & Controlling Labor Costs	1
8.375 Supervising Sanitation & Maintenance	1

##### Winter

8.317 Inter Commercial Kitchen Production	7
8.328 Adv Practical Menu Plan B	1
8.342 M & P: The Butcher Station	2
8.354 Banquet, Buffet & Catering Mgmt B	1
8.365 Planning the Restaurant	1
8.369 Pricing & Evaluating the Menu	1

##### Spring

8.318 Adv Commercial Kitchen Production	7
8.329 Adv Practical Menu Plan C	1
8.343 M & P: The Bakeshop	2
8.347 Wine Service	1
8.355 Banquet, Buffet & Catering Mgmt C	1

### Associate of Science in Culinary Arts and Restaurant Management/Hotel and Restaurant Cooking Option

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree  
2.515 Business Math is required.

#### Major Requirements . . . . .83

##### Fall - First Year

8.310 Professional Food Service I	6
8.324 Practical Menu Plan A	1
8.336 Foodservice Sanitation	1
8.337 Stations, Tools, Culinary Techniques	3
8.338 Intl Food & Beverage Vocab	2
8.345 Techniques of Table Service	1
8.350 Banquet, Buffet & Catering Proc A	1
8.384 Orient to the Hospitality Industry	1

##### Winter

8.311 Professional Foodservice II	7
8.325 Practical Menu Plan B	1
8.339 M & P: Gardemanger—Salads	2
8.346 Dining Room Management	1
8.351 Banquet, Buffet & Catering Proc B	1
8.357 Work Analysis and Simplification	1
8.363 Management Techniques	1

##### Spring

8.312 Professional Foodservice III	7
8.326 Practical Menu Plan C	1
8.340 M & P: Vegetables & Entree	3
8.352 Banquet, Buffet & Catering Proc C	1
8.358 Hiring & Training	1
8.359 Supervising Restaurant Personnel	1
8.360 Foods	1

##### Fall - Second Year

8.313 Hotel and Restaurant Cooking I	7
8.327 Adv Practical Menu Plan A	1
8.341 M & P: Stocks, Soups, Sauces	2
8.353 Banquet, Buffet and Catering Mgmt A	1
8.368 Creating the Menu	1
8.371 Purchasing Foodstuffs & Controlling Food Costs	1
8.372 Scheduling Production & Controlling Labor Costs	1
8.375 Supervising Sanitation & Maintenance	1

##### Winter

8.314 Hotel and Restaurant Cooking II	7
8.328 Adv Practical Menu Plan B	1
8.342 M & P: The Butcher Station	2
8.354 Banquet Buffet and Catering Mgmt B	1
8.369 Pricing and Evaluating the Menu	1

##### Spring

8.315 Hotel and Restaurant Cooking III	7
8.329 Adv Practical Menu Plan C	1
8.343 M & P: The Bakeshop	2
8.355 Banquet Buffet and Catering Mgmt C	1



## Associate of Science in Culinary Arts and Restaurant Management/ Restaurant and Catering Management Option

### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree  
2.515 Business Math is required.

### Major Requirements . . . . .91

#### Fall - First Year

8.310 Professional Foodservice I	6
8.324 Practical Menu Plan A	1
8.336 Foodservice Sanitation	1
8.337 Stations, Tools, Culinary Techniques	3
8.338 Intl Food & Beverage Vocab	2
8.345 Techniques of Table Service	1
8.350 Banquet, Buffet & Catering Proc A	1
8.384 Orient to the Hospitality Industry	1

#### Winter

8.311 Professional Foodservice II	7
8.325 Practical Menu Plan B	1
8.339 M & P: Gardemanger—Salads	2
8.346 Dining Room Management	1
8.351 Banquet, Buffet & Catering Proc B	1
8.357 Work Analysis and Simplification	1
8.363 Management Techniques	1

#### Spring

8.312 Professional Foodservice III	7
8.326 Practical Menu Plan C	1
8.340 M & P: Vegetables & Entrees	3
8.352 Banquet, Buffet & Catering Proc C	1
8.358 Hiring & Training	1
8.359 Supervising Restaurant Personnel	1
8.360 Foods	1

#### Fall - Second Year

8.321 Adv Cooking for Managers I	3
8.327 Adv Prac Menu Plan A	1
8.332 Management Lab A	3
8.341 M & P: Stocks, Soups, Sauces	2
8.353 Banquet, Buffet & Catering Mgmt A	1
8.368 Creating the Menu	1
8.371 Purchasing Foodstuffs & Controlling Food Costs	1
8.372 Scheduling Production & Controlling Labor Costs	1
8.375 Supervising Sanitation & Maintenance	1
BA 211 Prin of Accounting I	3

#### Winter

8.322 Adv Cooking for Managers II	3
8.328 Adv Practical Menu Plan B	1
8.333 Management Lab B	3
8.342 M & P: The Butcher Station	2
8.354 Banquet, Buffet & Catering Mgmt B	1
8.365 Planning the Restaurant	1
8.367 Financing the Restaurant	1
8.369 Pricing and Evaluating the Menu	1
8.377 Promoting the Restaurant	1

#### Spring

8.323 Adv Cooking for Managers III	3
8.329 Adv Practical Menu Plan C	1
8.334 Management Lab C	3
8.343 M & P: The Bakeshop	2
8.347 Wine Service	1
8.348 Beverage Management	1
8.355 Banquet, Buffet & Catering Mgmt C	1

## CULINARY ARTS AND RESTAURANT MANAGEMENT COURSES

### Culinary Arts Fundamental Courses

#### 1.280 CWE Culinary Arts

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to culinary arts. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

#### 1.280 CWE Restaurant Management

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to restaurant management. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

#### 8.336 Food Service Sanitation

(18 class hrs. 1 cr) F

Surveys food-borne diseases, personal hygiene, safe food handling, receiving and storage, warewashing and environmental sanitation. Note: One-week class.

#### 8.337 Stations, Tools and Culinary Techniques

(6 class hrs/wk 3 cr) F

Introduction to safe and sanitary use of tools and equipment, how to set up and clean up the kitchen and dining room stations, basic principles of cooking and the basics of weights and measures.

#### 8.338 International Food and Beverage Vocabulary and History

(2 class hrs/wk 2 cr) F

Introduction to culinary vocabulary from all over the world, as seen on menus and employed in commercial kitchens in the U.S. The French system of order for classical service forms the basis for study of foods, wines, tools and techniques associated with French cuisine. Study of historical development of western cuisines reveals the reason for the international flavor of kitchen argot. Note: Course is open to non-majors.

#### 8.345 Techniques of Table Service

(18 class hours 1 cr) F

Course covers elements of service, qualifications of staff, hand and tray skills, taking the order and writing the check, coordinating with the kitchen, serving the guest, bussing and setting tables, opening and closing, side work, organization and teamwork, carving and cooking at the table. Note: One-week class.

#### 8.384 Orientation to the Hospitality Industry

(18 class hours 1 cr) F

An orientation to the LBCC program. Includes an exploration of hospitality careers, hospitality operations, professional work habits, conservation of energy and materials, safety procedures and fire prevention, the use of standardized recipes, and teamwork and communication techniques. Note: One-week class.

### Food Preparation Courses

#### 8.300 Restaurant A La Carte

(3-24 class hrs/wk 1-8 cr) F/W/Sp

Basic food preparation course, with emphasis on foods cooked to order. Provides opportunity to work the broiler, fry, griddle and saute stations, as well as to prep foods in the pantry and back kitchen areas. Depending upon the hour, students prepare a variety of short order dishes, from omelets and grilled sandwiches to broiled steaks and sauteed vegetables, providing opportunity to learn breakfast, lunch and dinner cooking. Note: May be repeated for up to 36 credits. Prerequisite: Instructor approval.

#### 8.302 Practical Cooking for Non-Majors

(6 class hrs/wk 2 cr) F/W/Sp

Practical food preparation procedures for students not pursuing a career in the foods industry. Students will have opportunity to prepare salads, dressings, stocks, soups, sauces and vegetables for cooking and service. International foods are stressed. Note: May be repeated for up to 12 credits. Registered students must present proof of recent TB test. Prerequisite: Instructor approval.

#### 8.310 Introduction to Professional Foodservice I

(20 class hrs/wk 6 cr) F/W/Sp

A laboratory and work experience class in which the beginning student will spend time as an assistant on the following stations: entree, salad, vegetable, soup and stock, bakery, storeroom, warewashing and dining room. Instructor demonstrates safe use of machines and hand tools, sanitation and hygiene procedures, basic cooking processes and proper station set up and clean up. Basic table service skills are emphasized. Students take part in actual preparation, setup and service of a small dining room to learn how a restaurant really works. Note: Class begins fourth week of term.

#### 8.311 Introduction to Professional Foodservice II

(20 class hrs/wk 7 cr) F/W/Sp

A laboratory course in food preparation, emphasizing mastery of basic salads and dressings. Students will rotate stations on a two-week basis but will begin to take on more responsibility in producing a salable product for cafeteria and restaurant customers. Students continue to practice table service skills in the department's sit-down restaurant.

**8.312 Introduction to Professional Foodservice III**

(20 class hrs/wk 7 cr) F/W/Sp

This laboratory section focuses on vegetable and entree preparation. Students will cook vegetables, starches and main dishes for service in the college cafeteria. Student cooks also will prepare entrees according to the various styles of service: restaurant, hotel and institutional. The student will begin to assume responsibility for directing a station as duties rotate every two weeks. Students continue to practice table service in the department's restaurant.

**8.313 Hotel and Restaurant Cooking I**

(20 class hrs/wk 7 cr) F/W/Sp

An advanced course in the kitchen, under service conditions. Students will take charge of a station and be responsible to the student chef and the instructor for its efficient operation. Students may begin to specialize on a station and rotate at monthly or quarterly intervals.

**8.314 Hotel and Restaurant Cooking II**

(20 class hrs/wk 7 cr) F/W/Sp

The advanced cooking student will begin to make a menu for his or her station and coordinate activities of the station with that of the chef and the rest of the kitchen and will order and receive merchandise for the station.

**8.315 Hotel and Restaurant Cooking III**

(20 class hrs/wk 7 cr) F/W/Sp

In this final quarter of lab experience the student has more responsibility for developing menus and recipes for service. The student may continue to specialize or may wish to broaden knowledge at instructor's discretion.

**8.316 Introduction to Commercial Kitchen Production and Management**

(20 class hrs/wk 7 cr) F/W/Sp

Course gives students increased responsibility for kitchen stations: entrees and sauces, and second cook, sous chef and student chef stations. Students are entirely responsible for the efficient running of the kitchen; chef trainees familiarize themselves with job descriptions for every station of the kitchen in order to delegate authority properly.

**8.317 Intermediate Commercial Kitchen Production and Management**

(20 class hrs/wk 7 cr) F/W/Sp

Chef-trainee works as chef or sous chef to coordinate kitchen activities for planning and ordering, receiving, storing, cooking and serving.

**8.318 Advanced Commercial Kitchen Production and Management**

(20 class hrs/wk 7 cr) F/W/Sp

Final quarter of sequence, in which the student assumes the title, responsibility and authority of student chef. Under instructor's guidance the student prepares a two-week menu and order sheet and oversees the ordering, receiving, preparation and service of food for the college cafeteria.

**8.321 Advanced Cooking for Restaurant Managers I**

(12 class hrs/wk 4 cr) F/W/Sp

A lab course, emphasizing stock, soup and sauce preparation. Provides beginning familiarity with international and novel cuisines. Student managers will plan, cost and price menus. Includes practice of formal dining room skills. Supervision of student cooks and service personnel is stressed.

**8.322 Advanced Cooking for Restaurant Managers II**

(12 class hrs/wk 4 cr) F/W/Sp

A lab course emphasizing meat grades, cuts and preparation. International dishes are dressed and novel cuisine is explored in greater depth. Continues experience in kitchen and dining room service and management techniques. Students deliver routine demonstrations to the class.

**8.323 Advanced Cooking for Restaurant Managers III**

(12 class hrs/wk 4 cr) F/W/Sp

Cooking/managing lab, with vegetables, entrees and baked goods stressed in production and theory. Includes production forecasting and portion controls implemented by student managers and refinements in dinner house cooking, including tableside preparation techniques and practice. Students assume responsibility for total dining room operation.

**8.324, 8.325, 8.326 Practical Menu Planning A, B, C**

(3 class hrs/wk 1 cr) F/W/Sp

Course complements the first-year cooking labs. Students assist in planning and preparing menu items on a daily basis, making daily presentations to the class, and are responsible for knowing the names and ingredients of all menu items for the term. Includes a daily critique of the previous day's menu.

**8.327, 8.328, 8.329 Advanced Practical Menu Planning A, B, C**

(3 class hrs/wk 1 cr) F/W/Sp

Course designed for second-year culinary arts students to write menus, purchase orders and line set-up sheets. Students in charge of a station direct that station and coordinate activities with the student chef and other station heads. Includes daily oral presentations on current menu items, their preparation and coordination. Students are responsible for knowing names and ingredients of all menu items for the term. Each term covers a menu series and differing menu items.

**8.339 Materials and Processes: Gardemanger - Salads**

(2 class hrs/wk 2 cr) W

Lectures, demonstrations and discussions of proper techniques for preparation of appetizers, hors d'oeuvres, salads and dressings, sandwiches, coffee and eggs. Includes basics of the buffet, chaud-froid pieces, ice carving and cold soups. Complements and supplements kitchen laboratory practice.

**8.340 Materials and Processes: Vegetables and Entrees**

(3 class hrs/wk 3 cr) Sp

Basic knowledge and technique is acquired through lecture-demonstrations and discussions on preparation of green, red, yellow and white vegetables, including various market forms of vegetables from raw to frozen pre-cooked. Also includes instructions and procedures for preparing rice, pastas, legumes and dried vegetables and entrees from beef, veal, lamb, pork, poultry, fish, variety meats, pastas, vegetables and dairy products.

**8.341 Materials and Processes: Stocks, Soups and Sauces**

(3 class hrs/wk 2 cr) F

Course provides preparation and training in basic and specialty stocks, classic and innovative soups, and the leading mother and secondary warm sauces.

**8.342 Materials and Processes: The Butcher Station**

(3 class hrs/wk 2 cr) W

Introduces cutting of beef hindquarter, arm chuck and portion steaks; breaking a leg of veal and a lamb or pork carcass; splitting chicken; skinning and filleting fish; peeling prawns; and shucking clams and oysters for service. Safety is stressed, along with proper sanitation, grades and cuts of beef.

**8.343 Materials and Processes: The Bake Shop**

(3 class hrs/wk 2 cr) Sp

A lecture-discussion class which provides knowledge of leavening action; the uses of fats and sugars; pastry, sweet dough and cake baking; and basic techniques with the pastry bag. Includes readings, lectures and practice in baking breads and desserts.

**Restaurant Management Courses****8.332 Management Lab A**

(9 class hrs/wk 3 cr) F/W/Sp

Course provides practice in interviewing job applicants, training student employees, handling grievances, writing job descriptions and making performance evaluations. Students revise station set up and clean up procedures, and employee and clean up schedules. Students are assigned to one of three lab restaurants.

**8.333 Management Lab B**

(9 class hrs/wk 3 cr) F/W/Sp

Student managers will be assigned to one of three lab areas for administration of prices, orders receiving, issuing and inventory for foods, utensils and supplies. Management trainees prepare food cost analysis and design menu for assigned restaurant.

**8.334 Management Lab C**

(9 class hrs/wk 3 cr) F/W/Sp

Management trainees prepare and analyze budgets, P&L statements and balance sheets for assigned restaurant and develop a promotional campaign. Labor cost analysis, payroll procedures and employee regulations are stressed.

**8.350 Banquet, Buffet & Catering****Procedures A** (3 class hrs/wk 1 cr) F

A course in kitchen and dining room banquet procedures. Students will plan and put on banquets during the term, with emphasis on the annual French or international banquet. Setting the banquet room, serving the guests and portioning the meals are stressed. Note: The exact content of the course depends to some extent on the number and type of functions booked each year.

**8.351 Banquet, Buffet & Catering****Procedures B** (3 class hrs/wk 1 cr) W

Students will work together to put on buffets and banquets during the term, planning, preparing and serving food to large groups of people. Special attention will be given buffets, although all types of banquets may be served. Setting the buffet, including chaud-froid and ice sculpture centerpieces, will be stressed. Students evaluate foods for appearance, taste and portion consistency.

**8.352 Banquet, Buffet & Catering****Procedures C**

(3 class hrs/wk 1 cr) Sp

The emphasis in this course is on catering, although students also will participate in planning and serving sit-down banquets and buffets. Includes food preparation, loading and transporting, catering set-up service, clean up and reloading. A large-scale banquet is usually scheduled for the term and students will have opportunity to work large- and small-scale catered parties.

**8.353 Banquet, Buffet & Catering Management A**

(3 class hrs/wk 1 cr) F

Course provides for advanced students to plan, supervise and work on banquets and/or buffets and caterings during the term and to assist in training new students in basic banquet procedures. Emphasizing planning, promoting, costing and billing of banquets, students will apply their knowledge under actual service conditions.

**8.354 Banquet, Buffet & Catering Management B**

(3 class hrs/wk 1 cr) W

Advanced students will plan, serve and supervise large and small banquets, buffet and caterings as scheduled. Includes advance planning, preparing and training for large-scale events; evaluating and judging of foods for eye appeal, taste, color and arrangement. Buffet planning, set up and clean up are emphasized but actual service depends somewhat on scheduling and demand.

**8.355 Banquet, Buffet & Catering Management C**

(3 class hrs/wk 1 cr) Sp

This course emphasizes catering management and procedures, allowing participation in planning and serving large banquets and/or buffets during the term. Special equipment and problems of catering are stressed.

## RESTAURANT MANAGEMENT SHORT COURSES

The following courses deal with special topics and are scheduled during the year to meet the needs of both students and working professionals.

**8.346 Dining Room Management**

(12-14 class hrs 1 cr) F

Course surveys cashing and hosting; styles of service and types of staffing; training, scheduling and supervising staff; building the check average and maintaining a sales history; and controlling cash and guest check. Note: Two- to four-week course.

**8.347 Wine Service**

(12-14 class hrs 1 cr) Sp

Survey of techniques for serving and selling wine, wine evaluation terms and food/wine combinations. Includes classification of wines, geography of major wine regions and wine evaluation for color, bouquet, taste and finish characteristics. Note: This is a theory course and does not include wine tasting. Two- to four-week course.

**8.348 Beverage Management**

(12-14 class hrs 1 cr) Sp

Course covers types of spirits and methods of distillation, types of mixed drinks, cocktail service, bar layout, the liquor storeroom, liquor controls, pricing drinks and liquor regulations. Note: This is a theory course and does not include tasting. Two- to four-week course.

**8.349 Composing the Wine List**

(12-14 class hrs 1 cr)

An individual project course, including coordination of the wine list with a restaurant's menus; style of service; storage facilities; financial resources; promotional strategy; selecting aperitifs, sparkling wines, still wines, dessert wines and port; and pricing, designing and printing the list. Note: Two- to four-week course.

**8.357 Work Analysis & Simplification**

(12-14 class hrs 1 cr) W

Course stresses analyzing tasks, flowcharting work and simplifying tasks by grouping tasks into functions and departments. Also includes writing job descriptions. Note: Two- to four-week course.

**8.358 Hiring and Training Employees**

(12-14 class hrs 1 cr) Sp

Survey of job pricing, recruiting and interviewing techniques, selection and orientation of new employees, preparation of operating manuals, conducting on-the-job training and conducting effective meetings. Note: Two- to four-week course.

**8.359 Supervising Restaurant Personnel**

(12-14 class hrs 1 cr) Sp

Introduction to techniques for motivating the staff, styles of management, supervisory techniques and communication skills. Includes evaluation and promotion of employees, handling grievances, discipline and terminations, and delegating authority and responsibility. Note: Two- to four-week course.

**8.363 Management Techniques**

(12-14 class hrs 1 cr) W

Introduction to time management, planning and problem-solving methods, financial statements and uniform systems of accounts used in the hospitality industry, and preparing short-term and long-term operating budgets. Note: Two- to four-week course.

**8.365 Planning the Restaurant**

(12-14 class hrs 1 cr) W

Introduction to setting investment returns and performance goals and the feasibility study: analysis of concept, market, community comprehensive plan and site. Includes projecting sales, operating expenses, capital costs and break-even points. Note: Two- to four-week course.

**8.367 Financing the Restaurant**

(12-14 class hrs 1 cr) W

Introduces types of ownership and their tax implications, including leasing, franchising and buying. Includes methods and sources of financing a food service operation, insurance, managing working capital, financing new equipment, remodeling and expansion. Note: Two- to four-week course.

**8.368 Creating the Menu**

(12-14 class hrs 1 cr) F

Survey of types of commercial food service operations and their markets and menus. Includes multi-market restaurants, writing time block and specialty menus, projecting sales and direct costs for individual time block/specialty menus, and analyzing and adjusting the menu mix within a single operation. Note: Two- to four-week course.

**8.369 Pricing and Evaluating the Menu**

(12-14 class hrs 1 cr) W

Course includes yield tests and standardized recipes, precosting foods and labor, pricing based on cost and on market, measuring the relative popularity of menu items and achieving a profitable sales mix. Note: Two- to four-week course.

**8.371 Purchasing Foodstuffs and Controlling Food Costs**

(12-14 class hrs 1 cr) F

Course includes specifications, market practices and purchasing procedures; receiving procedures and reports; storage facilities, procedures and security; issuing and inventorying; determining food costs by sales area and food type; and simplified food cost-control systems. Note: Two- to four-week course.

**8.372 Scheduling Production and Controlling Labor Costs**

(12-14 class hrs 1 cr) F

Course includes analyzing the sales history, forecasting sales volume and menu mix, scheduling production and staff, analyzing payroll reports, payroll procedures, government regulations and employee benefits. Note: Two- to four-week course.



**8.374 Equipment Layout**

(12-14 class hrs 1 cr)

An individual project course in which students analyze the menu for production and service requirements; determine space and equipment requirements for receiving and storage, warewashing, cooking, service and dining room areas; and arrange equipment for efficiency and compactness. Note: Two- to four-week course.

**8.375 Supervising Sanitation and Maintenance**

(12-14 class hrs 1 cr) F

Introduction to safety, energy conservation and pollution control programs, including housekeeping and sanitation schedules; equipment and facilities maintenance schedules; supervising sanitation and maintenance personnel; purchasing supplies, utensils and contract services; and repair and replacement of equipment. Note: Two- to four-week course.

**8.376 Designing the Restaurant**

(12-14 class hrs 1 cr)

An individual project course in which students work through all steps of the decision process: translating the restaurant concept into rough plans; establishing the budget; zoning; building and health code checklists; developing the design theme of the public areas; and preliminary selection of lighting, furnishings and appointments. Note: Two- to four-week course.

**8.377 Promoting the Restaurant**

(12-14 class hrs 1 cr) W

Introduction to the sales function, including restaurant marketing strategy, advertising budget, public relations, selling banquets and catering, and in-house promotions. Note: Two- to four-week course.

**8.378 Merchandising the Menu**

(12-14 class hrs 1 cr)

Course includes menu layout, illustration and copy, costing artwork and printing, internal selling techniques and coordinating the menu with the dining room atmosphere. Note: Two- to four-week course.

**8.388 Entertainment Management**

(12-14 class hrs 1 cr)

An individual project course, including types of entertainment and their promotional advantages, developing special events around entertainment contracts and facilities, and controlling entertainment costs. Note: Two- to four-week course.

**8.389 Front Desk Procedures**

(12-14 class hrs 1 cr)

Survey of techniques for selling rooms and booking reservations, registering and checking out guests, using sales and accounting records, operating transcript and posting machines, coordinating customer services and handling complaints and emergencies. Note: Two- to four-week course.

**8.393 Constructing and Remodeling Food Service Facilities**

(12-14 class hrs 1 cr)

An individual project course, including refining plans and budget; developing effective relations with consultants, architects and builders; obtaining estimates and bids; project scheduling using PERT; and monitoring construction and government inspection to prevent delays, cost overruns, oversights and mistakes. Note: Two- to four-week course.

## DATA PROCESSING

**Faculty:**

Peggy Ayres, Gladys Norman, Kitson Yu

The Data Processing curriculum is designed to develop graduates able to successfully enter the job market as application programmers. Working under a true, fourth-generation environment, the student will learn to write programs in several different languages and to apply these skills to the solving of actual business problems, both within the college and the community.

Students finishing the first year of the curriculum should be able to enter the job market as programmer trainees with at least two languages at their disposal. Students completing the full two-year curriculum will be granted an associate degree in data processing and will be in a strong position to enter a rapidly growing job market. Students interested in the associate degree program should receive advising from the Data Processing Department.

The Data Processing curriculum leads to an Associate of Science degree.

## DATA PROCESSING CURRICULUMS

### Associate of Science in Computer Programming

**General Education Requirements . . . . . 16**

See graduation requirements for Associate of Science degree  
Math is not required.

**Major Requirements . . . . . 81****Fall - First Year**

2.570 Keyboarding for D.P.	1
2.571 Data Processing I	10
General Education Class (see advisor)	3

**Winter**

2.572 Data Processing II	10
BA 235 Business Statistics	3

**Spring**

2.573 Data Processing III	10
BA 236 Intro to Mgmt Science	4

**Fall - Second Year**

2.581 Data Processing IV	10
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<input type="checkbox"/> Accounting Option (Selection one) . . . . .	(3)
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2.530 Practical Accounting I	3
BA 211 Prin of Accounting I	3

**Winter**

2.582 Data Processing V	10
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<input type="checkbox"/> Accounting Option (select one) . .	(3)
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2.531 Practical Accounting II	3
BA 212 Prin of Accounting II	3

**Spring**

<input type="checkbox"/> Data Processing Option (Select one) . . . . .	(7)
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1.280 CWE Data Processing	7
2.583 Data Processing VI	7

<input type="checkbox"/> Accounting Option (Select one) . .	(3)
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2.532 Practical Accounting III	3
BA 213 Prin of Accounting III	3

**Electives . . . . . 4**

Computer science courses 97

## Data Processing Courses

**1.280 CWE Data Processing**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to data processing. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**2.508 IBM 129 Keypunch Operation**

(6.5 class hrs/wk 2 cr) F/W/Sp

Individualized instruction on operating the IBM 129 cardpunch machine. Includes familiarization with IBM card; names and functions of all operating parts, keys and switches; duplication procedures; error correction procedures; coding a program card; and storing and using a program. Some speed and accuracy building on alphabetic and numeric keyboard. Note: 5-week course. Prerequisite: Typing skills, minimum 25 wpm.

**2.510 Introduction to Data Processing**

(6 class hrs/wk 4 cr) F/W/Sp/Su

Introduction to the world of data processing and its influence on everyday life. Topics include the history of data processing, the punched card, card-oriented processing systems, analysis of computer-generated reports, third generation processing systems and number systems. A symbolic, machine-oriented language will be used to explain data flow and several problems will be solved utilizing a procedure-oriented language called BASIC. Note: Requires registration in both lecture and lab.

**2.512 Computer Terminal Operation**

(6.5 class hrs/wk 2 cr) F/W/Sp

Individualized instruction in operating a computer terminal, including parts and keys, procedures for adding, inquiring, modifying, and deleting records. Also includes some speed and accuracy building on alphabetic and numeric keyboards. Note: Five-week course. Prerequisite: Typing skills, minimum 25 wpm.

**2.517 Data Entry Concepts**

(3 class hrs/wk 3 cr) W

Course covers data entry concepts and equipment, including study of the four types of data entry devices—buffered keypunches, key-to-diskette devices, key-to-disk devices and terminals. Also covers job hunting, interviewing techniques and preparing physically and mentally for the work world. Designed for data entry operator majors.

**2.556 Advanced Keypunch Operation**

(9 class hrs/wk 5 cr) F/W/Sp

Course provides practice in speed and accuracy to employable level on the IBM 129 keyboard and a computer terminal keyboard. Presents verification procedures on the IBM 129. Provides extensive practice in typical jobs a data entry operator will encounter in the working world. Prerequisite: 2.502 Computer Terminal Operation, 2.508 IBM Keypunch Operation; OA 123 Typing Skill Building.

**2.558 Introduction to Programming**

(5 class hrs/wk 4 cr) F/W/Sp/Su

Course provides opportunity to write computer programs, using a procedure- or problem-oriented language, introduces the tasks that a computer programmer must perform and provides the means to program a modern computing system. Topics include input/output, arithmetic statements, transfer and control statements, arrays and subprograms. Note: The computer language currently used is FORTRAN.

**2.559 Advanced Programming:****FORTRAN** (5 class hrs/wk 4 cr)

Advanced work with symbolic languages and FORTRAN, including subroutines, input/output, numerical evaluations, advanced arrays, functions, specification statements and differential equations. Prerequisite: 2.558 Introduction to Programming or CS 213 Introduction to Symbolic Language Programming.

**2.570 Keyboarding for Data Processing**

(2 class hrs/wk 1 cr) F

Students will learn touch typing techniques on the alphabetic and numeric pad of a computer terminal. Also introduces terminal's functional keys as well as symbol keys.

**2.571 Data Processing I**

(20 class hrs/wk 10 cr) F

Introduction to computer, programming languages and data processing mathematics, emphasizing how computers work and their place in modern business society. Includes a history of data processing, punched card equipment, job flow, computer architecture and memory design, systems design and third-generation operating systems concepts. Course introduces the tasks that a computer programmer must perform and provides the means to program a modern computing system. Topics include input-output, arithmetic statements, transfers and control statements, arrays and subprograms. Computer programs will be developed by the student using a procedure- or problem-oriented language. Note: DP II, III, IV and V course content may be interchanged from year to year.

**2.572 Data Processing II**

(20 class hrs/wk 10 cr) W

Course provides additional work in problem-oriented language and introduction to an assembler language, with additional topics from data processing mathematics introduced as needed. The second phase stresses the need for accurate and complete documentation within the data processing function. Program flowcharting is used to solve and then document several involved, logical processes. Prerequisite: 2.571 Data Processing I.

**2.573 Data Processing III**

(20 class hrs/wk 10 cr) Sp

Study of an assembler language continues, viewing the data processing function within a modern environment and its use to further the firm's goals. Includes advanced study of macro- and sub-program writing and language and disk usage techniques. Prerequisite: 2.572 Data Processing II.

**2.581 Data Processing IV**

(20 class hrs/wk 10 cr) F

Introduction to business-oriented computer languages, COBOL and RPG. Topics include I/O decision statements, PERFORM statements and three level tables. Emphasis is placed on structural analysis and design techniques of third/fourth generation operating systems of the IBM 4331 DOS/VSE and its related Software VAM. Using a business case study, the effect of the computer is studied from the systems approach. Prerequisite: 2.573 Data Processing III.

**2.582 Data Processing V**

(20 class hrs/wk 10 cr) W

The first phase of this block is designed to prepare the student for entry into an operational programming environment. Topics include reading programs, programming teams/groups, problem solving and analyzing programming. The student is assigned several programming projects on an individual basis and as a programming team member. The second phase involves advanced COBOL topics, emphasizing use of mass storage files with random and sequential access. Prerequisite: 2.581 Data Processing IV.

**2.583 Data Processing VI**

(20 class hrs/wk 7 cr) Sp

Individual, selected projects from business and industrial organizations within the community are assigned by the instructor. The student is required to plan the project and to carry out all phases of system design, machine programming, design of forms, testing of representative data and writing of operational procedures. Class time will be utilized to guide students toward completion of the project and to look to actual data processing solutions to other types of business problems. Note: Seven credits of 1.280 CWE Data Processing may be substituted for DP VI. Prerequisite: 2.573 Data Processing III.

**2.589 Data Processing Readings and Conferences**

(1-20 class hrs/wk 1-10 cr) F/W/Sp

Subject areas of particular interest to the student or areas where the student needs additional work can be covered within this course, with topics at the discretion of the instructor and student. Prerequisite: Instructor approval.

**9.603 Computer Center Operations I**

(3 class hrs/wk 3 cr) F

An in-depth analysis of the jobs performed by the following computer operations personnel: computer operator, operations supervisor, tape librarian, tab operator, I/O receptionist, scheduler and control clerk.

**9.604 Computer Center Operations II**

(3 class hrs/wk 3 cr) W

An introduction to the operation of computer center equipment, computer operator demands, computer recovery procedures, computer center standards and procedures, and scheduling considerations. Prerequisite: 9.603 Computer Center Operations I.

**9.605 Computer Center Operations III**

(3 class hrs/wk 3 cr) Sp

A third course in the operation of a computer center, emphasizing back-up and restore procedures, maintenance of system libraries, teleprocessing, multiprogramming, time-sharing, machine maintenance and learning the basic programming language.

Prerequisite: 9.604 Computer Center Operations II.

**CS 101 The Nature of Digital Computers**

(6 class hrs/wk 4 cr) F/W/Sp/Su

An introduction to the historical development of digital computers, how computers work, one conversational language, programs and flow charts, algorithms and social and technological implications of computers. A symbolic, machine-oriented language will be used to explain data flow and several problems will be solved utilizing a procedure-oriented language, called BASIC. Note: Requires registration in both lecture and lab.

**CS 211 Introduction to Computer Science**

(6 class hrs/wk 4 cr) F/W/Sp

Introduction to algorithms, flow charts and basic programming concepts; a computer model; methodology programming in a structural language called PASCAL; and computer applications. Prerequisite: CS 101 The Nature of Digital Computers.

**CS 212 Techniques for Computer Programming**

(6 class hrs/wk 4 cr)

Study of data and its representation on a computer system; control structures and their use in design; and implementation of computational algorithms, emphasizing PASCAL. Prerequisite: CS 211 Introduction to Computer Science.

**CS 213 Introduction to Symbolic Language Programming:****FORTAN**

(6 class hrs/wk 4 cr) F/W/Sp

Computer applications utilizing the FORTAN language. Prerequisite: CS 101 The Nature of Digital Computers.

**CS 215 Computer Organization**

(6 class hrs/wk 4 cr) Sp

An introduction to logical organization, computer hardware and machine language programming. Prerequisite: CS 101 The Nature of Digital Computers and one other programming course.

**CS 217 Introduction to COBOL****Programming** (6 class hrs/wk 4 cr)

Application of the ANSI COBOL Language to commercial problems, usually characterized by the need to process large files of data.

Includes a thorough treatment of language elements, file structures and I/O considerations. Prerequisite: CS 211

Introduction to Computer Science or CS 213

Introduction to Symbolic Language

Programming: FORTAN.

# SECRETARIAL SKILLS

**Faculty**

Patsy Chester, Department Chair  
Illa Atwood, Jay Brooks, Dorothy Leuthold,  
Peggy Lind, Mary Lou McPheeters, Joyce  
Moreira, Dorothy Skwark, Sue Trautwein

The Secretarial Skills Department provides course opportunities for students seeking entry-level positions as well as for students seeking more advanced positions. The department strives to provide training in the most current office procedures and on the most current office equipment. In many courses, the student is placed at an appropriate level, based on background, and encouraged to advance at an individualized rate.

The Secretarial Sciences curriculums lead to Associate of Science degrees in Administrative Secretary (Alphabetic Shorthand, Gregg Shorthand or Word Processing Option), Educational Secretary, Legal Secretary and Medical Receptionist, or to one-year certificates in Secretarial Sciences (Shorthand or Transcription Option) and Medical Transcriptionist.

## SECRETARIAL SKILLS CURRICULUMS

### Associate of Science in Administrative Secretary / Alphabetic Shorthand Option

**General Education Requirements . . 16-20**

See graduation requirements for Associate of Science degree  
2.515 Business Math With Calculators is required.

**Major Requirements . . . . . 77****Fall - First Year**

2.500 Business Orientation	1
2.515 Business Math w/Calculators (applies to general ed requirements)	3
2.530 Practical Accounting I	3
2.537 Alphabetic Shorthand	3
OA 121 Typing I (may be waived based on competency exam)	3

**Winter**

1.131 Spelling (may be waived based on competency exam)	3
2.515 Business Math w/Calc (applies to general ed requirements)	1
2.538 Applied Alphabetic Shorthand	3
2.551 Office Communications	3
2.652 Filing	1
OA 122 Typing II	3

**Spring**

2.527 Transcribing Machines I	3
2.535 Payroll Accounting	3
2.610 Clerical Office Procedures	3
2.655 IBM Memory Typewriter	1
OA 123 Typing III	3

**Fall - Second Year**

2.415 Human Relations in Business	3
2.528 Transcribing Machines II	3
2.647 Administrative Management	3
2.653 Automated Office Concepts	3
2.666 IBM Displaywriter	3

**Winter**

2.518 Business Law	3
2.613 On-the-Job Training	4
2.645 Business Conference Techniques	3
2.654 CPT Operation	2

**Spring**

2.614 On-the-Job Training	4
2.656 Word Processing Practicum	3
9.500 Elements of Supervision	3

93-  
97



### Associate of Science in Administrative Secretary / Gregg Shorthand Option

#### General Education Requirements . . 16-20

See graduation requirements for  
Associate of Science degree  
2.515 Business Math with Calculators  
is required.

#### Major Requirements . . . . .80

##### Fall - First Year

1.131 Spelling (may be waived based on competency exam)	3
2.500 Business Orientation	1
2.515 Business Math w/Calc (applies to general ed requirements)	3
2.652 Filing	1
OA 111 Stenography I (may be waived based on competency exam)	3
OA 121 Typing I (may be waived based on competency exam)	3

##### Winter

2.515 Business Math w/Calc (applies to general ed requirements)	1
2.551 Office Communications	3
OA 112 Stenography II	3
OA 122 Typing II	3

##### Spring

2.527 Transcribing Machines I	3
2.530 Practical Accounting I	3
2.610 Clerical Office Procedures	3
2.655 IBM Memory	1
OA 113 Stenography III	3
OA 124 Typing III	3

##### Fall - Second Year

2.528 Transcribing Machines II	3
2.647 Administrative Management	3
2.653 Automated Office Concepts	3
2.666 IBM Displaywriter	3
OA 211 Applied Stenography I	3

##### Winter

2.613 On-the-Job Training	4
2.645 Business Conference Techniques	3
2.654 CPT Operation	2
2.656 Word Processing Practicum	3
OA 212 Applied Stenography II	3

##### Spring

2.415 Human Relations in Business	3
2.535 Payroll Accounting	3
2.614 On-the-Job Training	4

96-

100

### Associate of Science in Administrative Secretary / Word Processing Option

#### General Education Requirements . . 15-20

See graduation requirements for  
Associate of Science degree  
2.515 Business Math with Calculators  
is required.

#### Major Requirements . . . . .73

##### Fall - First Year

2.500 Business Orientation	1
2.515 Business Math w/Calc (applies to general ed requirements)	3
2.530 Practical Accounting I	3
2.537 Alphabetic Shorthand	3
OA 121 Typing I (may be waived based on competency exam)	3

##### Winter

1.131 Spelling (may be waived based on competency exam)	3
2.515 Business Math w/Calc (applies to general ed requirements)	2
2.551 Office Communications	3
2.652 Filing	1
OA 122 Typing II	3

##### Spring

2.415 Human Relations in Business	3
2.527 Transcribing Machines I	3
2.610 Clerical Office Procedures	3
2.654 CPT Operation	2
2.655 IBM Memory Typewriter Operation	1
OA 124 Typing III	3

##### Fall - Second Year

2.528 Transcribing Machines II	3
2.647 Administrative Management	3
2.653 Automated Office Concepts	3
2.666 IBM Displaywriter	3

##### Winter

2.613 On-the-Job Training	4
2.645 Business Conference Techniques	3
2.656 Word Processing Practicum	3

##### Spring

2.510 Intro to DP	4
2.518 Business Law	3
2.614 On-the-Job Training	4

88-

93

### Associate of Science in Educational Secretary

#### General Education Requirements . . 16-20

See graduation requirements for  
Associate of Science degree

2.515 Business Math with Calculators is required.  
HE 252 First Aid is required.  
SP 111 Interpersonal Communications is required.

#### Major Requirements . . . . .74

##### Fall - First Year

2.500 Business Orientation	1
2.515 Business Math w/Calc (applies to general ed requirements)	3
2.652 Filing	1
OA 121 Typing I (may be waived based on competency exam)	3

☐ Accounting or Shorthand Option . (3)

2.530 Practical Accounting I	3
OA 111 Stenography I (may be waived based on competency exam)	3

##### Winter

2.515 Business Math w/Calc (applies to general ed requirements)	1
2.551 Office Communications	3
2.653 Automated Office Concepts	3
OA 122 Typing II	3

☐ Accounting or Shorthand Option . (3)

2.531 Practical Accounting II	3
OA 112 Stenography II	3

##### Spring

2.415 Human Relations in Business	3
2.610 Clerical Office Procedures	3
OA 124 Typing III	3

☐ Accounting or Shorthand Option . (3)

2.532 Practical Accounting III	3
OA 113 Stenography III	3

##### Fall - Second Year

2.510 Intro to Data Processing	4
2.666 IBM Displaywriter	3
PY 201 General Psychology	3

##### Winter

2.613 On-the-Job Training	4
2.654 CPT Operation	2
9.764 Oregon School Law	3
PY 202 General Psychology	3

##### Spring

2.220 Personal Finance	3
2.535 Payroll Accounting	3
2.614 On-the-Job Training	4
9.500 Elements of Supervision	3
PY 203 General Psychology	3

90-

94

## BUSINESS DIVISION

**Associate of Science in Legal Secretary****General Education Requirements . . 16-20**

See graduation requirements for Associate of Science degree

2.515 Business Math with Calculators is required.

**Major Requirements . . . . .80****Fall - First Year**

1.131 Spelling (may be waived based on competency exam)	3
2.500 Business Orientation	1
2.515 Business Math w/Calc (applies to general ed requirements)	3
2.518 Business Law	3
OA 121 Typing I	3

☐ **Shorthand Option (Select one) . . . (3)**

2.537 Alphabetic Shorthand	3
OA 111 Stenography I	3

**Winter**

2.515 Business Math w/Calc (applies to general ed requirements)	1
2.551 Office Communications	3
2.652 Filing	1
2.675 Legal Office Proc & Term I	3
OA 122 Typing II	3

☐ **Shorthand Option (Select one) . . . (3)**

2.538 Applied Alphabetic Shorthand	3
OA 112 Stenography II	3

**Spring**

2.530 Practical Accounting I	3
2.661 Legal Typing	3
2.663 Legal Office Procedures	3

☐ **Typing or Shorthand Option (Select one) . . . . . (3)**

OA 113 Stenography II	3
OA 123 Typing Skill Building	3

**Fall - Second Year**

2.527 Transcribing Machines I	3
2.647 Administrative Management	3
2.653 Automated Office Concepts	3
2.666 IBM Displaywriter	3

☐ **Typing or Shorthand Option (Select three credits) . . . . . (3)**

2.654 CPT Operation	2
2.655 IBM Memory Typewriter	1
OA 211 Applied Stenography	3

**Winter**

2.415 Human Relations in Business	3
2.613 On-the-Job Training	4
2.656 Word Processing Practicum	3
2.662 Legal Transcription	3

☐ **Law or Shorthand Option (Select one) . . . . . (3)**

CJ 220 Intro to Substantive Law	3
CJ 222 Procedural Law	3
OA 212 Applied Stenography	3

**Spring**

2.535 Payroll Accounting	3
2.614 On-the-Job Training	4

96-

100

**Associate of Science in Medical Receptionist****General Education Requirements . . 16-20**

See graduation requirements for Associate of Science degree

2.515 Business Math with Calculators is required.  
HE 252 First Aid is required.

**Major Requirements . . . . .70****Fall - First Year**

1.131 Spelling (may be waived based on competency exam)	3
2.500 Business Orientation	1
2.652 Filing	1
5.630 Medical Terminology I	3
OA 121 Typing I (may be waived based on competency exam)	3

**Winter**

2.515 Business Math w/Calc (applies to general ed requirements)	1
2.551 Office Communications	3
2.671 Medical Law and Ethics	2
5.625 Clinical Office Procedure	4
5.633 Medical Terminology II	3
OA 122 Typing II	3

**Spring**

2.506 Medical Typing	3
2.515 Business Math w/Calc (applies to general ed requirements)	3
2.527 Transcribing Machines I	3
2.670 Medical Office Procedures	3
5.634 Medical Terminology III	3

**Fall - Second Year**

2.415 Human Relations in Business	3
2.524 Medical Transcription I	3
2.530 Practical Accounting I	3
2.537 Alphabetic Shorthand	3

**Winter**

2.525 Medical Transcription II	3
2.613 On-the-Job Training	4
2.653 Automated Office Concepts	3

**Spring**

2.535 Payroll Accounting	3
2.614 On-the-Job Training	4
5.631 Pharmaceutical Terminology	2

86-

90

**One-Year Certificate in Medical Transcriptionist****Major Requirements . . . . .40****Fall - First Year**

1.131 Spelling (may be waived based on competency exam)	3
2.500 Business Orientation	1
5.630 Medical Terminology I	3
OA 122 Typing II	3
WR 115 Basic Writing (may be waived based on competency exam)	3

**Winter**

2.506 Medical Typing	3
2.527 Transcribing Machines I	3
2.671 Medical Law and Ethics	2
5.633 Medical Terminology II	3
WR 121 English Comp	3

**Spring**

2.415 Human Relations in Business	3
2.529 Applied Med Transcription	5
5.631 Pharmaceutical Terminology	2
5.634 Medical Terminology III	3

**Electives (Select two) . . . . .6**

2.551 Office Communications	3
OA 123 Typing Skill Building	3
HE 252 First Aid	3

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**One-year Certificate in Secretarial Sciences/Shorthand Option****Major Requirements . . . . .42****Fall - First Year**

2.500 Business Orientation	1
2.515 Business Math w/Calc	3
2.652 Filing	1
OA 121 Typing I (may be waived based on competency exam)	3
WR 115 Basic Writing Skills (may be waived based on competency exam)	3

☐ **Shorthand Option (Select one) . . . (3)**

2.537 Alphabetic Shorthand	3
OA 111 Stenography I (may be waived based on competency exam)	3

**Winter**

1.131 Spelling (may be waived based on competency exam)	3
2.551 Office Communications	3
2.653 Automated Office Concepts	3
OA 122 Typing II	3

☐ **Shorthand Option (Select one) . . . (3)**

2.538 Applied Alphabetic Shorthand	3
OA 112 Stenography II	3

**Spring**

2.527 Transcribing Machines I	3
2.530 Practical Accounting I	3
2.610 Clerical Office Procedures	3
2.655 IBM Memory Typewriter	1
OA 124 Typing III	3

**Electives . . . . .3-4**

2.510 Intro to DP	4
2.522 Advanced Office Machines	2
9.700 Civil Service Prep	1
OA 113 Stenography III	3
OA 123 Typing Skill Building	3

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46

## One-year Certificate in Secretarial Sciences/Transcription Option

### Major Requirements . . . . .45

Fall	
1.131 Spelling (may be waived based on competency exam)	3
2.500 Business Orientation	1
2.530 Practical Accounting I	3
2.652 Filing	1
OA 122 Typing II	3
WR 115 Basic Writing Skills (may be waived based on competency exam)	3
Winter	
2.515 Business Math w/Calc	3
2.527 Transcribing Machines I	3
2.551 Office Communications	3
2.653 Automated Office Concepts	3
2.655 IBM Memory Typewriter	1
OA 124 Typing III	3
Spring	
2.515 Business Math w/Calc	1
2.528 Transcribing Machines II	3
2.535 Payroll Accounting	3
2.610 Clerical Office Procedures	3
2.654 CPT Operation	2
WR 121 English Composition: Occupational	3

45

## SECRETARIAL SKILLS COURSES

### 2.500 Business Orientation

(2 class hrs/wk 1 cr) F

Introduction to various career opportunities in the business field through films, speakers and field trips.

### 2.504 Typewriting IV

(5 class hrs/wk 3 cr) F/W/Sp/Su

Additional units on correspondence, business forms and manuscripts, with special job-oriented projects and composition at the typewriter. Emphasis on speed and accuracy improvement. Provides individualized instruction; students advance at their own rate. Prerequisite: OA 124 Typewriting III or equivalent.

### 2.506 Medical Typing

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Introduction to preparation of medical forms and projects, as well as continued drills for speed and accuracy. Prerequisite: OA 122 Typewriting II or equivalent.

### 2.515 Business Mathematics with Calculators

(5 class hrs/wk 1-5 cr) F/W/Sp/Su

Course provides the opportunity to learn operation of the electronic calculator. This knowledge will be applied to business mathematics in areas such as payroll, banking, invoices, simple interest, compound interest, etc. Students advance at their own rate. Prerequisite: 1.109 Pre-Business Math or equivalent.

### 2.522 Advanced Office Machines

(5 class hrs/wk 2 cr) F/W/Sp/Su

Course emphasizes building speed as well as practical business applications. Prerequisite: 2.515 Business Math with Calculators or equivalent.

### 2.524 Medical Transcription I

(5 class hrs/wk 3 cr) F/W/Sp/Su

Introductory course in transcription of medical terminology in word lists and paragraphs, as well as preparation of basic medical forms. Prerequisite: 2.527 Transcribing Machines I; 5.630 Medical Terminology I.

### 2.525 Medical Transcription II

(5 class hrs/wk 3 cr) F/W/Sp/Su

Further development of skill in preparation of medical forms and records from dictated material. Prerequisite: 2.524 Medical Transcription I; 5.633 Medical Terminology II.

### 2.527 Transcribing Machines I

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Course provides opportunity to develop an entry-level job skill on the transcribing machine. Prerequisite: OA 122 Typewriting II or equivalent; WR 115 Basic Writing Skills or equivalent; 1.131 Spelling or equivalent.

### 2.528 Transcribing Machines II

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Course further develops the student's skill on the transcribing machine. Includes projects from a variety of business situations. Prerequisite: 2.527 Transcribing Machines I.

### 2.529 Applied Medical Transcription

(10 class hrs/wk 1-5 cr) F/W/Sp/Su

Introduction to transcription of medical terminology in word lists and paragraphs, followed by preparation of medical forms and records from dictated material. Prerequisite: 2.527 Transcribing Machines I; 5.633 Medical Terminology II.

### 2.537 Alphabetic Shorthand

(5 class hrs/wk 1-3 cr) F/W/Sp

Course designed for those needing a short and rapid method of writing both notes and verbatim dictation. Covers the theory of ABC Stenoscrypt, including the dominant sound rule, hi-frequency words, hi-frequency letter groups, prefix and suffix rules, and phrasing and abbreviating principles. Emphasizes development of speed and accuracy in dictation and transcription.

### 2.538 Applied Alphabetic Shorthand

(5 class hrs/wk 3 cr) F/W/Sp

An extensive review of ABC Stenoscrypt, including theory, brief forms, phrases and short cuts. Dictation covers vocabularies representative of various types of business. Emphasizes development of transcription skills and greater speed and accuracy. Production of mailable copy is stressed. Prerequisite: OA 121 Typewriting I; 2.537 Alphabetic Shorthand, with a minimum of 60 wpm.

### 2.551 Office Communications

(6 class hrs/wk 3 cr) W/Sp

Course shows students how good communication works for the individual on a day-to-day basis. Stresses written communications, oral communications and listening skills. Prerequisite: WR 115 Basic Writing Skills; OA 121 Typewriting I or equivalent.

### 2.590 Reading & Conference for Secretarial Skills

(2-10 class hrs/wk 1-5 cr)

Individualized course covering subject areas of particular interest to the student or areas where additional work is needed. Note: Number of credits is determined by amount of time spent.

### 2.610 Clerical Office Procedures

(6 class hrs/wk 3 cr) Sp

Course includes instruction in telephone techniques, job interviewing, communications and office procedures. Students will be doing projects integrating all office skills and techniques. Prerequisite: 2.551 Office Communications; OA 122 Typewriting II; WR 115 Basic Writing Skills.

### 2.613, 2.614, 2.615 On-the-Job Training: Secretarial

(3-36 class hrs/wk 1-12 cr) F/W/Sp/Su

Supervised employment in a secretarial field, primarily for second-year students, to provide practical experience related to the student's major field of interest. Prerequisite: 2.0 GPA; Business Division approval.

### 2.645 Business Conference Techniques

(3 class hrs/wk 3 cr) W

Course prepares students to effectively handle oral communications in business situations, such as interviews, committees, briefings and presentations. Emphasizes effective oral communication of business ideas, statistics and research to business superiors and colleagues.

### 2.647 Administrative Management

(3 class hrs/wk 3 cr) F

This course includes office managerial topics, such as office layout and equipment, records management, selection of office personnel and automation.

### 2.652 Filing

(2 class hrs/wk 1 cr) F/W/Sp/Su

Introduction to basic principles and information for efficient performance in managing and using records in the office.

### 2.653 Automated Office Concepts

(3 class hrs/wk 3 cr) F/W

Terminology and concepts concerning the automated office will be introduced and discussed, such as word processing, automated records management (micrographics), microcomputers and reprographics.

### 2.654 CPT Operation

(2 class hrs/wk 2 cr) W/Sp/Su

Introduction to operation of the CPT Automatic Typewriter. Includes recording and reading information, using search and switch codes, skipping, adjusting, duplicating and making single and dual-tape revisions. Prerequisite: OA 122 Typewriting II; instructor approval.



**2.655 IBM Memory Typewriter Operation**

(2 class hrs/wk 1 cr) F/W/Sp/Su

Introduction to operation of the IBM Memory Typewriter. Includes procedures for recording, reading, duplicating, skipping and revising information. Prerequisite: OA 122 Typewriting II.

**2.656 Word Processing Practicum**

(6 class hrs/wk 3 cr) F/W/Sp

This is a self-paced course designed to give the student practical, hands-on experience in production typing on the IBM Displaywriter. Includes a series of in-basket exercises involving handwritten and rough draft copy, revisions and transcription tapes. Exercises are designed to simulate the actual word processing center which handles typing tasks for a variety of local businesses. Decision making, records management and other skills and aptitudes desirable for word processing workers will be emphasized. Prerequisite: 2.666 IBM Displaywriter.

**2.661 Legal Typing**

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Course emphasizes typing legal documents, with continued drills for speed and accuracy. Prerequisite: OA 122 Typewriting II or equivalent.

**2.662 Legal Transcription**

(5 class hrs/wk 3 cr) F/W/Sp/Su

Course stresses the ability of students to take instruction via the dictaphone and to type legal documents verbatim. Prerequisite: 2.527 Transcribing Machines I; 2.675 Legal Office Procedures and Terminology I; 2.661 Legal Typing.

**2.663 Legal Procedures & Ethics**

(6 class hrs/wk 3 cr) Sp

Specifics of working in a legal office, stressing confidentiality, methods of handling clients, interaction with the courthouse, the law library, etc. Prerequisites: 2.551 Office Communications; 2.675 Legal Office Procedures and Terminology I; OA 122 Typewriting II.

**2.666 IBM Displaywriter**

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Instruction in the operation of the IBM Displaywriter to do computer-based word processing. Includes edit, edit table, print, global search and replace, and automatic word wrap. Prerequisite: OA 124 Typewriting III or equivalent.

**2.670 Medical Office Procedures**

(6 class hrs/wk 3 cr) Sp

Specifics of working in a medical office are stressed, including insurance, medical records, administrative office procedures, receptionist techniques and communications. Prerequisites: 2.551 Office Communications; OA 122 Typewriting II.

**2.671 Medical Law and Ethics**

(2 class hrs/wk 2 cr) F

Course includes licensing, confidentiality, legal relationship of physician and patient, and legal and ethical responsibilities of medical personnel.

**2.675 Legal Office Procedures and Terminology I**

(6 class hrs/wk 3 cr) W

Course prepares students for legal secretarial work through lecture and practice of words and forms used in a legal office. Students gain a basic knowledge in general legal office duties, ethics, basic elements of law, general office duties, courts and court procedures, litigation, legal research and appeals.

**9.700 Civil Service Preparation**

(5 class hrs/wk 1 cr) F/W/Sp/Su

A self-paced course designed to prepare individuals for the clerical/secretarial Civil Service test. The course includes alphabetizing, filing, arithmetic, number usage, English usage, spelling and vocabulary.

**BA 106 Leadership: FSA**

(2 class hrs/wk 1-2 cr) F/W/Sp

This course is designed to offer a student an opportunity to develop leadership ability through active participation in a student organization.

**BA 199 Current Trends in Business**

(3 hrs/wk 1 cr)

Through utilization of workshops, field trips, speakers, etc., this course will provide up-to-date information relating to the business world. Students will be exposed to latest trends, new equipment and changing procedures relevant to their current or future position in the business environment.

**OA 111 Stenography I**

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Introduction to theory of Gregg shorthand, including the alphabet, brief forms, phrasing and abbreviating principles. Students advance at their own rate.

**OA 112 Stenography II**

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Course provides completion of shorthand theory and review of all principles. Develops ability to construct new outlines rapidly from dictation and lays a solid foundation for further development of dictation and transcription skill. Students advance at their own rate. Prerequisite: OA 111 Stenography I or equivalent.

**OA 113 Stenography III**

(6 class hrs/wk 3 cr) F/W/Sp

Course emphasizes further development of speed and accuracy in dictation and transcription. Includes intensive practice in refining shorthand skills and producing mailable letters. Prerequisite: OA 112 Stenography II or equivalent.

**OA 115 Stenography Refresher**

(6 class hrs/wk 1-2 cr) F/W/Sp/Su

This course is designed for the individual who already has a shorthand background and desires to review theory as well as build shorthand speed and transcription accuracy. Prerequisite: OA 112 Stenography II or equivalent; OA 121 Typewriting I or equivalent.

**OA 121 Typewriting I**

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Beginning typing for those with no previous instruction or those needing a review of basic techniques. Includes basic techniques of the touch system, speed and accuracy, manuscript writing, tabulation, correspondence and centering. Provides individualized instruction; students advance at their own rate.

**OA 122 Typewriting II**

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Continued units on correspondence, tabulation, business forms, manuscripts, secretarial projects, speed and accuracy, and number proficiency. Provides individualized instruction; students advance at their own rate. Prerequisite: OA 121 Typewriting I or equivalent.

**OA 123 Typing Skill Building**

(5 class hrs/wk 3 cr) F/W/Sp/Su

Course provides special emphasis on speed and accuracy, with special drills to work on numbers and remedial techniques. Prerequisite: OA 121 Typewriting I or equivalent.

**OA 124 Typewriting III**

(5 class hrs/wk 1-3 cr) F/W/Sp/Su

Continued units on correspondence, tabulation, business forms, manuscripts, secretarial projects, speed and accuracy, and number proficiency. Provides individualized instruction; students advance at their own rate. Prerequisite: OA 122 Typewriting II or equivalent.

**OA 211 Applied Stenography I**

(6 class hrs/wk 3 cr) F/W/Sp

A thorough and extensive review of Gregg shorthand, advanced principles, phrases, shortcuts and dictation covering vocabularies representative of various types of business. Basic skills of office work are stressed. Prerequisite: OA 113 Stenography III or equivalent, with a minimum of 80 wpm.

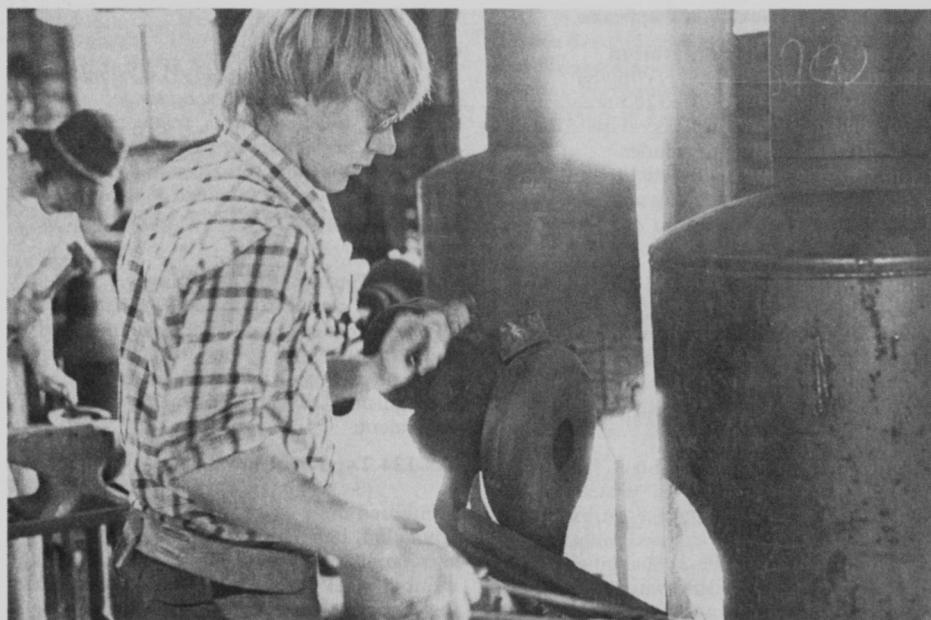
**OA 212 Applied Stenography II**

(6 class hrs/wk 3 cr) F/W/Sp

A continuation of OA 211 Applied Stenography I, emphasizing speed, accuracy and secretarial standards. Included are legal and technical dictation and transcription. Prerequisite: OA 211 Applied Stenography I or equivalent.

# COMMUNITY EDUCATION DIVISION

DIRECTOR: Michael Patrick



Working at the 2200° F. forges in LBCC's off-campus Farrier School in Corvallis require careful attention.

**T**he Community Education Division offers a variety of credit and non-credit classes and programs both on and off the LBCC campus. Organized into four community-based centers open both days and evenings, the Community Education Division is able to provide educational classes within commuting distance of most residents of Linn and Benton counties.

The four main centers, located on the main college campus in Albany and in Corvallis, Lebanon and Sweet Home, also arrange for classes to be held on a regular basis in many of the college district's smaller communities, including Scio, Brownsville, Philomath and Alsea. Classes are held in other areas when there are sufficient numbers of students and an available public or private facility.

In response to the needs of its local service area, each Community Education center offers a mixture of classes and programs, including lower-division college transfer courses, vocational preparatory and vocational upgrading, general self-improvement courses for adults (covering such areas as agriculture,

health and physical fitness, art, music, foreign languages and human relations), and hobby and recreation courses that are self-supporting through student tuition and fees. A major component of instruction at each off-campus center is the free instruction in reading, writing and math for adults with below eighth-grade education and low-cost instruction for adults wanting to obtain a high school diploma or a high school equivalency certificate (GED). These services are provided on the main campus through the Instructional Support Services Division.

Students working on degrees or certificates through LBCC may be eligible to participate in the Cooperative Work Experience program. For more information see the CWE section of this catalog.

## ADULT GENERAL EDUCATION PROGRAMS

A variety of classes and programs are available to adults who do not have a high school diploma. Instruction is available both days and evenings on the main campus, through the Instructional Support Services Division and at each off-campus Community

Education Center. Classes also are scheduled as needed in Scio, Brownsville and other locations in the college district. The college also will try to find volunteer instructors or tutors or self-study materials to help adults who, due to illness, disability, incarceration or other reasons beyond their control, are unable to attend regularly scheduled classes.

To be eligible for these classes, a person must be at least 16 years of age and no longer enrolled in school (see exception in "High School Continuation"). Persons who are under age 18 must present from their local school district a signed release from compulsory attendance as provided for by ORS 339.30.

## ADULT BASIC EDUCATION

The ABE program provides classes in reading, writing, vocabulary, spelling and math for students who have not completed the eighth grade. There is no tuition charge for ABE classes.

## CITIZENSHIP PREPARATION

Individualized study programs are available for residents who wish to become naturalized United States citizens. Additional information is available from the GED instructor.

## ENGLISH AS A SECOND LANGUAGE (ESL)

For adults whose first or native language is not English, instruction is available in reading, writing and speaking the English language. The course stresses vocational and "survival" skills in using and understanding English.

Instruction is provided at beginning, intermediate and advanced levels. The beginning level instruction is free. A tuition charge may be assessed for intermediate and advanced levels.

## GENERAL EDUCATIONAL DEVELOPMENT (GED) STUDIES

GED classes are designed for adults who wish to prepare for the GED high school equivalency examination. The classes also are available for those who wish to improve their general knowledge and skills in the subject areas offered. Areas of study include writing, math, reading, comprehension of literature, social studies, science and consumer education.

A small tuition is charged for GED studies and students must purchase some texts and study materials.

## HIGH SCHOOL CONTINUATION

High School Continuation is a cooperative program with area schools for high school students wanting to complete their program early or make up credit deficiencies.

To be eligible for admission to the program, a person must be age 16 or over, currently enrolled in high school and referred by their high school administrator or counselor.

## ADULT HIGH SCHOOL DIPLOMA

LBCC is authorized by the state of Oregon to issue a high school diploma to adults who meet high school graduation requirements established by the college. High school credits may be obtained in LBCC college-level and non-credit classes or by attending high school classes offered at the off-campus Community Education centers or through the Instructional Support Services Division on the main campus. In some cases, adults may obtain high school credits for life experiences, such as military service and training, previous employment, employer- or union-sponsored training programs, correspondence or self-study programs, or personal experiences or activities that resulted in the acquisition of skills or knowledge at or beyond secondary school level.

Information about the High School Diploma program is available at the Community Education centers. Admission applications and information are available from LBCC's admissions office.

## ALBANY CENTER

**Director:**  
Mary Spilde

The Albany Center is located in Takena Hall on the main LBCC campus and serves the general populations of Albany, North Albany, Tangent and Shedd. Workshops and courses are offered for vocational upgrading, parent education and life enrichment in subjects such as conversational language, art, music, physical fitness and home and family.

In addition to classes scheduled on campus, the Albany Center also offers courses in locations throughout the greater Albany area, including the Albany Senior Center, the Albany Boys and Girls Club, the Linn County Fairgrounds and the Albany Public Schools.

Part-time students may register at the Albany Center for any class offered through an LBCC Community Education Center.

## EVENING CAMPUS

The Albany Center is responsible for administration of main-campus evening classes and instructional programs. During the regular academic year, the Albany Center is open Monday through Thursday evenings until 10 pm. After 5 pm questions or problems concerning evening classes or instructional programs should be directed to the Albany Center.

## PARENT EDUCATION

**Faculty:**  
Bobbie Weber

Parent Education classes are offered to those parents interested in learning more about child development, guidance techniques and how various learning activities enable children to reach their maximum potential.

Classes also are offered to help individuals who work with children as foster parents, teacher aides or volunteers.

Strategies of parenting are addressed in discussion classes. Participatory classes also include a laboratory experience in which parents and children interact. Special interest classes address a specific area of work with children.

A certificate of completion in Parent Education is available to individuals who complete specific requirements. For further information, contact the Parent Education coordinator.

## PARENT EDUCATION COURSES

### 0.691 Understanding Child Abuse (2.5 class hrs/wk 0 cr)

Designed for volunteer workers who will learn to recognize cases of child abuse, its nature and its effects upon the child and the child abuser. Service agencies and laws on reporting are explained and discussed. Note: Four-week course.

### 0.881 Single Parenting (2 hrs/wk 0 cr)

Course considers skills and guidance techniques to make the single parent effective. Includes rule setting, value clarification, responsive listening, family decision-making and communication. Note: Four- to six-week course.

### 0.884 Being A Parent and Liking It (2 class hrs/wk 0 cr)

Designed to help parents develop realistic expectations for their children, improve communication and guidance skills, help reduce family tension, raise self-esteem and offer support. Note: Four-week course.

### 0.884 Parent Effectiveness Training (PET) (3 class hrs/wk 3 cr)

A skill-training program particularly for parents, equipping them for staying in effective relationship with their children. The PET system values the uniqueness of every child, treats ways of responding to messages of others and provides a system of cultivating effective human relationships, including parent-child, husband-wife, boss-subordinate and friend-friend.

### 0.884 Stepparenting (2 hrs/wk 0 cr)

Stepparents assume a ready-made family; course helps develop this new family into a strong one. Note: Four- to six-week course.

### 0.885 Avenues to Adoption (3 class hrs/wk 0 cr)

An opportunity for prospective parents to explore adoption. First class offers general information, is free and involves no commitment to continue. Note: Five-week course.

### 0.885 Mother-Person Workshop (1.5 hrs/wk 0 cr)

An opportunity to explore the many roles of being a mother: how to keep it all together and deal constructively with time, stress, romance and reality. Note: Five-week course.

### 0.891 Living and Learning With Your Toddler (2 class hrs/wk 1 cr)

A course designed for parents of children between the walking stage and 2½ years of age. The parents observe and participate with their children in activities suited to the age group and discuss topics such as negative behavior, toilet training and guidance techniques.



**0.891 Living and Learning With Your Two-Year-Old I, II, III**

(3.6 class hrs/wk 2 cr) F/W/Sp

Parents and children participate in a lab situation designed to meet the needs of the two-year-old. Through participation in the lab and three evening seminars, parents focus on child development, guidance techniques and creation of appropriate activities and environments in this three-course sequence.

**0.891 Living With Child With Special Needs I, II**

(3.6 class hrs/wk 2 cr) F/W/Sp

Parents and their preschool children participate in a lab specifically designed to meet the needs of children with speech, hearing and other handicapping conditions. Through seminar and lab participation in this three-course sequence, parents increase knowledge and awareness of the child's development and special needs.

**0.891 Living With Your Preschooler or Kindergartener I, II, III**

(20-50 class hrs/term 1-3 cr) F/W/Sp

Preschool/kindergarten cooperative helps parents of preschool children develop awareness of factors affecting the child's physical, emotional and intellectual development. This three-course sequence includes participation in the cooperative preschool lab and seminars.

**0.892 Childbirth Preparation**

(3 class hrs/wk 0 cr)

A study of the childbirth experience, including Lamaze techniques of control. Provides the expectant mother with skills to manage her labor and delivery with the help of her prepared partner. Note: Six-week course. Student should pre register 10-12 weeks before expected date of childbirth.

**0.892 Living and Learning With Your Baby** (2 class hrs/wk 1 cr)

A course for parents of infants from birth to beginning walkers. Parents bring child to class, where activities with the baby are included. Also included are practical skills, learning to meet the needs of the total family, making toys and understanding the development of infants.

**0.8921 Parents and Children Together (PACT)** (2 class hrs/wk 1 cr)

Learning and sharing experiences for school-age parents and their young children.

**0.900 Parenting and Family Communications**

(2 class hrs/wk 1 cr)

Course topics include ego needs, communication principles and skills, family discipline, responsibility, handling conflict and other subjects that relate to personality and family development. Note: Six-week course.

**0.901 Between Parent and Teens**

(2 class hrs/wk 1 cr)

Designed to facilitate improvement of relationship between teenagers and their parents. Emphasizes effective communication skills, mutual problem-solving and assuming responsible behavior. Recognition is given to the strengths families have and to means of increasing personal growth for both parents and adolescents. Note: Appropriate for any interested adults; parents may come without teenagers. Eight-week course.

**0.902 Foster Parent Seminar**

(3 class hrs/wk 1 cr)

Discussions for existing foster parents on working with foster children, natural parents and CSD workers, legal rights and responsibilities of foster parents and communication skills. Note: Five-week course.

**7.180 Supervised Placement**

(6 class hrs/wk 4 cr) F/W/Sp

Students work in child development lab setting under direction of instructor. Assignments may include material preparation, skill training or specific care tasks. Weekly class session permits students from various placements to share common learning experiences and tie placement activity to training objectives.

**FL 199 Early Childhood Lab Experience**

(3-5 class hrs/wk 2-3 cr) F/W/Sp

This course helps students develop self-confidence in working with preschool children by actively participating in the campus Parent-Child Lab. Students increase their knowledge of child development and basic guidance techniques while working with and observing children.

**FL 225 Child Development**

(3 class hrs/wk 3 cr)

An introduction to the study of social, emotional, intellectual and physical growth and development of infants and young children. Course includes observations in child development lab.

**SPECIAL SHORT PROGRAMS**

Programs financed by specially obtained funds, such as grants may be held for specific occupations or groups of people. These programs usually are one- or two-terms long and differ each year, because they are designed to meet specific needs. Examples of programs completed in the past are Tool Room Technician, Jobs for Women in the Wood Products Industry and Electronics Fabrication.

Any person interested in these programs should call the Albany Center to obtain current training subjects, schedules and qualification procedures.

**BENTON CENTER****Director:**

Ann Crisp

**Faculty:**

Annamay Lundstrom, Jason Widmer

The Benton Center is located at 630 NW 7th, Corvallis, in the old Washington School and is open from 8 am - 10 pm Monday through Thursday during school weeks and 8 am - 5 pm on Fridays. The center serves all of Benton County except the North Albany area, providing classes in the rural areas as well as in Corvallis. Many of the programs are made possible through the cooperation of school districts in the area.

The center has many self-study, open-entry labs which allow students to start a program when they are ready and to make their own schedule. The center provides lower division transfer courses, vocational preparation programs, upgrading courses for local business and industries and adult self-improvement courses. Popular subject areas include practical accounting, art, physical fitness, conversational language, outdoor education, ceramics, cooking and parent education. Courses are offered during the day and in the evening. Registration and purchasing of books occurs at the center too.

A vocational counselor is available to residents of the area at no charge. Some evening hours are available. Appointments may be made by calling the center.

**ADULT GENERAL EDUCATION****Faculty:**

Kelly Fish

The Benton Center offers programs in Adult Basic Education, General Education Development, Adult High School Diploma, High School Continuation, Citizenship Preparation and English as a Second Language, writing lab, study skills, spelling skills and reading. For additional information, see "Adult General Education Programs" at the beginning of the Community Education section.



Field study classes offered each summer provide on-site learning activities.

## ELECTRONICS

### Faculty:

Dennis Hanhi

The Electronics Lab is designed to teach or upgrade electronics job skills, with individualized instruction in a wide range of independent-study courses. The student is able to begin the program at any time when space is available and to choose desired class hours.

The Electricity/Electronics I and Electricity/Electronics II sequences also are available by correspondence.

In addition to instruction provided by the center, the lab is open for independent use by knowledgeable community members.

## ELECTRONICS COURSES

### 1.134 Vocational Study Skills

(1-6 class hrs/wk 1-3 cr)

See course description under "Developmental Programs."

### 6.334 Electronic Fabrication

(1-10 class hrs/wk 1-6 cr)

Course designed to prepare students for electronic assembly and fabrication positions. Teaches occupational skills in safety, hand tool use, soldering techniques, basic electricity, meter usage and printed circuit board and integrated circuit manufacturing processes.

### 6.554 Technical Project

(1-9 class hrs/wk 1-3 cr)

Course provides in-depth study of particular aspects of electronics, as determined by the individual student's interests. Prerequisite: 6.332 Basic Semiconductors.

### 9.674, 9.675, 9.676

#### Electricity/Electronics I

(1-4 class hrs/wk 1-3 cr)

An individualized, introductory course sequence in electricity and electronics, designed to provide knowledge of basic theories and laws of DC electricity. The student also will acquire basic skills in hand tool use, soldering and multimeter use. Prerequisite: High school algebra or equivalent; high school geometry or equivalent; 6.551 Technical Math I or MT 101 College Algebra, to be taken concurrently.

### 9.677, 9.678, 9.679

#### Electricity/Electronics II

(1-4 class hrs/wk 1-3 cr)

Individualized course sequence continues 9.674-9.676 Electricity/Electronics I sequence, providing knowledge of basic theories and laws of AC electricity. The student will acquire basic skills in oscilloscope, function generator and power supply use.

## FARRIER SCIENCE

### Faculty:

Larry Bewley

The program provides comprehensive training in horseshoeing and basic forging. Training may be sought by those engaged in farming or related occupations or by those who wish to operate a part-time or full-time horseshoeing business.

This is a 14-week program offered fall, winter and spring. Class sessions last from 8 am to 4:30 pm daily, Monday through Friday. Admission is on a first-come, first-served basis and early application through the Benton Center is advised.

In addition to books and supplies, students should expect to spend about \$450 on a personal set of tools.

The Farrier Science curriculum leads to a certificate.

## FARRIER SCIENCE CURRICULUM

### Certificate in Farrier Science

Major Requirements . . . . . 23

8.200 Farrier Science . . . . . 23

## FARRIER SCIENCE COURSES

### 8.200 Farrier Science

(3 class hrs/wk 4-23 cr)

Course designed to provide the basic knowledge and skills for entering the farrier or horseshoeing trade. Includes horse anatomy and physiology, hoof care, hoof disorders and diseases, use of hand tools, basic forging, regular horseshoeing and corrective shoeing.

## Math

### Faculty:

Ann Mills

The Math Lab is designed for individualized study, with assistance readily available. Instructors provide advice on which courses to take and help arrange a suitable study program and time schedule. The classes may be entered at any time during the school year.

## MATH COURSES

### 0.611 Word Problems

(10 class hrs/wk 1 cr)

This course deals exclusively with the major types of word problems found in algebra. Many exercises involving 10 types of problems are explained in the text and performed by the student.

### 1.109 Pre-Business Mathematics

(4 class hrs/wk 1-3 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### 1.110 Elements of Algebra

(4 class hrs/wk 1-4 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### 1.127 Study Skills Seminar in Math

(1-10 class hrs/wk 1-3 cr)

Provides instruction and practice in specific math areas, to be determined by the instructor and student.

### 4.200 Math I

(4 class hrs/wk 1-4 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### 4.202 Math II

(4 class hrs/wk 1-4 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### 4.204 Math III

(4 class hrs/wk 1-4 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### 9.695 Introduction to Microcomputer

Basics (3 class hrs/wk 1-3 cr)

Introduction to BASIC language and its use in writing programs. Students must be at least 16 years old.

### MT 100 Intermediate Algebra

(4 class hrs/wk 1-4 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### MT 101 College Algebra

(4 class hrs/wk 1-4 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### MT 102 Trigonometry

(4 class hrs/wk 1-4 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

### MT 173B Microcomputers: BASIC

(4 class hrs/wk 1-3 cr)

See course description under "Mathematical Sciences, Science & Technology Division."

## OFFICE OCCUPATIONS LAB

### Faculty:

Joyce Moreira

The Office Occupations Lab offers a place to upgrade or learn new office skills.

The student may begin courses at any time and work at an individualized pace.

Students enrolled for credit courses will have equipment reserved for a specific time period. Equipment also may be used at other times on a space-available basis. Students enrolled by the hour will have equipment reserved for the specified number of hours.

Courses offered apply towards the certificates and degrees offered by the Secretarial Skills Department of the Business Division. See that catalog section for degree requirements.

## OFFICE OCCUPATIONS LAB COURSES

### 2.506 Medical Typing

(5 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."

### 2.515 Business Mathematics with

Calculators (5 class hrs/wk 1-5 cr)

See course description under "Secretarial Skills, Business Division."

### 2.515 Electronic Calculator Operation

(2 class hrs/wk 1 cr)

Individualized course provides instruction in operation of the electronic calculator.

### 2.527 Transcribing Machines I

(5 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."

### 2.652 Filing

(2 class hrs/wk 1 cr)

See course description under "Secretarial Skills, Business Division."

### 2.653 Word Processing—TRS80

(4 class hrs/wk 2 cr)

Course covers entering, correcting and editing of letters, memos, tables and letters, then printing out error-free text. Also includes re-formatting, hyphenating and automatic page numbering. Students use the TRS80 computer with the SCRIPSIT program.

### 2.661 Legal Typing

(5 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."

### 9.700 Civil Service Preparation

(5 class hrs/wk 1 cr)

See course description under "Secretarial Skills, Business Division."

### OA 112 Stenography II

(5 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."

### OA 113 Stenography III

(6 class hrs/wk 3 cr)

See course description under "Secretarial Skills, Business Division."

### OA 115 Stenography Refresher

(6 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."



**OA 121 Typewriting I**

(5 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."

**OA 122 Typewriting II**

(5 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."

**OA 123 Typing Skill Building**

(5 class hrs/wk 3 cr)

See course description under "Secretarial Skills, Business Division."

**OA 124 Typewriting III**

(5 class hrs/wk 1-3 cr)

See course description under "Secretarial Skills, Business Division."

## LEBANON CENTER

**East Linn Director:**

Dee Deems

The Lebanon Center, located at 2600 Stoltz Hill Road, serves the communities of Lebanon, Scio and rural East Linn County. The center houses three classrooms, with several other facilities utilized for classes throughout the area. Although a variety of daytime classes are offered, the Lebanon Center schedule consists primarily of evening courses.

The Community Education Division emphasizes the value and rewards of lifelong learning opportunities by providing a broad range of courses to meet the interests and learning needs of the local community. Typical offerings include introductory college transfer courses, job skills improvement and vocational upgrading courses; and credit and non-credit courses in art, agriculture, business, mathematics, science, language arts, physical education and health, family living and self-improvement.

Other college services available through the Lebanon Center include career, academic and financial aid counseling; general information about the LBCC campus and instructional programs; registration for part-time students; and textbook sales for classes offered through the Lebanon Center.

## ADULT GENERAL EDUCATION

**Faculty:**

Carol Flaherty

The Lebanon Center offers programs in Adult Basic Education, General Education Development, Adult High School Diploma and High School Continuation. For additional information see "Adult General Education Programs" in this section.

## FIRE SCIENCE

**Advisor:**

Dee Deems

The Fire Science program is designed as a part-time curriculum available to any individual currently employed in Fire Science or preparing for such a position.

The program is primarily for evening students with occasional weekend seminars offered. The program typically offers each class in the curriculum at least once every three years, based on demand. However, courses in related areas, such as communication skills, physical education, humanities and mathematics, are offered regularly during the day as well as in the evening.

Completion of the Fire Science curriculum leads to an Associate of Science degree.

## FIRE SCIENCE CURRICULUM

### Associate of Science In Fire Science

#### General Education Requirements . . . . . 20

See graduation requirements for Associate of Science degree.

#### Major Requirements . . . . . 65

1.280 Cooperative Work Experience	11
4.100 Blueprint Reading	2
5.245 Fire Science Rescue Practices	3
5.254 Intro to Fire Protection	3
5.256 Elem Science for Firefighting	3
5.257 Fire Service Hydraulics	2
5.258 Fire Company Org & Station Mgt	3
5.260 Hazardous Materials I	3
5.261 Hazardous Materials II	3
5.262 Fund of Fire Prevention	3
5.263 Fire Pump Construction & Oper	4
5.264 Bldg Construction for Fire Prot	3
5.273 Fire Investigations	3
5.275 Fire Science I	4
5.277 Fire Science II	4
9.313 Emergency Medical Tech I	8
9.500 Elem of Supervision	3

#### Electives . . . . . 9

Additional technical courses

94

## FIRE SCIENCES COURSES

### 1.280 CWE Fire Science

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to Fire Science. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 4.100 Blueprint Reading

(3 class hrs/wk 2 cr)

See course description under "Civil Engineering and Drafting Technology, Science and Technology Division."

### 5.245 Fire Science Rescue Practice

(3 class hrs/wk 3 cr)

Covers tools, equipment, methods and procedures of searching and rescuing victims trapped in fires, building collapses, cave-ins, mechanical and auto entrapment. Includes caring for and transporting victims to safety.

### 5.254 Introduction to Fire Protection

(3 class hrs/wk 3 cr)

Introduces the philosophy and history of fire protection; history of loss of life and property by fire; the fire department's community role and responsibility; organization and function of local, county, state, federal and private fire protection agencies and allied organizations; and sources of professional career opportunities.

### 5.256 Elementary Science for

**Firefighting** (3 class hrs/wk 3 cr)

Covers characteristics and behavior of fire; fundamental physical laws and chemical reactions occurring in fire and fire suppression; analysis of factors contributing to fire (cause, rate of burning, heat generation and travel, by-products of combustion) and to its confinement, control, and extinguishment.

### 5.257 Fire Science Hydraulics

(2 class hrs/wk 2 cr)

Introduction of hydraulic laws and formulas as applied to fire science. Students apply formulas and do mental calculations to solve hydraulic problems. Emphasis on "rule of thumb" operations; advanced fire ground hydraulics, including complicated pumping operations; underwriter requirements for pumps and accessories; fire ground-water supply; and other fire-scene operations problems.

### 5.258 Fire Company Organization & Station Management

(3 class hrs/wk 3 cr)

Students gain knowledge of the hows and whys of fire department organization and management and an understanding for command and administrative decisions. Includes basics of why and how various functions of administration are carried out and authority and responsibilities of command officers, chiefs and elected officials. Also covers fire company organization and operation, company responsibilities in station, response to alarms, public relations, fire prevention, records, reports, communications and company morale.

### 5.260 Hazardous Materials I

(3 class hrs/wk 3 cr)

Reviews basic chemistry and studies chemical characteristics and behavior of materials that burn or react violently, including flammable solids and liquids, pressurized gases, liquified gases, combustible metals, cryogenics, plastics and oxidizing agents.

**5.261 Hazardous Materials II**

(3 class hrs/wk 3 cr)

A study of the composition, characteristics, and behavior of unstable materials, explosives, rocket propellents, water reactive materials, poisons, corrosives, combustion products and radioactive materials.

**5.262 Fundamentals of Fire Prevention**

(3 class hrs/wk 3 cr)

Introduces fundamentals of fire inspections, including standards, recognizing fire hazards, techniques of evaluating hazards, home inspections, fire company surveys, fire fighter responsibilities and practical recommendations. Students learn to write reports that include maps and sketches of each building inspected and to recommend safe practices and improvements.

**5.263 Fire Pump Construction & Operation**

(5 class hrs/wk 4 cr)

A basic course for pump operators, presenting theory, construction and principles of operation of fire service pumps. Also includes the principles of driving, drafting and pumping from hydrant; basic "rule of thumb" hydraulics, emergency operations; and actual practice using local departments' apparatus.

**5.264 Building Construction for Fire Protection**

(3 class hrs/wk 3 cr)

Covers classification of buildings, structural features affecting fire spread, effects of fire on structural strength and construction materials, fire stops, ratings of materials, fire retardants, fire spread and representative fire loads.

**5.273 Fire Investigation**

(3 class hrs/wk 3 cr)

Teaches how isolating the cause of a fire can affect fire prevention. Studies the burning characteristics of combustibles; effects of fire on materials; interpreting clues and burn patterns that lead to the point of origin; identifying incendiary indications, sources of ignition and materials ignited; and preserving the scene and evidence.

**5.275 Fire Science I**

(5 class hrs/wk 4 cr)

A course in practical physics covering matter, measurements, machines and energy. Laboratory time is provided for demonstrations and experiments.

**5.277 Fire Science II**

(5 class hrs/wk 4 cr)

Covers physical and chemical properties of substances, chemical changes, bonds, reactions, chemical combinations, atomic structures and covalent substances. Includes theory of metals, acids, bases, salts, solutions, and basic organic chemistry. Laboratory time is provided for clarifying demonstrations and experiments.

**9.313 Emergency Medical Technician I**

(120 class hrs/wk 8 cr)

See course description under "Emergency Medical Technician, Health Occupations and Physical Education Division."

**9.500 Elements of Supervision**

(3 class hrs/wk 3 cr)

See course description under "Business Management, Business Division."

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## SWEET HOME CENTER

**Coordinator:**

Mona Waibel

The Sweet Home Center, located at 1314 Long Street, across from the post office, serves the communities of Brownsville, Halsey, Sweet Home, Cascadia and Foster. The facility houses four classrooms, with several other locations throughout the area used for classes. Because local school facilities are utilized, the center's program is primarily in the evening.

The Sweet Home Center provides a broad range of courses to meet the interests and learning needs of the local community, including college transfer, job skills improvement and general self-improvement courses for adults.

Other college services available through the Sweet Home Center include veterans, career, academic and financial aid counseling; general information about the LBCC campus and instructional programs; registration for part-time students; and textbook sales for classes offered through the Sweet Home Center.

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## ADULT GENERAL EDUCATION

The Sweet Home Center offers programs in Adult Basic Education, General Education Development, Adult High School Diploma and High School Continuation. For additional information see "Adult General Education Programs" in this section.

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# HEALTH OCCUPATIONS & P.E. DIVISION

DIRECTOR: H Richard McClain



A nursing instructor explains the correct techniques in using syringes.

## women or minorities.

Students may, upon recommendation of the faculty advisor and the Cooperative Work Experience staff, receive transfer or non-transfer college credit by participating in the CWE program. Further information may be found in the "Cooperative Work Experience" section of this catalog.

## ASSOCIATE DEGREE NURSING

### Faculty:

Evon Wilson, Department Chair  
Rachel Hagfeldt, Lyndall Johnson, Marty Miles, Joyce Neumann, Jackie Paulson, Gina Wallace

The Associate Degree Nursing program is approved by the Oregon State Board of Nursing and fully accredited by the National League for Nursing. This two-year program is open to both men and women and is designed to train highly skilled bedside nurses (RN) oriented to patient care. Clinical facilities utilized are the hospitals, nursing homes and health agencies in Linn and Benton counties and the state hospital in Salem.

Following acceptance into the nursing program (See "Admission to Health Occupa-

tions Programs" in the "Entering the College" section of this catalog), the student is expected to achieve a minimum C grade in each required course, to be taken in the specified sequence. Permission to continue in the nursing program with an incomplete in any required course will be considered on an individual basis.

Proficiency in math and chemistry is required for admission to the ADN program. Students with a deficiency will be required to complete CH 101 or CH 104 Basic Chemistry and 1.110 Elements of Algebra as program prerequisites.

The student is graded in all aspects of the program, including clinical practices. Evening clinicals may be required. The student is expected to participate on a daily basis; absence is made up through agreement with the instructor.

All nursing courses are to be completed at Linn-Benton Community College unless special permission for transfer credit is granted. Related courses may be taken prior to or concurrent with enrollment in the nursing program.

Students unable to meet the required competency level for the program may be advised of other alternatives to meet their goals. Petitions to complete the nursing program at a later time will be reviewed by the program coordinator and the health occupations director.

The Associate Degree Nursing curriculum leads to an Associate of Science degree. Graduates are eligible to take the Oregon State Test Pool Examination for Registered Nurse licensing.

**T**his division provides career preparation for health occupations, as well as classes in physical education, personal health and first aid.

Programs in health-related fields include associate degree nursing (RN), nursing assistant, dental assistant, emergency medical technician and related health areas. Preparation includes both classroom and clinical experience.

Students completing these programs are qualified to pursue various health service occupations in hospitals, nursing homes, clinics, and doctors' or public health offices.

Activity classes are offered for students who must take physical education to meet graduation requirements and for those desiring opportunities for skill development and increased physical fitness.

Personal health and first aid also are a part of the division's curriculum.

The Health Occupations and Physical Education Division encourages students to make career choices based on interests, needs and abilities, without regard to the traditional roles of men,



## ASSOCIATE DEGREE NURSING CURRICULUM

### Associate of Science in Nursing

#### General Education Requirements . . 17-20

1.110 Elements of Algebra is required.  
SP 111 Interpersonal Communication  
is required.  
AN 103 Introduction to Anthropology  
or SO 204 General Sociology  
substitutes for the elective requirement.

#### Major Requirements . . . . .84

Fall - First Year	
5.711 Nursing I	6
5.732 Drug Administration	2
BI 221 Human Biology	3
FN 225 Nutrition	4
Winter	
4.215 Microbiology for Nurses	3
5.712 Nursing II	8
BI 222 Human Biology	3
PY 201 General Psychology	3
Spring	
5.713 Nursing III	9
5.726 Nursing in Contemporary Society I	1
BI 223 Human Biology	4
PY 202 General Psychology	3
Fall - Second Year	
5.721 Nursing IV	10
AN 103 Introduction to Anthropology or SO 204 General Sociology (substitutes for general ed requirement)	3
Winter	
5.722 Nursing V	10
5.727 Nursing in Contemporary Society II	1
Spring	
5.723 Nursing VI	10
Electives . . . . .	3
Additional humanities courses	104
	107

## NURSING COURSES

### 1.280 CWE Nursing

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su  
An instructional program designed to give students practical experience in supervised employment related to nursing. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**5.711 Nursing I** (9 class hrs/wk 6 cr) F  
Introduction to the role of the nurse in meeting needs common to patients of all ages. Includes fundamentals, normal prenatal care, growth and development tasks for all ages, and beginning communication. Covers physical and mental illness for all ages, including labor, delivery and post-partum care, with emphasis on problem solving. Independent learning tasks, demonstrations, audio-visual aids, discussion and lecture are used in the classroom. A supervised campus lab is required. Supervised clinical practice is

provided, with pre- and post-conferences to evaluate planned patient care. Note: Must be taken in sequence. Individually scheduled tutorial sessions are offered in addition to published schedules.

**5.712 Nursing II** (14 class hrs/wk 8 cr) W  
Second course in sequence introduction to the role of the nurse. Note: Must be taken in sequence.

**5.713 Nursing III** (17 class hrs/wk 9 cr) S  
Third course in sequence introduction to the role of the nurse. Note: Must be taken in sequence.

**5.721, 5.722, 5.723 Nursing IV, V, VI**  
(20 class hrs/wk 10 cr) F/W/Sp  
Continued study of major illnesses, from pediatrics to geriatrics, including complications of pregnancy. Gives consideration to scope, prevention, diagnosis, treatment and psycho-social aspects of illness, with emphasis on decision making. Includes deviations from normal growth and development which predispose to illness; rehabilitative aspects of nursing care and available community agencies; and basic concepts of personality, behavior and psychological processes, ranging from "normal" to extreme deviation. Additional topics include legal aspects and trends in nursing, community health, leadership skills and specialty nursing areas. Note: Must be taken in sequence. Available only to second-year nursing students.

**5.726, 5.727 Nursing in Contemporary Society I, II** (1 class hr/wk 1 cr)  
The nursing role is defined based on the history of the profession, current theories on the nature of health and disease, and selected responsibilities of the nurse in society and as practitioner. Reciprocal influences between society and nursing are identified as they relate to biological, sociological, psychological and therapeutic settings. Current issues and practices in nursing are identified. Prerequisite: Instructor approval.

**5.732 Drug Administration**  
(2 class hrs/wk 2 cr) F  
Introduction to major drug classifications, drug administration skills, calculating drug dosages, legal aspects of drug administration and use of drug information resources. Includes general topics in pharmacology, such as drug metabolism and adverse reactions. Note: Available only to admitted ADN students.

**5.733 Pharmacology** (3 class hrs/wk 3 cr)  
Course designed for RNs and LPNs. Includes an overview of pharmacology, with emphasis on commonly administered drugs and problems encountered in administration of medications, and some aspects of drug abuse and methods of intervention.

**9.424 Independent Nursing Studies**  
(1-5 class hrs/wk 1-5 cr)  
Provides supervised, individual study, including one-to-one conferences with instructors, field trips, research assignments and use of audio-visual aids. Prerequisite: Instructor approval.

## DENTAL ASSISTANT

**Faculty:**  
Jerry Morgan

The one-year Dental Assistant program is accredited by the American Dental Association and prepares students for chairside assisting, office laboratory activities and receptionist procedures. Clinical facilities include a modern, fully equipped, on-campus dental clinic and cooperating dental offices throughout Linn and Benton counties.

This program accepts only one class of limited size each year, which begins in fall term. (See "Admission to Health Occupations Programs" in the "Entering the College" section of this catalog.)

Continuation in the program is contingent on satisfactory completion of course work each preceding term. Exceptions will be considered on an individual basis.

The Dental Assistant curriculum leads to a one-year certificate. Graduating students receive state of Oregon certificates in Radiological Proficiency and Expanded Duties and are eligible to take the certification exam administered by the National Board of the American Dental Assistants Association.

## DENTAL ASSISTANT CURRICULUM

### One-Year Certificate in Dental Assisting

#### Major Requirements . . . . .63

Fall	
1.150 Techniques of Reading/Studying	3
4.220 Integrated Basic Science I	4
5.445 Intro to Dental Assisting	1
5.461 Dental Radiology I	2
5.494 Clinical Practice I	3
5.497 Dental Health Education I	1
5.500 Oral Anatomy and Histology	1
OA 121 Typing I	2
Winter	
1.103 Occupational Speech Communication	3
4.221 Integrated Basic Science II	3
5.462 Dental Radiology II	2
5.484 Dental Materials Lab I	3
5.488 Expanded Duties I	1
5.495 Clinical Practice II	3
5.498 Dental Health Education II	1
HE 112 First Aid: Multi-Media	1
Spring	
5.453 Dental Pathology	2
5.463 Dental Radiology III	2
5.485 Dental Materials II	3
5.489 Expanded Duties II	1
5.491 Dental Office Records	1
5.496 Clinical Practice III	4
5.499 Dental Health Education III	1
PY 216 Social Psychology I	3
Summer	
0.571 CPR	1
5.492 Office Emergencies	1
5.510 Office Practicum	8
5.515 Office Practicum Seminar	2

## DENTAL ASSISTANT COURSES

### 5.445 Introduction to Dental Assisting (1 class hr/wk 1 cr) F

Introduces roles of various dental professionals. Reviews the Dental Practice Act and ethics, and acquaints the student with various dental organizations and their benefits.

### 5.453 Dental Pathology (2 class hrs/wk 2 cr) Sp

A study of common pathological diseases, injured and normal tissue and developmental anomalies. Prerequisite: 4.220, 4.221 Integrated Basic Science I, II.

### 5.461 Dental Radiology I (2 class hrs/wk 2 cr) F

The first of a three-term sequence which introduces the principles and hazards of radiation, including safety factors, processing of film, operation of x-ray equipment and anatomical landmarks.

### 5.462 Dental Radiology II (3 class hrs/wk 2 cr) W

A continuation and review of 5.461 Dental Radiology I. Introduces x-ray techniques and patient considerations, emphasizing production of x-rays using manikins and patients. Prerequisite: 5.461 Dental Radiology I.

### 5.463 Dental Radiology III (3 class hrs/wk 2 cr) Sp

A continuation and review of 5.461, 5.462 Dental Radiology I, II. Emphasizes review of the State Board of Dental Examiners Radiology Synopsis. Students continue with production of patient x-rays. Prerequisite: 5.462 Dental Radiology II.

### 5.484 Dental Materials Lab I (4 class hrs/wk 3 cr) W

Introduction to dental restorative materials. Includes uses, properties, manipulation, composition, equipment, advantages, disadvantages and brand names.

### 5.485 Dental Materials Lab II (4 class hrs/wk 3 cr) Sp

Introduction to materials used in prosthodontic and laboratory procedures. Prerequisite: 5.484 Dental Materials Lab I.

### 5.488 Expanded Duties I (2 class hr/wk 1 cr) W

An introduction to dental assisting expanded duties delegated by the Oregon State Board of Dental Examiners.

### 5.489 Expanded Duties II (2 class hrs/wk 1 cr) Sp

Course provides opportunity to perform expanded duties in scheduled clinical sessions. Completeness and competency of clinical assignments and communication between operator and patient is emphasized. Supervised practice and task-proficiency analysis continues through this session.

### 5.491 Dental Office Records

(1 class hr/wk 1 cr) Sp

Introduction to dental office records, patient reception, appointment scheduling, record maintenance, financial arrangements, coordination and supply control.

### 5.492 Office Emergencies

(1 class hr/wk 1 cr) Su

Course provides familiarization with various emergencies and treatment, including drugs. Emphasizes the responsibility of the dental office team to be prepared for emergencies.

### 5.494 Clinical Practice I

(3 class hrs/wk 3 cr) F

First course of a three-term sequence which introduces the student to basic dental assisting tasks, including sterilization and disinfection, patient reception, anesthesia, aspiration and charting.

### 5.495 Clinical Practice II

(5 class hrs/wk 3 cr) W

Second course in three-term sequence, designed to familiarize students with basic dental assistant tasks, restorative procedures and instrumentation. The student gains clinical experience in the campus dental clinic. Prerequisite: 5.494 Clinical Practice I.

### 5.496 Clinical Practice III

(6 class hrs/wk 4 cr) Sp

Third course in three-term sequence, designed to familiarize the student with the basic dental assisting tasks, restorative procedures and instrumentation. The various dental specialties are introduced. The student continues to gain clinical experience in the campus dental clinic. Prerequisite: 5.495 Clinical Practice II.

### 5.497 Dental Health Education I

(1 class hr/wk 1 cr) F

First course of a three-term sequence emphasizing concepts and principles of patient education, including oral hygiene, preventive dentistry, techniques for communication and motivating the patient. Includes clinical sessions for actively applying principles of dental health education.

### 5.498 Dental Health Education II

(1 class hr/wk 1 cr) W

Second course in a three-term sequence. Emphasizes nutritional information applied to good oral health, including nutrients, basic four food groups, food diaries and nutritional analysis. Principles learned in 5.497 Dental Health Education I continue to be applied in the campus clinic. Prerequisite: 5.497 Dental Health Education I.

### 5.499 Dental Health Education III

(2 class hrs/wk 1 cr) Sp

Third course in three-term sequence, involving the student with community projects within the school system. Stresses principles of communication and patient motivation. Student continues to study control of dental disease by preventive methods. Evaluation and assessment of instructional materials for various age levels (preschool through geriatric) will be included.

### 5.500 Oral Anatomy and Histology

(2 class hrs/wk 1 cr) F

Anatomy and histology of the teeth and their supporting structures, including growth, development, form and function of oral structures. Laboratory experience involves a detailed study of tooth anatomy through use of models.

### 5.510 Office Practicum (24 clinical hrs/wk 8 cr) Su

Course designed to give the dental assisting student work experience closely paralleling the field of study. Emphasizes building skills in various dental assisting procedures.

### 5.515 Office Practicum Seminar

(2 class hrs/wk 2 cr) Su

A series of seminars in which the student shares work-related experiences with the instructor and fellow students. The student also receives information on employment skills, basic planning, basic economics and resume preparation. The course includes an overall review of the LBCC Dental Assistant program.

## EMERGENCY MEDICAL TECHNICIAN

**Faculty:**  
Beverly Moore

The Emergency Medical Technician program is four terms in length, excluding summer term. It is a competency-based program reflecting the educational goals and objectives of the National Standard Emergency Medical Technician-Paramedic Course.

The EMT program is designed to provide the graduate with the technical competencies to function as an EMT-1 through an EMT-IV. In addition, the program will provide opportunity to increase understanding and skills through related course work, particularly in basic science.

Clinical facilities utilized are ambulance services, hospitals and community health agencies through the state of Oregon. Clinical dates are scheduled during days, evenings and some weekends.

Special admissions procedures for the EMT program are outlined in "Admissions to Health Occupation Programs" in the "Entering the College" section of this catalog.

Individual courses also are available for students seeking EMT competencies but not enrolled in the full-time program.

The Emergency Medical Technician curriculum leads to a one-year certificate. Graduates are eligible to take the certification exam through the Oregon State Health Division and the Board of Medical Examiners.

## EMERGENCY MEDICAL TECHNICIAN CURRICULUM

### One-Year Certificate in Emergency Medical Technician

#### Major Requirements . . . . .52

Fall - First Year	
5.630 Medical Terminology	3
9.313 EMT I	8
BI 221 Human Biology	4
Winter	
2.671 Medical Law & Ethics	2
9.314 EMT II	3
BI 222 Human Biology	4
Spring	
5.732 Pharmacology	2
9.315 EMT III	11
9.320 CPR Instructor	1
Fall - Second Year	
9.316 EMT IV	10
9.322 Patient Assessment	2
9.323 Disaster Plan Management	2

#### Electives . . . . .6

Additional social science course	3
Additional speech course	3
	58

## EMERGENCY MEDICAL TECHNICIAN COURSES

### 1.280 CWE Emergency Medical Technician

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to emergency medical technology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 9.313 Emergency Medical Technician I

(120 class hrs 8 cr) F/W

A basic training program, with classroom theory, practice exercises and clinical experience in problems encountered by ambulance personnel. Includes overall role and responsibilities of the emergency medical technician in emergency care and operational aspects of the job; developing skill in life-saving techniques and emergency treatment short of that rendered by physicians or by paramedical personnel under direct supervision of a physician; and developing skill in use and care of necessary equipment. Note: Currently consists of evening lectures and daytime labs and clinical experiences.

### 9.314 Emergency Medical Technician II

(36 class hrs 3 cr) W

Course upgrades skills of basically trained EMTs, a second step in a career development pattern. Includes advanced training in certain aspects of intravenous therapy and airway management. Note: Currently consists of evening lectures and daytime labs and clinical experiences. In addition to class hours specified above, additional hours are required for the off-campus clinical. Prerequisite: 9.313 Emergency Medical Technician I.

### 9.315 Emergency Medical Technician III

(157 class hrs 11 cr) Sp

Third course in training sequence for emergency medical technicians. Provides additional skills required in certain cardiac emergencies. The success of this type of program depends upon close medical supervision. Note: Currently consists of evening lectures and daytime labs and clinical experience. In addition to class hours specified above, additional hours are required for the off-campus clinical. Prerequisite: 9.314 Emergency Medical Technician II.

### 9.316 Emergency Medical Technician IV

(108 class hrs 10 cr) F

Course prepares the emergency medical technician for satisfactory completion of the Paramedic Certification Examination given by the Board of Medical Examiners. Provides advanced skills for assessing and caring for patients with central nervous system disorders, emergencies associated with childbirth, pediatric problems, rescue techniques and crisis intervention. Note: Currently consists of evening lectures and daytime labs and clinical experiences. In addition to class hours specified above, additional hours are required for the off-campus clinical. Prerequisite: 9.315 Emergency Medical Technician III.

### 9.322 Patient Assessment

(2 class hrs/wk 2 cr) F

Course provides the EMT III with basic skills necessary to assess patient condition in an emergency. Includes a review of related anatomy and physiology, techniques of examination and integration of common, re-occurring pathophysiology. A major portion of classroom time will be spent in practicing techniques. Prerequisite: 9.315 Emergency Medical Technician III; instructor approval.

### 9.323 Disaster Planning/Management

(2 class hrs/wk 2 cr) F

Course provides the EMT III with necessary skills for disaster management. Includes planning and organizational skills for mass-casualty situations, community resources, development of a disaster plan and participation in organizing and testing a mock disaster drill. Prerequisite: 9.315 Emergency Medical Technician III; instructor approval.

# HEALTH OCCUPATIONS CONTINUING AND RELATED EDUCATION

#### Faculty:

Bobbie Lamberton, Coordinator

Health Occupations Continuing Education courses and workshops are offered for nurses, dental personnel, medical assistants, nursing assistants and other health workers. These courses are offered at the request of health institutions or by groups of individuals. Courses are designed for both professional growth and advancement.

Health Occupations Related Education courses are provided to supplement the medical receptionist, medical transcriptionist, emergency medical technology and nursing programs.

## HEALTH OCCUPATION CONTINUING EDUCATION COURSES

### 9.410 Medications and Nursing

Implications (3 class hrs/wk 3 cr)

Course designed for RNs and LPNs includes an overview of pharmacology, with emphasis on commonly administered drugs and some aspects of drug abuse and methods of intervention. Note: Available only to RN, LPN or nursing student. Requires familiarity with basic anatomy and physiology.

### 9.413 Medical Law and Ethics Update for the Medical Assistant

(3 class hrs/wk 1 cr)

A three-session workshop designed for medical assistants, receptionists and other medical office personnel. Three lecturers provide a review of medical law and ethics, with question and discussion time planned for each consecutive session. Note: Three-week course. Available only to employees in these health fields.

### 9.419 Mini-Physical Assessment

Workshop (8 class hrs 1 cr)

Provides the practicing RN with skills necessary to assess the chest and abdomen. Includes a review of related anatomy and physiology, physical examination techniques used in assessing the thorax and abdomen, integration of common re-occurring pathophysiology of the thorax and abdomen, identification of heart sounds, adventitious breath sounds and abnormal bowel sounds. Appropriate nursing intervention also is included. Note: One-day workshop. Available only to RN or employee in related health field.



**9.425 Re-Entry into Nursing**

(20 class hrs/wk 10 cr)

Course designed for nurses who have not practiced for the past five years or for RNs or LPNs who would like to increase their own knowledge. This course meets the State Board of Nursing requirements for re-entry into nursing. Note: If not currently licensed in the state of Oregon, student is required to apply for licensing prior to enrollment.

**9.426 Coronary Care Nursing**

(7 class hrs/wk 5 cr)

Provides information for the RN in the coronary care unit. Emphasizes recognition and treatment of cardiac arrhythmia and emergency procedures such as cardiopulmonary resuscitation and electrical resuscitation. Reviews normal and abnormal anatomy and physiology of the heart, diagnostic methods and treatment of cardiovascular disease. Principles of cardiac monitoring and electrocardiography will be applied.

**9.430 Introduction to Basic Medical Laboratory Procedures**

(3 class hrs/wk 1 cr)

Three-session workshop designed for health workers in physicians' offices, providing basic information and techniques needed for routine lab procedures. Note: Three-week course.

**9.453 Interpretations and Implications of Common Laboratory Test** (8 class hrs 1 cr)

Provides the practicing RN with skills in performing and interpreting common laboratory tests. Urinalysis, Complete Blood Count tests and blood sugar tests will be included, with a review of physiology and pathophysiology associated with each. Skills practice will be available. Note: One-day workshop.

**9.460 Radiation Protection**

(3 class hrs/wk 3 cr)

Introductory course designed to adequately prepare persons who work or will work in x-ray in any medical facility. The course will cover all aspects of radiation protection. Includes theory and lab demonstration. Course meets the minimum requirements of the Radiation Control Section of the Department of Human Resources. Note: Not designed for x-ray technicians.

**HEALTH OCCUPATIONS  
RELATED COURSES****5.625 Clinical Office Procedures I**

(4 class hrs/wk 4 cr) W

A survey of the requirements and qualities for success as a medical assistant. Includes medical techniques, methods and procedures for assisting the physician with examination; medical surgical aseptic procedures; obtaining vital signs; care of equipment and supplies; and drugs and solutions. Prerequisite: 5.630 Medical Terminology I.

**5.630 Medical Terminology I**

(3 class hrs/wk 3 cr) F

Introduction to the terminology of anatomy and physiology fundamental to the understanding of the physician's diagnosis and treatment. Includes basic root words, prefixes and suffixes.

**5.631 Pharmaceutical Terminology**

(2 class hrs/wk 2 cr) W

Terminology of pharmaceutical (drug) supplies related to the physician's office, clinic or hospital. Prerequisite: 5.630 Medical Terminology I.

**5.633 Medical Terminology II**

(3 class hrs/wk 3 cr) W

Continuation of 5.630 Medical Terminology I, emphasizing terminology related to body systems. Prerequisite: 5.630 Medical Terminology I.

**5.634 Medical Terminology III**

(3 class hrs/wk 3 cr) Sp

Continuation of 5.633 Medical Terminology II, emphasizing specific pathology and medical practice areas. Prerequisite: 5.633 Medical Terminology II.

**NURSING  
ASSISTANT****Faculty:**

Carol Metcalf

The Nursing Assistant program is a six-week course of study which prepares students for positions as nurses aides, orderlies or home health aides. Positions are available in hospitals, nursing homes and home health services. Graduates often use this program as a starting point toward related health careers. Classroom and on-the-job experience provide the student with the background needed to care for, under the supervision of a professional nurse, the moderately ill or convalescent patient.

Special admissions procedures for the Nursing Assistant program are outlined in "Admissions to Health Occupations Programs" in the "Entering the College" section of this catalog.

The Nursing Assistant curriculum leads to a certificate.

**NURSING ASSISTANT  
CURRICULUM****Certificate in Nursing Assistant****Major Requirements . . . . . 10**

5.406 Nursing Assistant 7  
5.407 Nursing Assistant Lab 3

**10****NURSING ASSISTANT  
COURSES****5.406 Nursing Assistant**

(18 class hrs/wk 7 cr) F/W/Sp

Lecture course, including instruction in physical and social environments, daily living activities, basic therapeutic health measures and basic nursing-care planning.

**5.407 Nursing Assistant Lab**

(14 class hrs/wk 3 cr) F/W/Sp

Lab course provides clinical experience in a local hospital, to supplement principles taught in 5.406 Nursing Assistant.

**PHYSICAL  
EDUCATION  
AND HEALTH****Faculty:**

Jean Irvin, Department Chair  
David Bakley, Arlene Crosman, David  
Dangler, Verlund Kimpton

The Physical Education and Health Department provides a comprehensive program for students who want to gain knowledge about the value of preventive and corrective health practices and who want to participate in physical activities to gain and maintain physical fitness.

Health-related instruction includes theory and application of facts and attitudes for the health of the individual and the society.

Physical activity is provided through three distinct learning and participation opportunities: Students may learn lifetime recreational skills; developmental courses stress conditioning of the body and maintenance of a specific level of physical condition; and team sport courses provide a high level of conditioning and activity.

**PHYSICAL EDUCATION AND  
HEALTH COURSES****0.571 CPR Modular/Basic Life Support**

(9 class hrs/wk) F/W/Sp/Su

Theory and practice in immediate treatment given to accident victims and persons taken suddenly ill involving a cease in cardiac functions, taught according to American Red Cross requirements. Note: Completion of the course earns the student Red Cross CPR certification.

**4.108 Industrial Safety**

(3 class hrs/wk 3 cr) F/W/Sp

Introduction of accident prevention and first aid, developing safety practices relating to personnel, design, equipment and maintenance.

**9.320 CPR Instructor** (8 class hrs/wk 1 cr)  
A review of CPR skills and an introduction to methods and techniques of CPR instruction. Includes lesson plans, use of instructor manual, evaluation of students, processing of forms, records and Red Cross authorization. Prerequisite: Current Red Cross and CPR cards.

**HE 112 First Aid: Multi-Media** (10 class hrs 1 cr)

Theory and practice in immediate and temporary care given in case of accident or sudden illness, taught according to American Red Cross requirements, through the Red Cross multi-media method. Note: Completion of the course earns the student the Standard First Aid Certificate of the American Red Cross.

**HE 199 Lifetime Wellness**  
(2 class hrs/wk 2 cr) F/W/Sp

A course designed for students who wish to increase their general fitness and gain knowledge in lifetime wellness strategies. Specific emphasis is on nutrition, stress management and physical fitness.

**HE 250 Personal Health**

(3 class hrs/wk 3 cr) F/W/Sp  
Surveys health attitudes, outlooks and feelings as they affect the individual, community, nation and world. Emphasizes improving quality of health by providing reliable information to achieve a long and productive life.

**HE 252 First Aid**

(3 class hrs/wk 3 cr) F/W/Sp  
Instruction and practice in first aid skills that will enable care of oneself or others in the event of accident or illness. Meets requirements for first aid certification by the American Red Cross.

**HE 280 CWE Health**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su  
An instructional program designed to give students practical experience in supervised employment related to health. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**PE 131 Introduction to Health and Physical Education**

(3 class hrs/wk 3 cr) F  
Designed for students to learn about the physical education and health profession as a career. Includes professional orientation; basic philosophy and objectives; and professional opportunities and qualifications.

**PE 180 Beginning Basketball: Women**

(3 class hrs/wk 1 cr) F/W  
Basic basketball skills and concepts. Begins with fundamentals and works toward a full court situation.

**PE 180 Intermediate Basketball:**

**Women** (3 class hrs/wk 1 cr) W  
Course designed to advance the beginning basketball player's skills toward better success in a game situation. Prerequisite: 180 Beginning Basketball: Women.

**PE 180 Advanced Basketball: Women**

(3 class hrs/wk 1 cr) F/W  
Prepares the student for competition at the intercollegiate level. Note: Requires five meetings a week plus participation in 30 games. Prerequisite: Instructor approval.

**PE 180 Advanced Softball: Women**

(3 class hrs/wk 1 cr) Sp  
An advanced women's fast pitch softball course which will emphasize the finer aspects of the fast pitch game, including offensive and defensive skills and coaching strategies. Prerequisite: Instructor approval.

**PE 180 Advanced Volleyball: Women**

(3 class hrs/wk 1 cr) F  
This course is designed to prepare students for competition at the intercollegiate level. The emphasis of the course is on the development of skills for competitive play. Prerequisite: Instructor approval.

**PE 185 Adapted Body Conditioning: Co-ed**

(3 class hrs/wk 1 cr)

Activity course for the physically handicapped.

**PE 185 Aquatic Fitness: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp  
Water exercises use muscles of a specific area of the body while submerged in water.

**PE 185 Archery: Co-ed**

(3 class hrs/wk 1 cr) F/Sp  
Introduction to fundamentals of archery, safety and proper use of equipment.

**PE 185 Beginning Badminton: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp  
Instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstrates singles and doubles play, plus teamwork involved.

**PE 185 Intermediate Badminton: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp  
More advanced instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstrates singles and doubles play, plus teamwork involved.

**PE 185 Beginning Ballet: Co-ed**

(3 class hrs/wk 1 cr)  
Introduction to the basic concept of body alignment, the technical movement vocabulary in traditional ballet, the accompanying French terminology and the basic movement sequences that will develop strength and flexibility.

**PE 185 Intermediate Ballet Dance:**

**Co-ed** (3 class hrs/wk 1 cr)  
Introduction of ballet elements of advanced adagio, barre, petite and grande allegro. Emphasis will be placed on stationary and across-the-floor combinations. Prerequisite: Three credits PE 185 Beginning Ballet Dance or instructor approval.



Students in a physical education class warm-up by practicing their forehand shots.

**PE 185 Body Conditioning: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Instruction and practice in exercises that condition the body. Designed to develop a level of strength, flexibility and endurance which enables one to maintain an erect carriage, complete one's work, participate in active recreation and possess a reserve of energy.

**PE 185 Beginning Bowling: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Course stresses bowling fundamentals. Provides basic foundation from which students may progress to advanced bowling skills.

**PE 185 Intermediate Bowling: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Course increases skills and techniques of bowling. Rules and courtesies of the game as well as social and recreational value to the student are stressed.

**PE 185 Advanced Bowling: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

An advanced class for increasing skills and techniques of bowling. Rules and courtesies of the game as well as social and recreational value to the student are stressed.

**PE 185 Cross Country: Co-ed**

(3 class hrs/wk 1 cr) F

Activity course designed to improve each individual's cardiovascular system through distance running. Also deals with training methods and procedures for improvement of distance runners and strategies which may be employed in cross country running.

**PE 185 Dance Aerobics: Co-ed**

(2-3 class hrs/wk 1 cr) F/W/Sp

An exercise program choreographed to music, designed to tone, trim and firm all body muscle groups as it strengthens and conditions the cardiovascular system.

**PE 185 Flexibility and Relaxation: Co-ed**

(3 class hrs/wk 1 cr)

Instruction and practice in exercise to increase muscle flexibility and relaxation.

**PE 185 Beginning Golf: Co-ed**

(3 class hrs/wk 1 cr)

Introduction to the mental and physical needs involved in golf, including grip, stance, swing techniques, rules, strategy and etiquette.

**PE 185 Intermediate Golf: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

A more detailed presentation of golf techniques and strategy, designed to improve and correct basic swing errors.

**PE 185 Advanced Golf: Co-ed**

(3 class hrs/wk 1 cr) Sp

Intercollegiate as well as recreational golf, emphasizing development of skills during competitive play.

**PE 185 Beginning Gymnastics: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Instruction and practice in tumbling and use of gymnastic apparatus.

**PE 185 Intermediate Gymnastics: Co-ed**

(3 class hrs/wk 1 cr) W/Sp

Intermediate instruction and practice in tumbling and use of gymnastic apparatus.

**PE 185 Beginning Jazz Dance: Co-ed**

(3 class hrs/wk 1 cr)

Introduction to contemporary jazz technique, with an emphasis on uses of rhythm, syncopation and isolation of the various body parts.

**PE 185 Intermediate Jazz Dance: Co-ed**

(3 class hrs/wk 1 cr)

Introduction to intermediate level jazz dance techniques, historical and contemporary, and to American, African, Haitian and Caribbean jazz dance forms. Some emphasis will be placed on improvisatory jazz dance. Prerequisite: Three credits PE 185 Beginning Jazz Dance or instructor approval.

**PE 185 Jogging: Co-ed**

(3 class hrs/wk 1 cr) F/Sp

Instruction and practice in jogging to increase maximum amount of oxygen that the body can process in a given time.

**PE 185 Beginning Judo: Co-ed**

(2-3 class hrs/wk 1 cr) F/W/Sp

Judo is a contact sport, emphasizing the fundamentals of Kodokan judo skills with the philosophy of cultivation of one's mind and body to the fullest. Emphasizes defensive and offensive workouts.

**PE 185 Intermediate Judo: Co-ed**

(2-3 class hrs/wk 1 cr) W/Sp

More in-depth course in judo as a contact sport, emphasizing fundamentals of Kodokan judo skills with the philosophy of the cultivation of one's mind and body to the fullest. Emphasizes defensive and offensive workouts.

**PE 185 Beginning Karate: Co-ed**

(2-3 class hrs/wk 1 cr) F/W/Sp

Introduction to basic TAE Kwon Do (Korean Karate). Includes blocks, kicks, punches, forms and some freestyle, with emphasis on establishing and maintaining good body condition.

**PE 185 Intermediate Karate: Co-ed**

(2-3 class hrs/wk 1 cr) F/W/Sp

Karate skills will be taught in blocking, kicking, punches and forms, with emphasis on body condition and physical fitness. Prerequisite: Basic skills acquired in TAE Kwon Do or beginning Karate course, or instructor approval.

**PE 185 Advanced Lifesaving: Co-ed**

(3 class hrs/wk 1 cr)

Instruction and practice in lifesaving skills that will enable care of self and aid to anyone in danger of drowning. Personal safety and self-rescue skills are stressed. Note: This is not intended to be a complete lifeguard training course. Red Cross cards will be given to those passing the Red Cross exam. Prerequisite: Instructor approval.

**PE 185 Beginning Modern Dance: Co-ed**

(3 class hrs/wk 1 cr)

Introduction to the use of the human body in space and time, examining elements of modern dance technique.

**PE 185 Intermediate Modern Dance: Co-ed**

(3 class hrs/wk 1 cr)

Development of technique through exposure to historical and contemporary modern dance trends. Prerequisite: Three credits of PE 185 Beginning Modern Dance or instructor approval.

**PE 185 Beginning Racquetball: Co-ed**

(2 class hrs/wk 1 cr) F/W/Sp

Instruction and practice in stances, grips, service, strokes, scoring rules and strategy. Demonstrates singles and doubles play.

**PE 185 Intermediate Racquetball: Co-ed**

(2 class hrs/wk 1 cr) F/W/Sp

More advanced instruction and practice in racquetball, with a detailed presentation of technique and strategy.

**PE 185 Softball: Co-ed**

(3 class hrs/wk 1 cr) Sp

Provides instruction and experience in fundamental softball skills, as well as providing game experience. Emphasizes slow pitch rather than fast pitch style of play.

**PE 185 Beginning Swimming: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Instruction and practice in individual basic water skills and safety while in or about the water.

**PE 185 Intermediate Swimming: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Instruction and practice in individual water skills and safety while in, on or about the water. Provides opportunity to learn elements of good swimming.

**PE 185 Advanced Swimming: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Instruction and practice in skills to increase endurance and versatility in the water.

**PE 185 Beginning Tennis: Co-ed**

(3 class hrs/wk 1 cr) F/Sp

Instruction and practice in rules, etiquette, grip, stance, forehand and backhand drives, service, volley, lob, overhead smash, receiving, playing position and class play, and game strategy for both singles and doubles.

**PE 185 Intermediate Tennis: Co-ed**

(3 class hrs/wk 1 cr) F/W

Advanced tennis strategies and skills.

**PE 185 Advanced Tennis: Co-ed**

(3 class hrs/wk 1 cr) Sp

This course is designed to prepare students for competition, emphasizing development of skills for competitive play. Prerequisite: Instructor approval.

**PE 185 Advanced Track: Co-ed**

(3 class hrs/wk 1 cr) Sp

Develops sophisticated skills and techniques for inter-collegiate competition.



**PE 185 Track Skills: Co-ed**

(3 class hrs/wk 1 cr) W/Sp

Individualized practice in and concentration on development of skills and techniques in selected track and field events.

**PE 185 Beginning Volleyball: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

Introduction to skills and techniques basic to volleyball, including different offensive and defensive forms of team play, strategies, etiquette and rules of the game.

**PE 185 Intermediate Volleyball: Co-ed**

(3 class hrs/wk 1 cr) F/W/Sp

This course is designed for the player who has mastered beginning volleyball skills. A major emphasis will be to increase player abilities within a team situation.

**PE 185 Advanced Volleyball: Co-ed**

(3 class hrs/wk 2 cr) F/W/Sp

This course is designed to increase skill levels and mental strategies. Course emphasis is to increase player abilities within a team situation.

**PE 190 Beginning Baseball: Men**

(3 class hrs/wk 1 cr) F/W/Sp

Introduction to fundamental baseball skills.

**PE 190 Intermediate Baseball: Men**

(3 class hrs/wk 1 cr) F/W/Sp

Course allows student to refine basic baseball skills in hitting, fielding and throwing. Team offensive and defensive strategies and alignments will also be covered.

**PE 190 Advanced Baseball: Men**

(3 class hrs/wk 1 cr) Sp

Course designed to prepare students for intercollegiate competition in baseball.

**PE 190 Baseball Conditioning: Men**

(3 class hrs/wk 1 cr) W

Physical conditioning with emphasis on developing strength and agility for better efficiency in baseball skills.

**PE 190 Baseball Skills: Men**

(3 class hrs/wk 1 cr) W

Offers students the opportunity to learn and improve individual baseball skills.

**PE 190 Beginning Basketball: Men**

(3 class hrs/wk 1 cr) F/W

Basic basketball skills and concepts for the beginner. Begins with fundamentals and works toward a full court situation.

**PE 190 Intermediate Basketball: Men**

(3 class hrs/wk 1 cr) W

Course is designed to advance the beginning basketball player's skills toward better success in a game situation. Prerequisite: PE 190 Beginning Basketball: Men.

**PE 190 Advanced Basketball: Men**

(3 class hrs/wk 1 cr) F/W

Prepares the student for competition at the inter-collegiate level. Note: Requires five meetings a week plus participation in 30 games. Prerequisite: Instructor approval.

**PE 190 Flag Football: Men**

(3 class hrs/wk 1 cr) F

Course designed to develop skills fundamental to flag football. Note: Organization of class will depend upon skill level.

**PE 190 Wrestling: Men**

(3 class hrs/wk 1 cr) F/W

Course designed to acquaint the student with the fundamentals of collegiate wrestling set forth by the NCAA. Includes instruction, demonstration and practice in all aspects of wrestling.

**PE 194 Professional Activities**

(6 class hrs/wk 2 cr) F/W/Sp

Courses providing technical information for prospective teachers of various physical education activities. Includes six-week sessions in softball, personal conditioning, basketball and volleyball, and a 12-week session in swimming.

**PE 232 Backpacking**

(3 class hrs/wk 3 cr) F/Sp/Su

Course designed to prepare the individual for safe, challenging and enjoyable wilderness trips. Emphasizes physical conditioning, equipment, clothing, food, safety and the use of map and compass.

**PE 280 CWE Physical Education**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to physical education. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**PE 280 CWE Recreation**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to recreation. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**PE 291 Lifesaving (3 class hrs/wk 2 cr)**

Course in basic skills of lifesaving, leading to American Red Cross certification in senior lifesaving. Note: Open to students who pass qualifying tests in swimming.

**PE 292 Water Safety Instruction**

(3 class hrs/wk 2 cr) W/Sp

Methods course for teachers of swimming and water safety skills. Includes methods for instructing and evaluating swimmers of all ages, and basic life support. Course completion leads to American Red Cross certification in water safety instruction. Note: Open to students who pass qualifying tests in swimming and lifesaving.

**PE 294 Professional Activities**

(6 class hrs/wk 2 cr) F/W/Sp

Courses providing technical information for prospective teachers of various physical education activities. Includes a 12-week session in track and field, and six-week sessions in movement fundamentals, gymnastics, tennis and badminton.

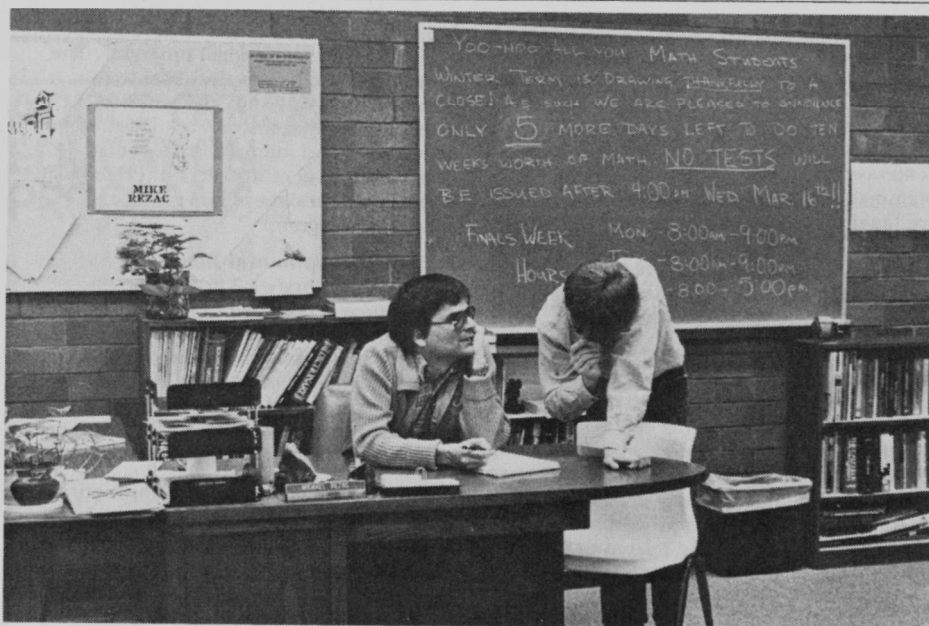
**RM 150 Recreation in Society**

(3 class hrs/wk 3 cr)

Introduction to the field of recreation and leisure as a profession. Includes personal leisure awareness and self-evaluation.

# HUMAN DEVELOPMENT

DIRECTOR: Robert Talbott



Students can get individualized help in the Math Learning Center.

## HUMAN DEVELOPMENT

### Faculty:

Rosemary Bennett, Janet Brem, Joyce Easton, Ray Miller, Blair Osterlund, Ann Marie Ross.

Human Development courses are taught by student services staff, including counselors and placement personnel. Courses taught by the counseling staff help students increase self-understanding and make career decisions. Placement personnel teach courses in resume writing and job search skills.

## HUMAN DEVELOPMENT COURSES

### 1.161 Interviewing Techniques

(1 class hrs/wk 2 cr)

Small-group seminar aimed at improving job interviewing skills necessary in the processing of seeking employment. Course content includes a summary of interviewing research findings, (audio-visual) practical interviewing experiences and discussion of interviewing strategies and preparation.

### 1.205 Resume Writing Seminar

(2 class hrs/wk 1 cr)

A three-week workshop, including exposure to a variety of types of resumes and guidance in developing and polishing each participant's resume.

### HD 199 Assertiveness Training

(1 class hrs/wk 1 cr)

Facilitates learning of communication skills, based on a foundation of respect for self, respect for others and respect from others.

### HD 199 Human Potential and Self

Motivation (2 class hrs/wk 2 cr)

A small-group experience which stresses positive attitude development and discovery of personal potential. Includes self-confidence, interpersonal understanding, goal-setting and clarification of personal values.

### HD 199 Life Planning for Women

(2 class hrs/wk 2 cr)

A supportive class for women seeking a new life direction. Includes the exploration of values, interests, abilities and realistic life choices.

### HD 199 Women and Weight

(2 class hrs/wk 2 cr)

Designed to increase understanding of feelings and attitudes that lead to compulsive eating, class offers support, understanding of self-responsibility and awareness of choice.

### HD 206 Coping Skills for Stress

(2 class hrs/wk 2 cr)

A practical "how to" class in physical and mental relaxation. Students learn the "fight or flight" theory and how long-term stress affects the body. Also develops increased understanding of how nutrition and exercise contribute to relaxation.

### HD 208 Career Planning

(3 class hrs/wk 3 cr)

Helps define career, develop personal awareness and practice decision making. A combination of lecture and group discussions teaches methods of career selection, emphasizing development as an on-going process.

### PY 111 Personal Development

(4 class hrs/wk 3 cr)

A small-group experience in interpersonal communication and group dynamics, emphasizing communication of feelings and self-responsibility.

**D**evelopmental programs are offered by the college to help students achieve their educational, career and personal goals. Both academic advising and personal and career counseling are provided by trained counselors and placement personnel.

Students who need additional help with course work can receive free, individualized tutoring. Many testing services, such as the General Education Development (GED) test and the College Level Exam Program (CLEP) test, also are provided.

Courses are offered to help adults with basic learning skills in math, reading, writing, vocabulary and spelling. Those wanting to earn a high school diploma or learn English as a second language will find courses available.

Other courses include career planning, stress management and special vocational and related training for the disadvantaged and handicapped person.

# INSTRUCTIONAL SUPPORT SERVICES

## Faculty:

Laurel Bible, Katherine Clark, Russell Gregory, Paula Grigsby, Charles Mann, Carolyn Miller

Instructional Support Services' courses are taught by staff from the Developmental Center, Special Programs, Adult General Education and Learning Resource Center. Services are provided in Testing, Tutoring, Writing Lab, Reading Lab, Math Lab and Special Programs.

## DEVELOPMENTAL SKILLS CENTER

The Developmental Skills Center provides a cluster of services designed for students, staff and community residents. Because it offers such broad services, the Center forms a bridge between instructional areas and student services. These developmental or growth programs provide for:

1. developing learning skills of all students;
2. identifying difficulties students face in learning; and
3. providing solutions to those difficulties.

The Developmental Skills Center maintains an open-door policy. All students are encouraged to take advantage of center offerings and may do so with or without earning credit. Many courses are individualized so that a student may begin or end studies at any time during the quarter.

Students may decide for themselves to improve skills in the Developmental Skills Center or may be referred by instructors or counselors. Referrals by counselors are often based upon the results of the entrance exam or the student's previous school performance.

## DEVELOPMENTAL CENTER COURSES

### 1.125 Study Skills

(3 class hrs/wk 0-3 cr) F/W/Sp

Instruction includes study techniques, budgeting time, studying for tests, test-taking tips (essay, multiple choice, etc.), note-taking, outlining, effective listening and using the library. The course applies the skills learned to textbooks.

### 1.126 Language Arts Skills

(4 class hrs/wk 0-3 cr) F/W/Sp

Sentence structure, usage, punctuation, grammar and improvement of writing skills are taught on a one-to-one basis. Diagnosis of existing skills indicates where a student begins within the program. Students progress at their own pace through the program, showing knowledge of one skill before beginning the next.

### 1.128 Reading Skills

(4 class hrs/wk 0-3 cr) F/W/Sp

Individualized instruction in the reading skills of comprehension, rate and vocabulary. Individual diagnosis provides placement at the appropriate instructional level and instruction stresses the improvement of those reading skills most closely related to the student's academic and career plans.

### 1.129 Speed and Power Reading

(3 class hrs/wk 3 cr) F/W/Sp

This course is intended for average and above average readers who wish to increase reading efficiency. Emphasis is placed on improvement of reading speed without significant loss of comprehension. Classroom, small group and individual activities stress improvement of the skills of skimming and scanning.

### 1.130 Basic Grammar

(3 class hrs/wk 3 cr) F/W/Sp

Designed to instruct students in the basic rules and practices in grammar, sentence structure, punctuation and general usage in writing. Special attention is given to individual differences and difficulties and the application of course work to the student's writing.

### 1.131 Spelling

(3 class hrs/wk 3 cr) F/W/Sp

Spelling skill is developed through word structure, word attack skills and pronunciation. Proofreading and dictionary usage are emphasized for use in the student's writing.

### 1.132 Spelling Skills

(4 class hrs/wk 0-3 cr) F/W/Sp

Improvement of spelling through studying phonetic and spelling principles in primarily independent manner. Instruction is based on diagnosis of the student's existing spelling skills. Modules allow for each student's different needs and learning speeds.

### 1.133 Writing Lab

(4 class hrs/wk 0-3 cr) F/W/Sp

Provides flexible course work in most writing skills. Each student's program is designed on a one-to-one contact basis with the instructor. Work may be on a short- or long-term basis, with or without credit.

### 1.134 Study Skills: Vocational (20-60 class hrs/term 0-3 cr) F/W/Sp

Individualized instruction to develop specific skills in various vocational programs. The instruction will be supplemental to the regular course offerings and will not substitute for that instruction. Diagnosis of deficiencies and interests of students determines level of instruction. Prerequisite: Concurrent enrollment in a specific vocational program.

### 1.135 Developmental Reading

(3 class hrs/wk 3 cr) F/W/Sp

This course is designed to improve skills in comprehension, reading rate and vocabulary. Reading skills are presented in individual and group activities. Diagnosis of the individual's reading skill provides placement for the individual activities. Note: Course may be repeated for up to nine non-transfer credits.

### 1.137 Mini-Courses in Developmental Skills (1-2 cr)

Special topics in development skills offered on a short-course basis. Subject determined by campus or program curriculum needs. Courses may begin at any time during the quarter, varying in length from two to six weeks.

### 1.150 Techniques of Reading and Studying (3 class hrs/wk 3 cr) F/W/Sp

Study skills and reading skills necessary to meet academic requirements are taught, with emphasis on the needs of the class. Reading skills of comprehension, rate and vocabulary development are individualized to each student.

### 1.153 Individualized Study Skills

(4 class hrs/wk 0-3 cr) F/W/Sp

A variable credit, individualized class designed to help a student master study skills that are essential to a community college student or transfer student.

### 1.156 English as a Second Language

(6 class hrs/wk 3 cr) F/W/Sp

Designed for non-native speakers. Class gives practice in reading, writing and speaking English. Emphasizes vocabulary, idioms and practical classroom skills. Prerequisite: Instructor approval.

### EN 115 Effective Reading

(3 class hrs/wk 3 cr) F/W/Sp

Intended for the average and above-average reader who wishes to improve study skills and increase reading efficiency skills of speed, comprehension and vocabulary. Entrance to the course is determined by a placement exam or a designated level of achievement in developmental reading. Prerequisite: Testing placement or instructor approval.



**LI 127 Use of the Library**

(2 class hrs/wk 1 cr) F/W/Sp

A course designed to help students use the library more effectively. The student will gain experience with the card catalog, periodical indexes, bibliographies, and reference materials. Students also will receive instruction on how to research a topic. This course is useful to students in any discipline. Note: Six-week course.

## **ADULT GENERAL EDUCATION PROGRAMS**

A variety of classes and programs are available to adults who do not have a high school diploma. Instruction is available both days and evenings at the campus in Albany and at the Benton, Lebanon and Sweet Home Community Education centers. Classes also are scheduled as needed in Scio, Brownsville, Philomath, Alsea and other locations in the college district. The college also will attempt to locate volunteer instructors, tutors or self-study materials to help adults who, due to illness, disability, incarceration or other reasons beyond their control, are unable to attend regularly scheduled classes.

To be eligible for these classes, a person must be at least 16 years of age and no longer enrolled in school (see exception in "High School Continuation"). Persons who are under age 18 must present from their local school district a signed release from compulsory attendance as provided for by ORS 339.30.

## **ADULT BASIC EDUCATION**

The ABE program provides classes in reading, writing, vocabulary, spelling and math for students who have not completed the eighth grade. There is no tuition charge for ABE classes.

## **CITIZENSHIP PREPARATION**

Individualized study programs are available for residents who wish to become naturalized United States citizens. Additional information is available from the General Educational Development (GED) instructor in the Instructional Support Services office or the local Community Education center.

## **ENGLISH AS A SECOND LANGUAGE (ESL)**

For adults whose first or native language is not English, instruction is available in reading, writing and speaking the English language. The course emphasizes vocational and "survival" skills in using and understanding English.

Instruction is provided at beginning, intermediate and advanced levels. The beginning level instruction is free. A tuition charge may be assessed for intermediate and advanced levels.

## **GENERAL EDUCATIONAL DEVELOPMENT (GED) STUDIES**

GED classes are designed for adults who wish to prepare for the GED high school equivalency examination. The classes also are available for those who wish to improve their general knowledge and skills in the subject areas offered. Areas of study include writing, math, reading, comprehension of literature, social studies, science and consumer education.

There is a small tuition charge for GED studies and students must purchase some texts and study materials.

## **HIGH SCHOOL CONTINUATION**

High School Continuation is a cooperative program with area schools for high school students who want to accelerate their program or make up credit deficiencies.

To be eligible for admission to the program, students must be age 16 or over, currently enrolled in high school and referred by their high school administrator or counselor.

## **ADULT HIGH SCHOOL DIPLOMA**

LBCC is authorized by the State of Oregon to issue a high school diploma to adults who meet high school graduation requirements established by the college. High school credits may be obtained in LBCC college-level and non-credit classes or by attending high school classes offered through the Instructional Support Services office and the Community Education centers. In some cases, adults may obtain high school credits through assessment of life experiences.

Information about the Adult High School Diploma program is available through the Instructional Support Services office or the Community Education centers. Admission applications and information are available from the Admissions office.

## **Special Short Courses**

Programs financed by specially obtained funds may be designed for specific occupations or groups of people. These programs are generally one or two terms in length and differ each year, as they are designed to meet specific needs. Examples of the type of programs that have been completed in the past are Tool Room Technician, Jobs for Women in the Wood Products Industry and Electronics Fabrication.

Any person interested in these programs should call the Special Instructional Programs office to obtain current training subjects, schedules and qualification procedures.

## **SPECIAL INSTRUCTIONAL PROGRAMS**

**Coordinator:**  
Melvin L Gilson

Special Instructional Programs offers specially designed programs, including those for handicapped, CETA-eligible or displaced homemaker students.

## **Special Needs Program**

This program is designed for handicapped students with special needs or those who work with special needs students. The assistance available includes assessment, tutoring services, reading for the blind, interpreters and note takers for the deaf, and a special, vocational study skills class.

Whenever possible, students are enrolled in regular vocational classes. When necessary, specially designed, individual training programs are developed using community resources and community training sites. Some special classes available are Living Skills, Therapeutic Activities for the Blind and Sign Language. Students in the program must meet particular enrollment requirements. Specific information is available at the Special Instructional Programs office.

# HUMANITIES & SOCIAL SCIENCES DIVISION

DIRECTOR: Kenneth D Cheney



Fine Arts classes are taken by people of all ages to fulfill both avocational and professional goals.

**T**he Humanities & Social Sciences Division has three educational aims. The first is to teach the richness of human existence, offering an education that is inward looking, personal and self-revealing and which teaches the student about his own uniqueness. The second is to teach the nature of society, human organization and the body politic, offering an education that is outward looking, social and civic, and teaches the student his relationship to other humans. The third is to fit the student for an economic role in society, through teaching the skills necessary for paid employment.

The division offers a broad range of academic subjects and programs in support of these aims. Collectively, these subjects are classified as the liberal arts. As a unifying force, they preserve a sense of community; in the inevitable process of change, they provide continuity; behind the arbitrary application of rules, they create the values.

Students may, upon recommendation of the faculty advisor and the Cooperative Work Experience staff, receive transfer or non-transfer

college credit by participating in the CWE program. Further information may be found in the "Cooperative Work Experience" section of this catalog.

The Humanities & Social Sciences Division offers programs leading to the Associate of Arts or Associate of Science degree in the following subjects: advertising and promotion, anthropology, archaeology, criminal justice, dance, pre-elementary education, English, fine arts, graphic arts, graphic design, history, journalism, liberal studies, music, political science, printing technology, psychology, pre-secondary education, social sciences (general), sociology and theater/acting.

## LIBERAL STUDIES CURRICULUM

Students with a specific major interest within the liberal arts should complete the program outlined for that subject; students with more general interests in the liberal arts should complete the program shown for an Associate of Arts in Liberal Studies.

## Associate of Arts in Liberal Studies

### General Education Requirements . . . . . 45

See graduation requirements for Associate of Arts degree

### Liberal Arts Requirement . . . . . 27

- ☐ Humanities sequence . . . . . (9)
- ☐ Social Science sequence . . . . . (9)
- ☐ Performing Arts (Select minimum of 3 credits each in three areas: art, music, theater, dance) . . . . . (9)

### Electives . . . . . 18

Additional courses or approved CWE . . . . . 90

## EDUCATION

### Advisor:

Marian L Cope

Successful completion of the outlined programs will permit students to transfer to any institution in the Oregon State System of Higher Education offering programs in elementary or secondary education and, upon admission to the professional teacher education program, complete requirements for a baccalaureate degree.

Admission to professional programs in education is based on several qualifications, including academic background and demonstrated ability to speak and write adequately. Application for admission should be made immediately upon transfer to the four-year institution.

Specific education requirements vary slightly at different four-year schools. Students planning to become teachers are urged to make an early decision about their intended transfer institutions and to work closely with an advisor in scheduling their programs.

## ELEMENTARY EDUCATION CURRICULUM

### Associate of Arts in Pre-Elementary Education

#### General Education Requirements . . . 60-72

- ☐ Composition . . . . . (6)  
 WR 121 English Composition . . . . . 3  
 WR 122 English Composition . . . . . 3  
 WR 123 English Composition . . . . . 3

☐ Math

Math for Elementary Teachers should be taken at transfer institution.

- ☐ Physical Education . . . . . (3)

PE 185 Activity Courses (repeated for three credits) . . . . . 3

- ☐ Health . . . . . (3)

HE 250 Personal Health . . . . . 3

- ☐ Physical Sciences<sup>1</sup> . . . . . (8-12)

GS 104 Physical Science . . . . . 4

GS 105 Physical Science . . . . . 4

GS 106 Physical Science . . . . . 4

- ☐ Biology<sup>1</sup> . . . . . (4-12)

BI 101 General Biology . . . . . 4

BI 102 General Biology . . . . . 4

BI 103 General Biology . . . . . 4

- ☐ Humanities . . . . . (9)

Literature Sequence

- ☐ Psychology (all but UO, EOSC) . . . (0-6)

PY 201 General Psychology . . . . . 3

PY 202 General Psychology . . . . . 3

- ☐ Speech (Select one) . . . . . (3)

SP 111 Interpersonal Communication . . . . . 3

SP 112 Fundamentals of Speech . . . . . 3

- ☐ Social Science<sup>2</sup> . . . . . (18)

Two social science sequences

#### Electives<sup>3</sup> . . . . . 36-18

##### Additional courses

90

##### Special transfer requirements:

1. PSU: Completion of a one-year sequence in physical science and a one-year sequence in biological science.  
 SOSC: Completion of any physical science sequence and general biology sequence.  
 OSU: Completion of two terms physical science and two terms general biology.  
 EOSC: No specific requirement, but completion of a minimum of 15 term hours in science, to include environmental studies, is recommended.  
 WOSC: Completion of one term general biology, two terms physical science.
2. UO: Emphasis on environment/ecology in course offerings. Physical education and speech are not required.  
 HE 440 Elementary Education Health (not available at LBCC) is required in place of HE 250 Personal Health. Pre-professional classroom field experience is required, available at LBCC through the Cooperative Work Experience program.  
 Students transferring to PSU should complete a minimum of 9 hours in history and geography. UO students should complete at least one term U.S. History.  
 OSU students should complete three terms U.S. History and two terms Introductory Geography.
3. Recommended Electives:  
 WOSC: Survey of Visual Arts  
 PSU: art, English, mathematics, modern language, music, physical education, health, science, social science, speech.  
 OSU: art, English, mathematics, modern language, music, physical education, health, science, social science, speech, environmental studies, early childhood. A minimum of 33 hours is required in one of these as an "area of concentration." Students may take as much work in the selected area as they wish during the freshman and sophomore years.  
 UO: Practicum in social science, humanities, consumer science, environmental science, physical or biological sciences, mathematics.  
 EOSC: Introduction to Literature, consumer economics, interpretation, personal finance.

## SECONDARY EDUCATION CURRICULUMS

Students planning to become junior or senior high school teachers of art, agriculture, business, home economics, English, industrial education, music, physical education, speech/theater or social science should complete the program shown under those major headings.

### Associate of Arts in Pre-Secondary Education / Art

#### General Education Requirements . . . . 45

See graduation requirements for Associate of Arts degree

#### Major Requirements . . . . . 33

AR 201 Introduction to Art History . . . . . 3

AR 202 Introduction to Art History . . . . . 3

AR 203 Introduction to Art History . . . . . 3

AR 115 Basic Design I . . . . . 3

AR 116 Basic Design II . . . . . 3

- ☐ Art Sequence (Select 6 credits each in three areas): . . . . . (18)

Drawing, painting, sculpture, ceramics, weaving. (Note: Four-year schools of education will not accept for transfer more than 6 credits each nor more than 18 credits total in drawing, painting, sculpture, ceramics, weaving).

#### Electives . . . . . 12

Additional courses to total a minimum of 90 credits.

90

### Associate of Arts in Pre-Secondary Education / Industrial Education

The transfer program in industrial education is designed to provide two years of community college work transferable to the Department of Industrial Education at Oregon State University, leading to a Bachelor of Science degree in industrial arts or trade and industrial education. Under the transfer agreement between Linn-Benton Community College and Oregon State University, a total of 108 hours can be transferred into the Department of Industrial Education. Of this total, 45 credit hours can be vocational-technical credit which is not normally transferable.

The Industrial Arts program leads to certification for teaching industrial arts in grades six through twelve. Industrial arts is a broad-based study of industry and technology for all secondary school students.

The Vocational Trade and Industrial Education program is designed to develop teachers who will prepare secondary students to enter a specific occupational area. The program requires two years of industrial or trade experience as a full-time journeyman in an occupational area such as building construction, machine metal working, printing, drafting, automotive mechanics, diesel mechanics or electricity/electronics. Technical work for this major is completed by a combination of a trade competency examination, for which up to 45 hours of credit can be earned, and related technical course work. The trade competency examination, taken at the beginning of the program, is designed to evaluate industrial or trade experience. Additional work needed to complete the 45-hour transfer will be selected in conjunction with the examination committee.

#### General Education Requirements . . . . 45

See graduation requirements for Associate of Arts degree<sup>1</sup>

SP 112 Fundamentals of Speech required.

PY 201, 202 General Psychology and SO 204

General Sociology recommended for social science

group requirement.

GS 104, 105, 106 Physical Science recommended for science group requirement.

#### Major Options (Select one) . . . . . 45

- ☐ Industrial Arts . . . . . (45)

Electricity, electronics sequences . . . . . 8-12

Graphics, drawing, printing sequences . . . . . 8-12

Welding, machine metals, construction, cabinetmaking sequences . . . . . 8-12

Power, automotive, diesel sequences . . . . . 8-12

- ☐ Vocational Trade and Industrial Education . . . . . (45)

Industrial or trade experience

Additional technical courses . . . . . 90

<sup>1</sup>In addition to the 90 hours required for the Associate of Arts degree, OSU recommends the following courses for transfer into their Industrial Education program.

MT 100 Intermediate Algebra . . . . . 4

WR 227 Technical Report Writing . . . . . 3

PS 201 American Government . . . . . 3

EC 215 Economic Development of the US . . . . . 3



## Associate of Arts in Pre-Secondary Education / Language Arts

### General Education Requirements\* . . . . 45

See graduation requirements for Associate of Arts degree  
EN 104, 105, 106 Introduction to Literature or  
RL 107, 108, 109 1st Year Spanish (12 credits)  
recommended for humanities group requirements.

### Major Requirements (Select three of the sequences) . . . . . 27

EN 101 Survey of English Lit	3
EN 102 Survey of English Lit	3
EN 103 Survey of English Lit	3
EN 107 World Literature	3
EN 108 World Literature	3
EN 109 World Literature	3
EN 201 Shakespeare	3
EN 202 Shakespeare	3
EN 203 Shakespeare	3
EN 253 Survey of American Lit	3
EN 254 Survey of American Lit	3
EN 255 Survey of American Lit	3

### Major Options (Select one) . . . . . 9-12

<input type="checkbox"/> Spanish . . . . . (12)	
RL 107 1st Year Spanish	4
RL 108 1st Year Spanish	4
RL 109 1st Year Spanish	4

<input type="checkbox"/> Creative Writing . . . . . (9)	
WR 240 Personal Journal Writing	3
WR 241 Intro to Imaginative Writing	3
WR 242 Intro to Imaginative Writing	3

<input type="checkbox"/> Journalism . . . . . (12)	
JN 215 Journalism Lab (may be repeated for 3 credits)	1
JN 216 Reporting I	3
JN 217 Reporting II	3
JN 218 Copy Editing & Makeup	3

### Electives . . . . . 3-9

Additional courses in literature, foreign language, creative/technical writing, journalism or approved CWE

90

## Associate of Arts in Pre-Secondary Education / Music

### General Education Requirements . . . . 45

See graduation requirements for Associate of Arts degree

### Major Requirements . . . . . 51

MU 111 Music Theory I	4
MU 112 Music Theory I	4
MU 113 Music Theory I	4
MU 201 Introduction to Music Literature	3
MU 202 Introduction to Music Literature	3
MU 203 Introduction to Music Literature	3
MU 211 Music Theory II	4
MU 212 Music Theory II	4
MU 213 Music Theory II	4
Individual Vocal or Instrumental Lessons (repeated for six credits)	6

### ☐ Ensemble (Select one) . . . . . (12)

MU 297A Concert Choir (repeated for minimum of 12 credits)	2
MU 295E Instrumental Jazz Ensemble (repeated for minimum of 12 credits)	2

96

\*Music majors are expected to have basic proficiency in piano. Students with deficient skills may be required to enroll in MU 131, 132, 133 Group Piano.

## Associate of Arts in Pre-Secondary Education / Physical Education

### General Education Requirements . . . . 45

See graduation requirements for Associate of Arts degree  
WR 123 English Composition recommended for composition requirement.  
CH 104 General Chemistry recommended as partial fulfillment of math/science group requirement.  
AN 103 Introduction to Cultural Anthropology recommended as partial fulfillment of humanities group requirement.

### Major Requirements . . . . . 27

PE 194 Professional Activity/Track Skills	2
PE 194 Professional Activity/Gymnastics	2
PE 194 Professional Activity/Tennis & Badminton	2
PE 194 Professional Activity/Softball & Phys Ed	2
PE 194 Professional Activity/Basketball & Volleyball	2
PE 194 Professional Activity/Swimming	2
PE 131 Intro to Health and Physical Education	3
FN 225 Nutrition	4
BI 102 Human Biology	4
PE 185 Beg/Int Swimming	1
RM 150 Recreation in Society	3

### Electives . . . . . 18

Additional courses recommended as partial fulfillment: PE 232 Backpacking/Orienteering and PE 201 Physical Ed/Recreation.

90

## Associate of Arts in Pre-Secondary Education / Social Science

### General Education Requirements . . . . 45

See graduation requirements for Associate of Arts degree

### Major Requirements . . . . . 36-39

☐ Humanities or foreign language sequence . . . . . (9-12)

☐ Social Science Sequence (Select 9 hours each in three areas): . . . . . (27)

anthropology/archaeology, sociology, economics, geography, history, political science, psychology.

### Electives . . . . . 6-9

Additional courses

90

## Associate of Arts in Pre-Secondary Education / Speech-Theater

### General Education Requirements . . . . 45

See graduation requirements for Associate of Arts degree

### Major Requirements . . . . . 27

SP 111 Interpersonal Communication or SP 112 Fundamentals of Speech. (Select course not taken in fulfillment of general requirement.)

☐ Interpretation (Select two) . . . . . (6)

TA 124 Reader's Theatre	3
SP 129 Oral Interpretation	3
SP 229 Intermediate Oral Interpretation	3

☐ Acting (Select two) . . . . . (6)

TA 121 Fundamentals of Acting	3
TA 122 Fundamentals of Acting	3
TA 125 Improvisation	3

☐ Technical Theater (Select two) . . . . . (6)

TA 161 Fund of Tech Theater: Scenery	3
TA 162 Fund of Tech Theater: Light	3
TA 163 Fund of Tech Theater: Sound	3
TA 262 Scenery	3
TA 263 Lighting	3
TA 268 Sound	3
TA 270 Makeup	3

☐ Practicum . . . . . (6)

TA 180 Rehearsal and Performance (minimum of three credits)	3
TA 185 Production Workshop (minimum of three credits)	3

### Electives . . . . . 18

Additional courses recommended: ballet, modern or jazz dance, world literature, Shakespeare, group voice, psychology, additional theater courses.

90

# ENGLISH AND FOREIGN LANGUAGES

## Faculty:

Gretchen Schuette, Department Chair  
Art Bervin, Shirley Call, Tom Chase, Vera Harding, Don Minnick, Jane White, Barbara-jene Williams.

The Department of English and Foreign Languages offers courses which encourage students to improve their writing; read, analyze, evaluate and appreciate literature; develop fluency in a second language; and discover how studying language prepares them for many possible careers.

Courses in expository, imaginative and technical writing challenge students to express themselves precisely and to re-discover the power and magic of words. Literature, which records, distills and enlarges upon human experience, offers insight into how we and others feel, think and act. It demands that we perceive the world as others have seen it and that we re-examine how we see it. A foreign language enlarges our ability to communicate and provides opportunity to learn about cultures using that language.

Students majoring in English can meld classroom theory to the practicality of the working world. Cooperative Work Experience (CWE) allows students to satisfy degree requirements while working on jobs related to their majors. Through this program students develop or refine their skills, reinforce the suitability of their chosen careers and discover the range of careers open to them.

The department offers programs leading to an Associate of Arts degree in English and in Pre-Secondary Education/Language Arts. Complementing the major are three support options—foreign language, creative writing or journalism—which enrich the courses required of English majors.

## ENGLISH CURRICULUM

### Associate of Arts in English

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree  
EN 104, 105, 106 Introduction to Literature, or  
RL 107, 108, 109 1st Year Spanish (12 credits)  
recommended for humanities group requirements.

#### Major Requirements (Select three of the sequences) . . . . .27

EN 101 Survey of English Lit	3
EN 102 Survey of English Lit.	3
EN 103 Survey of English Lit.	3
EN 107 World Lit	3
EN 108 World Lit	3
EN 109 World Lit	3
EN 201 Shakespeare	3
EN 202 Shakespeare	3
EN 203 Shakespeare	3
EN 253 Survey of American Lit	3
EN 254 Survey of American Lit	3
EN 255 Survey of American Lit	3

#### Major Options (Select one) . . . . .9-12

<input type="checkbox"/> Spanish . . . . . (12)	
RL 107 1st Year Spanish	4
RL 108 1st Year Spanish	4
RL 109 1st Year Spanish	4
<input type="checkbox"/> Creative Writing . . . . . (9)	
WR 240 Personal Journal Writing	3
WR 241 Intro to Imaginative Writing	3
WR 242 Intro to Imaginative Writing	3
<input type="checkbox"/> Journalism . . . . . (12)	
JN 215 Journalism Lab (repeated for 3 credits)	1
JN 216 Reporting I	3
JN 217 Reporting II	3
JN 218 Copy Editing & Makeup	3

#### Electives . . . . .5-9

Additional courses in literature, foreign language, creative/technical writing, journalism or approved CWE

90

### Associate of Arts in Pre-Secondary Education/Language Arts

See Secondary Education Curriculums

## LITERATURE COURSES

### EN 101, 102, 103 Survey of English Literature

(3 class hrs/wk 3 cr) F/W/Sp

A study of representative works in English literature, for their inherent worth and for their reflection of the times in which they were written. EN 101, ballads through Milton; EN 102, Defoe through the Romantics; EN 103, Browning through Joyce. Note: No prerequisite, but EN 104, 105, 106 Introduction to Literature sequence is highly recommended.

### EN 104 Introduction to Literature

(3 class hrs/wk 3 cr) F

Introduction to narrative fiction (short story and novel) through reading and discussing American, English and European works.

### EN 105 Introduction to Literature

(3 class hrs/wk 3 cr) W

Introduction to drama as developed in ancient Greece and transmitted through successive historical periods to the present. Course introduces students to Greek, medieval, Shakespearean and modern plays, stressing conventions of drama developed in succeeding historical periods.

### EN 106 Introduction to Literature

(3 class hrs/wk 3 cr) S

Study of poetry and the nature of literary experience through the reading of great poetry drawn from American, English and world literature. Works are read in entirety when possible, with emphasis on such elements as structure, style, imagery, figurative language and musical devices.

### EN 107, 108, 109 World Literature

(3 class hrs/wk 3 cr) F/W/Sp

Sequence acquaints students with outstanding works in ancient, medieval, Renaissance and modern literature which have permanent and wide appeal outside their own country. EN 107, Hebrew, Greek and Roman; EN 108, Middle Ages and Renaissance; EN 109, 18th Century to present.

### EN 112 The Literature of Science Fiction

(3 class hrs/wk 3 cr)

Survey of science fiction and its predecessors. Focuses on contributions of 20th Century writers like Asimov, Bradbury, Norton and Clarke.

### EN 121 Mystery Fiction

(3 class hrs/wk 3 cr)

Traces development and evolution of the genre, pre-Poe to present. Includes readings from Doyle, Sayers, Queen, Christie, Hammett, Chandler, R. MacDonald and Ambler.

### EN 201, 202, 203 Shakespeare

(3 class hrs/wk 3 cr) F/W/Sp

A reading of the major plays with emphasis upon Shakespeare as dramatist and poet. The background of the Elizabethan period, its dramatic tradition, theater and culture are emphasized. EN 201, Histories; EN 202, Tragedies; EN 203, Comedies.

### EN 204 Shakespeare

(3 class hrs/wk 3 cr)

Includes reading and television viewing of several major plays, with emphasis on Shakespeare as dramatist and poet. The background of the Elizabethan period, its dramatic tradition, theater and culture are emphasized. Note: May be repeated twice for credit; not more than 9 credits of lower-division Shakespeare may be applied toward graduation.

### EN 211 Athletics in Literature

(3 class hrs/wk 3 cr)

Study of the literature of sports and its reflection of our culture and world. Course focuses mostly on works of 20th Century American writers. Special emphasis will be placed on evolved myths of the athlete and athletics.

**EN 221 Women Writers in 20th Century American Literature**  
(3 class hrs/wk 3 cr)

Study of women writers of 20th Century American literature in fiction, drama, poetry, journals and essays. Examines the woman as writer and the influence of her writings on the art and time in which she lived.

**EN 222 Images of Women in Literature**  
(3 class hrs/wk 3 cr)

Analyzes images, archetypes and stereotypes of female characters in selected literature and explores the effects upon women of these literary images.

**EN 253, 254, 255 Survey of American Literature**  
(3 class hrs/wk 3 cr) F/W/Sp

Intensive readings of significant U.S. authors representing major literary periods provide an understanding and appreciation of American culture as expressed in literature. EN 253, Puritanism through Civil War era; EN 254, Transcendentalism through early Realism; EN 255, Realism and Naturalism through the present.

**EN 275 The Bible as Literature**  
(3 class hrs/wk 3 cr)

Survey of selected Old and New Testament readings acquaints students with literary forms, styles and content of biblical materials, and points out our literary and artistic indebtedness to the biblical heritage.

## WRITING COURSES

**HU 199 The Nature of Expression**  
(3 class hrs/wk 3 cr)

An interdisciplinary course that examines the nature of expression in human experience, and the relationship between form and expression.

**WR 115 Introduction to Expository Writing**  
(3 class hrs/wk 3 cr) F/W/Sp

A survey of basic conventions, purposes and strategies of standard written English. Emphasizes improvement of fluency in writing expository prose and confidence in the student's own ability to write acceptably and effectively at the college level. Note: This course does not satisfy institutional writing requirements for the transfer student.

**WR 121 English Composition: Liberal Arts** (3 class hrs/wk 3 cr) F/W/Sp

Emphasizes content and organization of the unified expository prose essay, stressing topic selection and limitation. Attention is paid to sentence and paragraph development, effective use of transitions, introduction, conclusion and diction. Note: Since spelling errors, faulty punctuation and inattentiveness to conventions of standard usage are grounds for failure, students who are deficient in these areas may be advised to enroll in WR 115 Introduction to Expository Writing prior to attempting this course.

**WR 121 English Composition: Occupational**  
(3 class hrs/wk 3 cr) F/W/Sp

Emphasizes expository writing skills necessary to vocational and technical students. Students gain core skills in paragraphing and rhetorical forms, and complete selected exercises pertaining to their occupational programs. Prerequisite: WR 115 Introduction to Writing required for occupational students seeking an Associate of Science degree.

**WR 122 English Composition**  
(3 class hrs/wk 3 cr) W/Sp

Emphasizes logic and style in expository writing, stressing ability to define statements and issues, recognize evidence, use inductive and deductive arguments, and avoid fallacies. Attention is paid to diction, tone and style of writing. Continues emphasis of WR 121 on rhetorical concerns and accuracy in mechanics and usage. Prerequisite: WR 121 English Composition.

**WR 123 English Composition**  
(3 class hrs/wk 3 cr) W/Sp

Introduction to use of library, research methods, proper use of sources and documentation. Students will write one or more research papers, making use of an outline, note cards, footnotes, bibliography and manuscript forms. Continues emphasis of WR 121 on rhetorical concerns and accuracy in mechanics and usage. Prerequisite: WR 121 English Composition.

**WR 227 Technical Report Writing**  
(3 class hrs/wk 3 cr) F/W/Sp

Technical writing concentrates on sources of information, evaluation of material, organization and presentation of information. It includes business letters and memorandum forms as well as technical report format. This transfer course is designed for students who must report the results of non-literary research. Prerequisite: WR 121 English Composition.

**WR 240 Personal Journal Writing**  
(3 class hrs/wk 3 cr)

Studies the use of journals for recording observations, reflecting thoughts of personal and public interest, preserving one's past, noting ideas for poems or stories, exploring one's identity, or practicing and experimenting with writing styles. Emphasis is given to the journal as a place to practice writing and to respond to entries offered for class review.

**WR 241 Introduction to Imaginative Writing** (3 class hrs/wk 3 cr)

Includes a study of the elements of short fiction (dialogue, setting, character, conflict, etc.), using workshop sessions in which students discuss the exercises and stories of their classmates. Note: May be repeated for up to 6 credits.

**WR 242 Introduction to Imaginative Writing** (3 class hrs/wk 3 cr)

Introduction to basic techniques of poetry writing such as rhythm, rhyme and imagery, with additional discussion of the more technical aspects of the craft. Students may be asked to work with certain fixed traditional forms, but major emphasis will be placed on fostering and developing individual style. Note: May be repeated for up to 6 credits.

**WR 280 CWE Writing**  
(6-42 class hrs/wk 2-14 cr) F/W/Sp/S-u

An instructional program designed to give students practical experience in supervised employment related to writing. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

## FOREIGN LANGUAGE COURSES

**RL 107, 108, 109 First Year Spanish**  
(4 class hrs/wk 4 cr) F/W/Sp

An introduction to Spanish, stressing speaking and reading with exercises in elementary composition. Note: Students whose competence already exceeds the scope of any course within the sequence will not be admitted. Must be taken in sequence, but entrance is permitted at any level.

**RL 207, 208, 209 Second Year Spanish**  
(4 class hrs/wk 4 cr)

Intensive oral and written exercises designed to help the student acquire an accurate and fluent use of Spanish. Includes study of selections from representative authors. Note: Must be taken in sequence, but entrance permitted at any level. Prerequisite: RL 109 First Year Spanish, or three years high school Spanish equivalent or instructor approval.

**RL 199 Special Studies—Spanish**  
(1 class hrs/wk 1 cr)

Selected topics focusing on Spanish culture. Note: Can be taken up to 3 times for credit.



# FINE AND APPLIED ARTS

## Faculty:

Jim Tolbert, Department Chair  
John Aikman, Rich Bergeman, Judith Rogers,  
Gene Tobey, Sandra S Zimmer

## FINE ARTS

The Fine Arts curriculum has three instructional objectives: to enhance students' sensitivity to their visual surroundings; to increase their ability to recognize historic influences in their own and others' works; and to develop skills that will enable them to express ideas through art.

Available classes include fundamental work in drawing, design and color. For those interested in three-dimensional art there are course sequences in ceramics, sculpture and weaving. Lecture courses in art history and art appreciation give added depth to the studio experience. To supplement the students' course work, instructional slides, films and an excellent collection of art books are available through the campus Learning Resource Center.

The department offers course work leading to an Associate of Arts degree in Fine Arts, which includes a core of 21 hours common to all students of art, plus additional work selected from one area of emphasis in painting and drawing, weaving and textiles, or ceramics and sculpture. The department also offers course work leading to an Associate of Arts in Pre-Secondary Education for students planning to become teachers of art.

## FINE ARTS CURRICULUMS

### Associate of Arts in Fine Arts

#### General Education Requirements . . . . .45

See graduation requirements for  
Associate of Arts degree

#### Major Requirements . . . . .21

AR 115 Basic Design I	3
AR 116 Basic Design II	3
AR 201 Intro to Art History	3
AR 202 Intro to Art History	3
AR 203 Intro to Art History	3
AR 231 Drawing: Fundamentals	3
AR 232 Drawing: Intermediate	3

#### Major Options (Select one) . . . . .18

##### ☐ Drawing and Painting . . . . . (18)

AR 181 Beginning Painting	3
AR 184 Beginning Watercolor	3
AR 234 Figure Drawing	3
AR 281 Painting II	3
Weaving or Textile Elective	3
Ceramics or Sculpture Elective	3

##### ☐ Weaving and Textiles . . . . . (18)

AR 143 Fabric Dyeing: Batik	3
AR 151 Beginning Weaving	3
AR 251 Weaving II: Loom	3
Weaving or Textile Elective	3
Drawing or Painting Elective	3
Ceramics or Sculpture Elective	3

##### ☐ Ceramics and Sculpture . . . . . (18)

AR 154 Beginning Ceramics	3
AR 191 Beginning Sculpture	3
AR 254 Ceramics II	3
AR 291 Sculpture: Figure Study	3
Drawing or Painting Elective	3
Weaving or Textile Elective	3

#### Electives . . . . .6

Additional art courses 90

### Associate of Arts in Pre-Secondary Education / Art

See *Secondary Education Curriculum*s

## FINE ARTS COURSES

### AR 102 Art Appreciation

(3 class hrs/wk 3 cr) F/W/Sp

A survey of the principle concerns of art and artists, ancient to modern times.

### AR 115 Basic Design

(6 class hrs/wk 3 cr) W

Introduction to values of black and white; concepts relating to shape; design structure, unity and proportion.

### AR 116 Basic Design II

(6 class hrs/wk 3 cr) W/Sp

An introductory study of concepts of color, its properties, combination, relatedness, proportions and interaction. Major emphasis is on color mixing.

### AR 133 Drawing: Portraiture

(3 class hrs/wk 2 cr)

Introductory course in drawing the human head. A painting will be included if time and skill permit. Major emphasis is on form development and values.

### AR 143 Fabric Dyeing: Batik

(6 class hrs/wk 3 cr)

Introduction to processes of textile design through batik and related dye methods. Provides studio experience with design guidance.

### AR 151 Beginning Weaving

(6 class hrs/wk 3 cr)

Introduction to techniques of construction with fiber, including basic principles, weaves, design considerations and preparation of a variety of looms.

### AR 154 Beginning Ceramics

(6 class hrs/wk 3 cr) F/W/Sp

Introduction to clay as an expressive material. Covers composition of clay bodies and basic forming processes: slab, pinch, coil, press mold and potter's wheel. Emphasis is on form and surface treatment; some firing and glazing included.

### AR 157 Beginning Jewelry and Metalsmithing

(6 class hrs/wk 3 cr)

General introduction to use of tools, design and major processes involved in creation of jewelry and other metal fabrications. Includes an in-depth study of lost-wax casting.

### AR 171 Beginning Printmaking

(6 class hrs/wk 3 cr)

Introduction to relief printing: woodcuts, linoleum cuts and wood engravings.

### AR 181 Beginning Painting: Still Life/Landscape

(6 class hrs/wk 3 cr)

Exploration of still-life painting or landscape painting, emphasizing composition, drawing and color.

### AR 183 Painting: Abstraction

(6 class hrs/wk 3 cr)

Exploration of the various ways a subject can be changed and abstracted through careful selection of certain elements essential to its character. Composition and color are emphasized.

### AR 184 Beginning Watercolor: Still-life/Landscape

(6 class hrs/wk 3 cr)

Exploration of watercolor techniques and compositional ideas appropriate to subjects taken from still-life or landscape.

### AR 185 Watercolor: Abstraction

(6 class hrs/wk 3 cr)

Exploration of the special effects of watercolor and their application to subject matter and compositional ideas.

### AR 191 Beginning Sculpture

(6 class hrs/wk 3 cr)

Course designed to expose the beginning student to a wide variety of materials and techniques in the production of three-dimensional art objects.

**AR 201, 202, 203 Introduction to Art History**

(3 class hrs/wk 3 cr) F/W/Sp

Three-term sequence covering the history, aesthetics and significance of the visual arts as they reveal man's concept of his place in time and space. Includes related contemporary thought in the fields of anthropology, religion, psychology and media studies. AR 201, Art Origins; AR 202, Christian Era to Industrial Revolution; AR 203, Modern era.

**AR 231 Drawing: Fundamentals**

(6 class hrs/wk 3 cr) F/W

Introduction to drawing media and techniques, with emphasis on observation, selection and recording of significant elements as related to 3-D form and space.

**AR 232 Drawing: Intermediate**

(6 class hrs/wk 3 cr) W/Sp

Intermediate problems in drawing, emphasizing complex forms, composition and form invention with a variety of techniques and materials. Prerequisite: AR 231 Drawing: Fundamentals or instructor approval.

**AR 234 Figure Drawing**

(6 class hrs/wk 3 cr) Sp

Introductory course in drawing the nude figure, with major emphasis on anatomy, form unity and development. Prerequisite: AR 231 Drawing: Fundamentals or instructor approval.

**AR 251 Weaving II: Loom**

(6 class hrs/wk 3 cr)

A study of multi-harness loom processes: warping a loom, weave construction and design considerations.

**AR 254 Ceramics II**

(6 class hrs/wk 3 cr) F/W/Sp

Clay construction for the experienced student, with advanced throwing and handbuilding, glazing and firing techniques.

**AR 257 Jewelry and Metalsmithing II**

(6 class hrs/wk 3 cr)

Continued instruction in the design and creation of jewelry and other metal fabrication. Prerequisite: AR 157 Beginning Jewelry and Metalsmithing.

**AR 280 CWE Fine Arts**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to fine arts. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**AR 281 Painting II: Still-Life/Landscape**

(6 class hrs/wk 3 cr) F/W/Sp

Continued instruction in still-life and landscape painting.

**AR 284 Watercolor II: Still-Life/Landscape**

(6 class hrs/wk 3 cr)

Continued instruction in watercolor techniques and compositional ideas appropriate to subjects taken from still-life or landscape.

**AR 291 Sculpture: Figure Study**

(6 class hrs/wk 3 cr)

Concentrated study in clay of the surface and structural anatomy of the human figure. Aimed at a greater understanding and use of the figure in three-dimensional art.

**AR 293 Sculpture: Metal Casting**

(6 class hrs/wk 3 cr)

Sculpture using lost-wax foundry casting process: using wax as the direct sculptural medium; preparing the sculpture for casting; and the foundry processes of burnout, melting and pouring. Note: Prior sculpture training is recommended.

## GRAPHIC COMMUNICATIONS AND JOURNALISM

The Graphic Communications and Journalism program is dedicated to training students for entry-level positions in the printing, publishing and design fields. The program also is committed to assist in upgrading the skills of persons already employed in the field and to providing basic lower-division requirements for those who wish to continue their education at a four-year institution.

The curriculums are designed to provide learning experiences consistent with the needs of potential employers in the industry. The equipment available for student use is comparable to that in the offices of printers, designers and the print media throughout the country.

Students participate as editors, writers, photographers, designers and advertising and production staff on **The Commuter**, the student-run weekly newspaper for the campus. Additionally, projects in design and production provide opportunities for students to deal with clients and to accept responsibility for deadlines and quality control. Cooperative Work Experience (CWE) opportunities may offer on-the-job learning experiences.

Students in the graphic arts and graphic design programs should anticipate expenses of \$200 per term for tools and materials. Printing technology and advertising/promotion students probably will spend \$100 annually for tools and supplies in addition to textbooks. Film and photographic paper will cost journalism students about \$50 during those terms in which they take photography.

Only those students who begin their program fall quarter may be assured of completing the program in two years. Students entering at other times may find it necessary to take more than six quarters of classes to complete degree requirements.

The Graphic Communications and Journalism curriculum lead to the Associate of Arts degree in Advertising and Promotion, Graphic Arts, and Journalism and the Associate of Science degree in Graphic Design and Printing Technology.

## GRAPHIC COMMUNICATIONS AND JOURNALISM CURRICULUMS

### Associate of Arts in Advertising and Promotion

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree

#### Major Requirements . . . . .41

<input type="checkbox"/> Graphic Communications . . . . .	(21)
AA 104 Intro to Graphic Communications	3
AA 120 Layout and Pasteup Procedures	3
AA 121 Survey of Visual Design	3
AA 224 Typographical Design	3
AA 229 Typesetting	3
JN 215 Journalism Lab (repeated for 3 credits)	3
JN 216 Reporting I	3
<input type="checkbox"/> Photography . . . . .	(7)
JN 134 Intro to Photography	2
JN 234 Intermediate Photography	2
AA 263 Process Camera	3
<input type="checkbox"/> Advertising and Promotion . . . . .	(13)
JN 225 Advertising/Public Relations	3
BA 223 Principles of Marketing	4
BA 238 Principles of Salesmanship	3
BA 239 Principles of Advertising	3

#### Electives . . . . .4

Additional courses or approved CWE

90

### Associate of Arts in Journalism

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree

#### Major Requirements . . . . .33

AA 104 Intro to Graphic Communications	3
AA 120 Layout & Pasteup Procedures	3
AA 229 Typesetting	3
AA 263 Process Camera	3
JN 134 Intro to Photography	2
JN 199 Newspaper Makeup	2
JN 215 Journalism Lab (repeated for three credits)	3
JN 216 Reporting I	3
JN 217 Reporting II	3
JN 218 Copy Editing & Makeup	3
JN 225 Advertising/Public Relations	3
JN 234 Intermediate Photography	2

#### Electives . . . . .12

Additional courses or approved CWE. Recommended: economics, business management, political science, literature.

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Working at a wheel, a pottery student concentrates on smoothing her bowl.

## Associate of Arts in Graphic Arts

### General Education Requirements . . . . 45

See graduation requirements for  
Associate of Arts degree  
AR 201, 202, 203 Art History, recommended for  
humanities group requirement.  
SP 112 Fundamentals of Speech is required.

### Major Requirements . . . . . 50

AA 104 Intro to Graphic Communication	3
AA 120 Layout and Pasteup Procedures	3
AA 174 Screen Printing	3
AA 221 Graphic Design I	3
AA 222 Graphic Design II	3
AA 223 Graphic Design III	3
AA 224 Typographical Design	3
AA 225 Packaging and 3-D Design	3
AA 228 Portfolio Preparation and Professional Practices	3
AA 229 Typesetting	3
AA 237 Illustration	3
AA 263 Process Camera	3
AR 115 Basic Design I	3
AR 116 Basic Design II	3
AR 231 Drawing: Fundamentals	3
AR 232 Drawing: Intermediate	3
JN 134 Intro to Photography	2

95

## Associate of Science in Graphic Design

### General Education Requirements . . . . 20

See graduation requirements for  
Associate of Science degree  
SP 112 Fundamentals of Speech is required.

### Major Requirements . . . . . 71

3.150 Intro to Graphic Communications	3
3.152 Layout & Pasteup Procedures	3
3.154 Packaging & 3-D Design	3
3.158 Typographical Design	3
3.164 Process Camera	3
3.166 Screen Printing	3
3.170 Illustration	3
3.172 Graphic Design I	3
3.173 Graphic Design II	3
3.174 Graphic Design III	3
3.182 Typesetting	3
AA 228 Portfolio Preparation & Professional Practices	3
AR 115 Basic Design I	3
AR 116 Basic Design II	3
AR 231 Drawing: Fundamentals	3
AR 232 Drawing: Intermediate	3
AR 234 Figure Drawing	3
JN 134 Intro to Photography	2
JN 199 Newspaper Makeup (may be repeated for up to 6 credits)	6
JN 234 Intermediate Photography	2
<input type="checkbox"/> Technical Drawing (Select two) . . (4-6)	
4.109 Tech Sketching	1
4.123 Tech Illustration	3
4.115 Presentation Drawing	3

### ☐ Typing . . . . . (6)

OA 121 Typing I*	3
OA 123 Typing Skill Building*	3

\*Students with a demonstrated typing proficiency of 55 words per minute may substitute additional electives.

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4.124



## Associate of Science in Printing Technology

### General Education Requirements . . . . .20

See graduation requirements for  
Associate of Science degree

### Major Requirements . . . . .51

3.150 Intro to Graphic Communications	3
3.152 Layout & Pasteup Procedures	3
3.153 Survey of Visual Design	3
3.158 Typographical Design	3
3.164 Process Camera	3
3.166 Screen Printing	3
3.167 Offset Press	4
3.168 Advanced Offset Press	4
3.169 Negative Imposition & Platemaking	4
3.182 Typesetting	3
4.124 Tech Drawing	2
JN 134 Intro to Photography	2
JN 199 Newspaper Makeup (may be repeated up to 6 credits)	6
JN 234 Intermediate Photography	2
OA 121 Typing I*	3
OA 123 Typing Skills Building*	3

\*Students with a demonstrated typing  
proficiency of 55 words per minute may  
substitute additional electives.

### Electives . . . . .19

Additional courses or approved CWE 90

## GRAPHIC PRODUCTION AND DESIGN COURSES

### 1.280 CWE Graphics

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to graphics. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 3.167 Offset Press

(6 class hrs/wk 4 cr) W

Introduction to the theory and practice of offset lithography. Includes press operation; ink and water systems; the Pantone system of ink mixing; use of presensitized, electrostatic and direct-image plates; and safety procedures. Projects are assigned and critiqued. Prerequisite: 3.166 Screen Printing; 3.169 Negative Imposition and Platemaking.

### 3.168 Advanced Offset Press

(6 class hrs/wk 4 cr) Sp

Emphasizes offset lithography skills in multi-color reproduction, ink matching, plate and blanket packing, and close register presswork. Students will take a job through all production phases, using skills learned in previous courses. Prerequisite: 3.167 Offset Press.

### 3.169 Negative Imposition and Platemaking (6 class hrs/wk 4 cr) F

Course teaches preparation of line and halftone negatives for offset reproduction; single and multiple color imposition; single page and multiple page imposition; use of screen tints to produce intermediate color values; color proofing techniques; and production of additive and subtractive plates for the offset press. Prerequisite: 3.154 Layout and Pasteup; 3.164 Process Camera.

### AA 104 (3.150) Introduction to Graphic Communications

(4 class hrs/wk 3 cr) F/W

An introduction to mass communication through journalism, graphic design and printing technology. Students will be exposed to terminology, techniques and career opportunities in each of these areas.

### AA 120 (3.152) Layout and Pasteup Procedures

(6 class hrs/wk 3 cr) F/Sp

Preparation of mechanical art, covering terminology; practice of layout and paste-up techniques, including use of headlines, body copy, line cuts and halftones; imposition; screened prints; screen tints; overlays; and color preparation. Prerequisite: AA 104 Introduction to Graphic Communications.

### AA 121 (3.153) Survey of Visual Design

(6 class hrs/wk 3 cr) W

Introduction to design through experimentation in black and white composition. Emphasizes developing sound design judgment based on thorough understanding of art elements and principles. Prerequisite: AA 104 Introduction to Graphic Communications.

### AA 174 (3.166) Screen Printing

(6 class hrs/wk 3 cr) F/W

Practice in screen printing techniques, using hand-cut paper and aqua stencils, tuche and glue and photostencil materials, and various types of ink for printing on glass, textiles, plastics and paper.

### AA 221 (3.172) Graphic Design I

(6 class hrs/wk 3 cr) F

Examines the relation of aesthetic concept to practical problems, with investigations into contemporary trends, methods and techniques. Layout and design for publication and advertising art direction are of primary emphasis. Lettering and inking skills will be stressed. Matting, papers and presentation also are included. Prerequisite: AA 120 Layout and Pasteup Procedures; AA 224 Typographical Design; AA 229 Typesetting; AA 263 Process Camera.

### AA 222 (3.173) Graphic Design II

(6 class hrs/wk 3 cr) W

The study and development of marks, symbols, logos, design systems and corporate identity programs. The design's adaptability, application, practicality and integrity are examined. Prerequisite: AA 221 Graphic Design I.

### AA 223 (3.174) Graphic Design III

(6 class hrs/wk 3 cr) Sp

A course in color, and black and white illustration/design. Individual work and study is emphasized. Prerequisite: AA 222 Graphic Design II.

### AA 224 (3.158) Typographical Design

(6 class hrs/wk 3 cr) F/W

An introduction to letterforms, developing fundamental awareness of type and typographic design. A study of the evolution of typography, art of calligraphy, hand-built letterforms and transfer lettering emphasize typography as a working tool. Prerequisite: AA 104 Introduction to Graphic Communications.

### AA 225 (3.154) Package Design

(6 class hrs/wk 3 cr) F

Introduction to design, display and merchandising of three-dimensional marketing solutions. The course stresses suitability of concept, design and color as applied to various products. Materials and methods of printing, cutting, folding, and assembly are explored for tactile and visual effect. Prerequisite: AA 224 Typographical Design; AA 237 Illustration; AA 263 Process Camera.

### AA 228 Portfolio Preparation — Professional Practices

(6 class hrs/wk 3 cr) Sp

Intended for second-year graphic design students, major emphasis will be re-evaluation of previously produced projects, organization and production of the business card, and the resume and portfolio (slide and original work). Current job opportunities; methods in merchandising job talents; action before, during and after the interview; and business practices and ethics are covered. Prerequisites: AA 222 Graphic Design II; AA 223 Graphic Design III, to be taken concurrently.

### AA 229 (3.182) Typesetting

(5 class hrs/wk 3 cr) F/W/Sp

Introduces operation of photo typesetting devices: production of headlines, body type, tabular matter and advertising composition. Prerequisite: AA 104 Introduction to Graphic Communications.

### AA 237 (3.170) Illustration

(6 class hrs/wk 3 cr) F/W

Class projects explore and develop skills in the use of various tools, materials and techniques. Conceptual development of illustration dealing with written materials will be examined. The intent of the course is to make the student aware of illustrative possibilities and processes. Prerequisite: AA 104 Introduction to Graphic Communications; AR 231 Drawing: Fundamentals; AR 232 Drawing: Intermediate.

**AA 263 (3.164) Process Camera**

(6 class hrs/wk 3 cr) W/Sp

Course teaches function and use of the process camera for making line and halftone negatives and photo-mechanical transfer positives, and related darkroom techniques including outline type and color imaging. Prerequisite: AA 104 Introduction to Graphic Communications; JN 134 Introduction to Photography.

**AA 299 (3.181) Special Projects**

(2-10 class hrs/wk 1-5 cr)

In coordination with the instructor, the student may select projects that will provide practical experience within the major field. Note: May be taken for a maximum of 6 credits. Prerequisite: Instructor approval.

**JOURNALISM COURSES****JN 199 (3.180) Newspaper Makeup**

(4 class hrs/wk 2 cr) F/W/Sp

Supervised work on the college's student newspaper (*The Commuter*) to gain practical experience in application of graphic arts skills. Note: May be taken for a maximum of 6 credits. Prerequisite: AA 120 Layout and Pasteup Procedures; AA 263 Process Camera; or instructor approval.

**JN 215 Journalism Laboratory**

(3 class hrs/wk 1 cr) F/W/Sp

Supervised work on the college's student newspaper (*The Commuter*) in reporting, photography, editing or advertising. Note: Course serves as the lab for JN 216, 217 Reporting I and II, JN 218 Copy Editing and Makeup; may also be taken independently from those courses.

**JN 216 Reporting I**

(3 class hrs/wk 3 cr) F/W

Introduction to basics of journalistic writing, with emphasis on assignments to be used in the student newspaper. Students study interviewing and other news gathering techniques, effective writing of news and features, and journalistic ethics while gaining reporting experience. Prerequisite: JN 215 Journalism Lab, to be taken concurrently.

**JN 217 Reporting II**

(3 class hrs/wk 3 cr) Sp

Journalistic writing emphasizing feature writing, in-depth reporting, interpretive writing and interviewing skills. Students submit articles for publication, generally in the student newspaper. Prerequisite: JN 216 Reporting I; JN 215 Journalism Lab, to be taken concurrently.

**JN 218 Copy Editing and Makeup**

(3 class hrs/wk 3 cr) W

Introduction to copy editing, page makeup, photo editing, headline writing and editorial decision-making, with skills applied to production of the student newspaper. JN 215 Journalism Lab, to be taken concurrently.

**JN 225 Advertising/Public Relations**

(3 class hrs/wk 3 cr) Sp

Overview of advertising and public relations, including public information methods, copywriting, design, marketing, use of printing technology, and historical and journalistic perspectives on the fields.

**JN 280 CWE Journalism**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to journalism. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**PHOTOGRAPHY COURSES****JN 134 Introduction to Photography**

(3 class hrs/wk 2 cr) F/W

Introduction to black and white photography, including skills in exposure, camera handling, composition, developing and printing. Note: A limited number of cameras are available for check-out.

**JN 234 Intermediate Photography**

(3 class hrs/wk 2 cr) Sp

Introduces refinements in black and white photography, including composition, lighting, exposure, darkroom techniques and presentation. Note: A limited number of cameras are available for check-out. Prerequisite: JN 134 Introduction to Photography or instructor approval.

**AA 261 Studio Photography**

(3 class hrs/wk 2 cr)

Introduction to applied studio photography, including the nature of light, equipment, portraiture, still-life, special effects, copying, exposure determination and use of filters. Includes both demonstrations and individual projects. Note: A limited number of cameras are available for check-out. Prerequisite: JN 134 Introduction to Photography.

**AA 262 Photography: Art and Technique**

(3 class hrs/wk 2 cr)

Advanced darkroom technique, including toning, reducing, Sabbatier effect, direct-positive and color processing. Projects encourage application of these techniques in the student's field of interest. Prerequisite: JN 234 Intermediate Photography or instructor approval.

**PERFORMING ARTS (Dance, Music, Speech, Theater)****Faculty:**

Stephen Rossberg, Department Chair  
Tim Bryson, Jane Donovan, Hal Eastburn,  
Gary Ruppert

The Performing Arts Department provides its students with a solid academic and performance background in the areas of music, dance, speech, theater and oral interpretation. Students may participate in department-sponsored theater productions, jazz band, vocal jazz ensemble, concert choir, community chorale and dance performance.

The department has superior facilities in which to work. Dance and theater classes meet on stage in the fully equipped theatre in Tadena Hall. Music classes meet in specially designed classrooms, with small practice rooms available to individuals.

Most department performances are held in The Theatre, Tadena Hall. The performing arts also make use of the Loft Theatre, a converted classroom in the Forum building, for Reader's Theatre, Chamber Theatre and other experimental theater performances.

The department offers the Associate of Arts degree in music, theater with acting emphasis, dance, and pre-secondary education with a speech and theater, or music emphasis.

Note: Check with Humanities and Social Science Division about current dance course offerings.

## DANCE CURRICULUM

### Associate of Arts in Dance

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree  
PE 180 Body Conditioning, recommended for physical education requirement.

#### Major Requirements . . . . .24

D 152 Elements of Repertoire	6
D 192, 292 Dance Lab (repeated for 12 credits)	12
D 251 Introduction to Dance	3
D 252 Fundamentals of Rhythm	3

#### Major Options (Select two) . . . . .12

##### ☐ Modern Dance . . . . . (6)

D 180 Beginning Modern Dance	1
D 181 Beginning Modern Dance	1
D 182 Beginning Modern Dance	1
D 280 Intermediate Modern Dance	1
D 281 Intermediate Modern Dance	1
D 282 Intermediate Modern Dance	1

##### ☐ Ballet . . . . . (6)

D 185 Beginning Ballet	1
D 186 Beginning Ballet	1
D 187 Beginning Ballet	1
D 285 Intermediate Ballet	1
D 286 Intermediate Ballet	1
D 287 Intermediate Ballet	1

##### ☐ Jazz Dance . . . . . (6)

D 188 Beginning Jazz Dance	1
D 189 Beginning Jazz Dance	1
D 190 Beginning Jazz Dance	1
D 288 Intermediate Jazz Dance	1
D 289 Intermediate Jazz Dance	1
D 290 Intermediate Jazz Dance	1

#### Electives . . . . .9

Additional courses from music and/or theater 90

## DANCE COURSES

### D 152 Elements of Repertoire

(2-6 class hrs/wk 1-3 cr)

Laboratory course includes modern, ballet and jazz techniques, emphasizing performance elements associated with a musical production. Note: May be repeated for up to 6 credits. Prerequisite: Audition.

### D 180, 181, 182 Beginning Modern Dance

(1 class hr/wk 1 cr) F/W/Sp

Introduction to use of the human body in space and time, examining elements of modern dance technique. Prerequisite: D 192 Dance Lab, to be taken concurrently.

### D 185, 186, 187 Beginning Ballet

(1 class hr/wk 1 cr) F/W/Sp

Introduction to the basic concept of body alignment, the technical movement vocabulary in traditional ballet, the accompanying French terminology and the basic movement sequences that will develop strength and flexibility. Prerequisite: D 192 Dance Lab, to be taken concurrently.

### D 188, 189, 190 Beginning Jazz Dance

(1 class hr/wk 1 cr) F/W/Sp

Introduction to contemporary jazz technique, with an emphasis on uses of rhythm, syncopation and isolation of the various body parts. Prerequisite: D 192 Dance Lab, to be taken concurrently.

### D 192 Dance Lab

(2 class hrs/wk 1 cr) F/W/Sp

Applied techniques in ballet, modern or jazz dance. Note: May be repeated for up to 6 credits. Prerequisite: Beginning Ballet, Modern or Jazz Dance sequences, to be taken concurrently.

### D 251 Introduction to Dance

(3 class hrs/wk 3 cr)

An overview of the professional and educational aspects of dance, the function of dance in society, and the significance of dance as an art form in contemporary culture.

### D 252 Fundamentals of Rhythm

(3 class hrs/wk 3 cr)

Rhythm as basis of movement, including use of rhythmic devices in dance notation and rhythmic analysis.

### D 280, 281, 282 Intermediate Modern Dance

(1 class hr/wk 1 cr) F/W/Sp

Development of technique through exposure to historical and contemporary modern dance trends. Prerequisite: D 180, 181, 182 Beginning Modern Dance sequence or instructor approval; D 292 Dance Lab, to be taken concurrently.

### D 285, 286, 287 Intermediate Ballet Dance

(1 class hr/wk 1 cr) F/W/Sp

Introduction to ballet elements of advanced adagio, barre, petite and grande allegro. Emphasis will be placed on stationary and across-the-floor combinations. Prerequisite: D 185, 186, 187 Beginning Ballet Dance sequence or instructor approval; D 292 Dance Lab, to be taken concurrently.

### D 288, 289, 290 Intermediate Jazz Dance

(1 class hrs/wk 1 cr)

Introduction to intermediate level jazz dance techniques, historical and contemporary, and to American, African, Haitian and Caribbean jazz dance forms. Some emphasis will be placed on improvisatory jazz dance. Prerequisite: D 188, 189, 190 Beginning Jazz Dance sequence or instructor approval; D 292 Dance Lab, to be taken concurrently.

### D 292 Dance Lab

(2 class hrs/wk 1 cr)

Second-year dance lab, for intermediate courses. Note: May be repeated for up to 6 credits. Prerequisite: Intermediate Ballet, Modern or Jazz Dance sequences, to be taken concurrently.

## MUSIC CURRICULUM

### Associate of Arts in Music

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree

#### Major Requirements\* . . . . .51

MU 111 Music Theory I	4
MU 112 Music Theory I	4
MU 113 Music Theory I	4
MU 201 Introduction to Music Literature	3
MU 202 Introduction to Music Literature	3
MU 203 Introduction to Music Literature	3
MU 211 Music Theory II	4
MU 212 Music Theory II	4
MU 213 Music Theory II	4
Individual Vocal or Instrumental Lessons (repeated for six credits)	6
<input type="checkbox"/> Ensemble (Select one) . . . . . (12)	
MU 297A Concert Choir (repeated for 12 credits)	12
MU 295E Instrumental Jazz Ensemble (repeated for 12 credits)	12
	96

\*Music majors are expected to have basic proficiency in piano. Students with deficient skills may be required to enroll in MU 131, 132, 133 Group Piano.

### Associate of Arts in Pre-Secondary Education/Music

See Secondary Education Curriculum

## MUSIC COURSES

### M 295E Instrumental Jazz Ensemble

(4 class hrs/wk 2 cr) F/W/Sp

Oriented toward performance of modern jazz, rock and improvisational music literature. Note: May be repeated for up to 12 credits. Prerequisite: Audition.

### M 297A Concert Choir

(4 class hrs/wk 2 cr) F/W/Sp

A performance-oriented class using vocal music that presents different problems and styles. Note: May be repeated for up to 12 credits.

### M 297C Vocal Jazz Ensemble

(4 class hrs/wk 2 cr) F/W/Sp

An exploration of the swing choir concept, oriented toward performance of popular vocal arrangements. Note: May be repeated for up to 12 credits. Prerequisite: Audition; M 297A Concert Choir, to be taken concurrently.

### M 297D Community Chorale

(2 class hrs/wk 1 cr) F/W/Sp

A performance-oriented class for major choral works. Note: May be repeated for up to 6 credits.

### MP 150/250 Rehearsal and Performance

(2-6 class hrs/wk 1-3 cr)

Course offers credit for music rehearsal directly related to Performing Arts Department performance. Note: Each may be repeated for up to 6 credits.

### MP 171/271 Individual Lessons: Piano

(1 lesson/wk 1 cr)

Individual instruction in piano. Note: Requires additional tutorial fee. Each may be



repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 174/274 Individual Lessons: Voice**  
(1 lesson/wk 1 cr)

Individual instruction in voice. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 178/278 Individual Lessons: Bass**  
(1 lesson/wk 1 cr)

Individual instruction in bass. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 180/280 Individual Lessons: Guitar**  
(1 lesson/wk 1 cr)

Individual instruction in guitar. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 181/281 Individual Lessons: Flute**  
(1 lesson/wk 1 cr)

Individual instruction in flute. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 183/283 Individual Lessons: Clarinet**  
(1 lesson/wk 1 cr)

Individual instruction in clarinet. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 184/284 Individual Lessons: Saxophone**  
(1 lesson/wk 1 cr)

Individual instruction in saxophone. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 186/286 Individual Lessons: Trumpet**  
(1 lesson/wk 1 cr)

Individual instruction in trumpet. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 187/287 Individual Lessons: French Horn**  
(1 lesson/wk 1 cr)

Individual instruction in French horn. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 188/288 Individual Lessons: Trombone**  
(1 lesson/wk 1 cr)

Individual instruction in trombone. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 190/290 Individual Lessons: Tuba**  
(1 lesson/wk 1 cr)

Individual instruction in tuba. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MU 101 Music Fundamentals**  
(3 class hrs/wk 3 cr) F/W/Sp

Fundamentals of music for the non-music major: music reading, simple chord structure, introduction to harmony, singing and selected instruments (recorder and piano).

**MU 111, 112, 113 Music Theory I**  
(5 class hrs/wk 4 cr) F/W/Sp

Elements of music science (melodic, harmonic, and rhythmic) are taught through analysis of the styles of Bach, Haydn, Mozart, and other 18th and 19th Century composers. Note: Must be taken in sequence.

**MU 131, 132, 133 Group Piano**  
(2 class hrs/wk 2 cr) F/W/Sp

Classroom instruction for the beginning piano student. Note: Must be taken in sequence.

**MU 134, 135, 136 Group Voice**  
(2 class hrs/wk 2 cr) F/W/Sp

Classroom instruction for the beginning voice student.

**MU 137 Group Guitar**  
(2 class hrs/wk 2 cr) F/W/Sp

Classroom instruction for the beginning guitar student. Note: May be repeated for up to 6 credits.

**MU 154 Jazz Improvisation I**  
(3 class hrs/wk 2 cr)

Course designed to develop visual and aural skills enabling the performer to improvise freely upon given material. Provides an examination of all improvisational styles, with an emphasis on jazz. In-class student performance is required. Prerequisite: MU 101 Music Fundamentals or MU 111 Music Theory I, or instructor approval.

**MU 155 Jazz Improvisation II**  
(3 class hrs/wk 2 cr)

A continuation of the concepts learned in MU 154 Jazz Improvisation I, with emphasis on development of personal style. Prerequisite: MU 154 Jazz Improvisation I or instructor approval.

**MU 161 Music Appreciation**  
(3 class hrs/wk 3 cr) F/W/Sp

A general survey of many music styles, with emphasis on developing music listening skills.

**MU 201, 202, 203 Introduction to Music Literature**  
(3 class hrs/wk 3 cr) F/W-/Sp

Cultivates understanding and enjoyment of music through a study of its elements, forms and historical styles. MU 201, elements and forms; MU 202, Middle Ages through Classical periods; MU 203, Beethoven to contemporary period.

**MU 205 Introduction to Jazz Literature**  
(3 class hrs/wk 3 cr)

For the non-major: a listener's approach to the development of jazz through its various styles.

**MU 211, 212, 213 Music Theory II**  
(5 class hrs/wk 4 cr)

Continuation of MU 111-113 Music Theory I sequence, taught through analysis of the styles of late 19th and 20th Century composers. Integrated into this course is keyboard harmony. Note: Must be taken in sequence.

**MU 280 CWE Music**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su  
An instructional program designed to give students practical experience in supervised employment related to music. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

## THEATER/SPEECH CURRICULUMS

### Associate of Arts In Theater/Acting

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree  
*Dance and/or body conditioning recommended for physical education requirements.*  
*Shakespeare recommended for humanities group requirements.*

#### Major Requirements . . . . .42

SP 129 Beginning Oral Interpretation	3
SP 229 Intermediate Oral Interpretation	3
TA 121 Fundamentals of Acting	3
TA 122 Fundamentals of Acting	3
TA 124 Reader's Theatre	3
TA 125 Improvisation	3
TA 202 Introduction to Theater	3
TA 270 Stage Makeup	3
<input type="checkbox"/> Technical Theater (Select two) . . .	(6)
TA 161 Fund of Tech Theater: Scenery	3
TA 162 Fund of Tech Theater: Lighting	3
TA 163 Fund of Tech Theater: Sound	3
TA 262 Scenery	3
TA 263 Lighting	3
TA 268 Sound	3
<input type="checkbox"/> Practicum (Must enroll in one course/quarter) . . . . .	(12)
TA 180, 280 Rehearsal and Performance (Repeated for minimum of 6 credits)	6
TA 185, 285 Production Workshop (Repeated for minimum of 6 credits)	6

#### Electives . . . . .3

Additional courses. Recommended: ballet, modern or jazz dance, Shakespeare, group voice, individual lessons in voice.

90

### Associate of Arts In Pre-Secondary Education/Speech-Theater

See Secondary Education Curriculum

## SPEECH COURSES

### SP 111 Interpersonal Communication

(3 class hrs/wk 3 cr) F/W/Sp

Practical approaches to developing effective interpersonal and small group communication skills in listening, non-verbal communication, message construction, group interaction, leadership style and dealing with communication barriers.

### SP 112 Fundamentals of Speech

(3 class hrs/wk 3 cr) F/W/Sp

Projects in oral communication to develop skill and confidence in speaking before large groups, with emphasis on content, organization, audience motivation and language.

### SP 129 Beginning Oral Interpretation

(3 class hrs/wk 3 cr)

Study of literature through oral performance, with analysis and performance of poetry and prose fiction. Recommended for those interested in voice, singing, acting, elementary teaching or the study of literature.

### SP 199 Special Studies in Speech

(2-6 class hrs/wk 1-3 cr)

Individual and special studies, to be arranged with an instructor.

### SP 229 Intermediate Oral Interpretation

(3 class hrs/wk 3 cr)

Study of literature through oral performance, with analysis and performance of nonfictional prose and dramatic literature. Recommended for those interested in voice, singing, acting, elementary teaching or the study of literature.

### 1.103 Occupational Speech Communication

(3 class hrs/wk 3 cr) F/W/Sp

Emphasizes oral communication skills for vocational/technical students, including telephone usage, interviewing, personal interaction, public speaking and information-sharing and problem-solving situations which may occur on the job.

## THEATER COURSES

### TA 121 Fundamentals of Acting

(3 class hrs/wk 3 cr) F

Experience oriented, with classroom activities designed to develop skills in improvisation, pantomime, movement and voice. Provides basic training in the art of acting, increases the student's understanding of the performing artist, and increases sensitivity in communication situations.

### TA 122 Fundamentals of Acting

(3 class hrs/wk 3 cr)

Study of methods, techniques and theory of acting as an art form. Performance of laboratory exercises and cutting from plays are basic teaching approaches. Note: May be taken independently or as a continuation of TA 121 Fundamentals of Acting.

### TA 124 Reader's Theatre

(3 class hrs/wk 3 cr)

Involves ensemble performance of poetry, prose and drama for audience response. Although some choreography and costumes are used, emphasis is not on acting, but on the oral interpretation of literature. Special stress also is placed on the student's planning and selection of appropriate Reader's Theatre programs.

### TA 125 Improvisation

(3 class hrs/wk 3 cr)

A continuation of TA 121 Fundamentals of Acting, intended to further polish a student actor's skills, primarily through improvisation. Prerequisite: TA 121 Fundamentals of Acting or instructor approval.

### TA 161 Fundamentals of Technical

Theater: Scenery

(6 class hrs/wk 3 cr)

Introduction to theater forms and spaces, the working elements of a theater, and the basic principles and techniques of scenery construction.

### TA 162 Fundamentals of Technical

Theater: Lighting

(6 class hrs/wk 3 cr)

Introduction to the basic equipment and methods of stage lighting.

### TA 163 Fundamentals of Technical

Theater: Sound & Stage

(3 class hrs/wk 3 cr)

Introduction to basic principles of sound; the equipment and equipment operation for sound reinforcement in the theater; and the role and responsibility of the stage manager in relationship to sound, lighting and other technical operations.

### TA 180, 280 Rehearsal and Performance

(2-6 class hrs/wk 1-3 cr) F/W/Sp

Course offers credit for participation in a public theater production of the college. Productions provide both extracurricular activity for non-majors and practical application of classroom theory for theater students. Note: Each may be repeated for up to 6 credits. Prerequisite to TA 280: 3 credits of TA 180.

### TA 185, 285 Production Workshop

(2-6 class hrs/wk 1-3 cr) F/W/Sp

Course offers credit for preparation of scenery, costumes, properties or publicity for a college production. Note: Each may be repeated for up to 6 credits. Prerequisite to TA 285: 3 credits of TA 185.

### TA 190, 290 Projects in Theater

(2-6 class hrs/wk 1-3 cr)

Individually arranged projects in theater design of scenery, lighting or costumes or in properties, directing, audition material and model making. Prerequisite: Instructor approval. Note: Each may be repeated for up to 6 credits. Prerequisite to TA 290: 3 credits of TA 190.

### TA 202 Introduction to Theater

(3 class hrs/wk 3 cr)

Survey of theater, past and present, and the development of dramatic literature, performers, theaters and theater organizations. Includes a detailed look at modern theater organization and opportunities.

### TA 239 Creative Dramatics

(3 class hrs/wk 3 cr)

Explores the use of drama as an instructional and recreational aid in working with children and young adults.

### TA 262 Scenery

(6 class hrs/wk 3 cr)

A study of the principles, practices and procedures of technical production. Provides practical experience in construction, painting and handling scenery.

### TA 263 Stage Lighting

(6 class hrs/wk 3 cr)

A study of stage lighting theory, practices and procedures in theatrical productions. Provides practical experience in the use and function of stage lighting equipment.

### TA 268 Sound

(3 class hrs/wk 3 cr)

A study of sound theory and equipment and the use of sound in theatrical productions and facilities.

### TA 270 Stage Makeup

(3 class hrs/wk 3 cr)

A study of the principles and techniques of basic stage makeup.

## PHILOSOPHY AND RELIGION

These courses are offered through the Humanities and Social Sciences Division on a limited basis. Consult the quarterly class schedule for availability.

## PHILOSOPHY AND RELIGION COURSES

### PH 202 Elementary Ethics

(3 class hrs/wk 3 cr)

A survey of moral strategies, including existentialist, situationist and taoist, as well as several-rule approaches. Introduces analysis of ethical language and justification of moral values.

### PH 203 Elementary Logic

(3 class hrs/wk 3 cr)

Introduction to theory and practice of effective thinking and the formulation of reasonable conclusions from logical processes. Topics include introduction to the functions of language and the nature of meaning, the structure of arguments, informal fallacies, and deductive and inductive methods.

**PH 204 Philosophy of Religion**

(3 class hrs/wk 3 cr)

Introduction to the analysis of religious behavior and concept found in modern Eastern and Western religions. Topics include the existence and nature of gods, the problem of evil, the religious experience, the functions of religious language and the status of religious knowledge.

**RE 201 Religions of the World**

(3 class hrs/wk 3 cr)

A comparative survey of the development and doctrines of biblical religions and of several Far Eastern religions.

**RE 202 The Old Testament and Its****Background** (3 class hrs/wk 3 cr)

An introduction to themes within major Old Testament traditions, set against the background of the cultural and political history of the Hebrew people.

**RE 203 The New Testament and Its****Background** (3 class hrs/wk 3 cr)

An introduction to New Testament theology, and to traditions about Jesus and Paul.

## SOCIAL SCIENCES

**Faculty:**

Doug Clark, Department Chair  
Russell Durham, Max Lieberman, Maribel Montgomery, Jerald Phillips, Martin Rosenson, Larry Sult, Gina Vee

The general objective of the social science curriculums is to develop in the student knowledge of society (past and present), and the individual and collective behavior of its members. The Social Sciences Department offers programs leading to an Associate of Arts degree in the following subjects: general social sciences, pre-secondary education/social science, anthropology, archaeology, history, political science, psychology and sociology.

The department also offers both the Associate of Arts and the Associate of Science degree in criminal justice (law enforcement and corrections).

Students with a specific major interest within the social sciences should complete the program outlined for that subject; students with more general interests, or those planning to teach social science in junior or senior high school, should complete the program for the Associate of Arts in General Social Science

## SOCIAL SCIENCE CURRICULUM

### Associate of Arts In General Social Science

**General Education Requirements . . . . .45**

See graduation requirements for Associate of Arts degree

**Major Requirements . . . . .35-36**

☐ Humanities or foreign language sequence . . . . . (8-9)

☐ Additional Social Science credits . (27)

anthropology/archaeology, sociology, economics, geography, history, political science, psychology.

**Electives . . . . .9-10**

Additional courses or approved CWE. 90

### Associate of Arts In Pre-Secondary Education / Social Science

See Secondary Education curriculums

## ANTHROPOLOGY/ARCHAEOLOGY

Anthropology is the study of physical and cultural human development and diversity. Archaeology is the scientific study of historic and pre-historic peoples through interpretation of relics and artifacts. The curriculum is intended to provide an introductory understanding of the discipline and available career opportunities.

## ANTHROPOLOGY CURRICULUM

### Associate of Arts In Anthropology

**General Education Requirements . . . . .45**

See graduation requirements for Associate of Arts degree

WR 123 *The Research Paper*, to be taken concurrently with AN 199 *Research Topics*, is required.  
SP 112 *Fundamentals of Speech* is required.  
AR 201, 202, 203 *Introduction to Art History*, recommended for humanities group requirements.

**Major Requirements . . . . .37**

AN 101 Intro to Physical Anthropology 3  
AN 102 Intro to Archaeology/Prehistory 3  
AN 103 Intro to Cultural Anthropology 3  
AN 104 Anthropology Lab (repeated for 3 credits) 3  
AN 199 Research Topics 1

☐ Anthropology Electives (Select two) . . . . . (6)

AN 107 Anthropology Today 3  
AN 117 North American Indians 3  
AN 210 Selected Topics in Social Anthropology 3

☐ Additional Social Science credits . (18)

economics, geography, history, political science, psychology, sociology.

**Electives . . . . .8**

Additional courses or approved CWE. 90



## ARCHAEOLOGY CURRICULUM

### Associate of Arts in Archaeology

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree

WR 123 *The Research Paper*, to be taken concurrently with AN 199 *Research Topics*, is required.

SP 112 *Fundamentals of Speech* is required.

AR 201, 202, 203 *Introduction to Art History*, recommended for humanities group requirements.

G 201, 202, 203 *Geology* recommended for science group requirement.

HS 101, 102, 103 *History of Western Civilization*, recommended for social science group requirement.

#### Major Requirements . . . . .34

AN 101 Intro to Physical Anthropology	3
AN 102 Intro to Archaeology/Prehistory	3
AN 103 Intro to Cultural Anthropology	3
AN 104 Anthropology Lab (repeated for 3 credits)	3
AN 199 Research Topics	1
AN 211 Archaeology Field Survey	4
AN 212 Archaeology Field Methods	4
AN 213 Archaeology Field Analysis	4

□ Additional Social Science credits . (9)

Economics, geography, history, political science, psychology, sociology.

#### Electives . . . . .11

Additional courses or approved CWE. 90

## ANTHROPOLOGY / ARCHAEOLOGY COURSES

### AN 101 Introduction to Physical Anthropology

(3 class hrs/wk 3 cr) F/W/Sp

Examination of mankind's place in nature, including physical evolution, history of the discovery of fossil humans and primate behavior.

### AN 102 Introduction to Archaeology/Prehistory

(3 class hrs/wk 3 cr) F/W/Sp

Examination of prehistoric and historic cultural traditions, cultural change through technology, prehistoric civilizations, and methods used for recovery and analysis of archaeological materials.

### AN 103 Introduction to Cultural Anthropology

(3 class hrs/wk 3 cr) F/W/Sp

Examination of mankind's cultural variation throughout the world and methods for analyzing the elements of culture, such as religion, social organization, family structure, language and political systems.

### AN 104 General Anthropology Lab

(2 class hrs/wk 1 cr)

Exercises in anthropological reconstruction, museum display and/or laboratory analysis. Prerequisite: Instructor approval.

### AN 107 Anthropology Today

(3 class hrs/wk 3 cr)

An examination of anthropological subdisciplines presented in popular media forms.

### AN 117 North American Indians

(3 class hrs/wk 3 cr)

A general survey course dealing with early man in the New World, including discussions of archaeological evidence of these first Americans, customs before white contact, westernization and contemporary issues.

### AN 199 Anthropology/Archaeology Research Topics

(1 class hrs/wk 1 cr)

Intended primarily for the anthropology or archaeology major to help develop skills in independent research, the student is required to review in-depth, current knowledge on an anthropological or archaeological topic of personal interest. Prerequisite: WR 123 *The Research Paper*, to be taken concurrently.

### AN 210 Selected Topics in Social Anthropology

(3 class hrs/wk 3 cr)

An in-depth examination of one or more selected anthropological topics such as marriage and kinship practices, religion and magic, and acquisition of sex roles.

### AN 211 Archaeological Field Survey

(variable class hrs/wk 4 cr)

Introduces theory and field practice in archaeological site surveying, mapping and reconnaissance. Prerequisite: AN 212 *Archaeological Field Methods* and AN 213 *Archaeological Field Analysis*, to be taken concurrently.

### AN 212 Archaeological Field Methods

(variable class hrs/wk 4 cr)

Introduces theory and field practice in archaeological excavating methods and recording techniques. Prerequisite: AN 211 *Archaeological Field Survey* and AN 213 *Archaeological Field Analysis*, to be taken concurrently.

### AN 213 Archaeological Field Analysis

(variable class hrs/wk 4 cr)

Introduces theory and practice in analyzing, interpreting and reconstructing archaeological data collected in the field. Importance of record keeping will be stressed. Prerequisite: AN 211 *Archaeological Field Survey* and AN 212 *Archaeological Field Methods*, to be taken concurrently.

### AN 234 Applied

Archaeology (variable class hrs/wk 4-12 cr)

Continuing opportunities for archaeological field and/or laboratory work provides opportunity to refine and enhance previous skills and knowledge, to explore particular issues and to broaden approaches.

Prerequisite: AN 211, 212, 213

Archaeological Field sequence.

### AN 280 CWE Anthropology

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to anthropology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### AN 280 CWE Archaeology

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to archaeology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

## CRIMINAL JUSTICE

The primary objective of the Criminal Justice program is to provide the student with a balanced inquiry into the complex process of administering justice in our society. A secondary objective is to help the student prepare for entry into, and advancement within, a variety of public service careers in the criminal justice field.

Students who major in criminal justice are presented with an opportunity to attain a basic understanding of criminal behavior theory, of historical and current criminal justice processes, and of utilizing more efficiently and effectively those resources available to the criminal justice system.

Students are given the opportunity to earn credit through the Cooperative Work Experience program (CWE) by active participation in criminal justice agencies, including police departments and sheriff offices, probation and parole offices, jails and other correctional facilities, halfway houses and juvenile group homes.

Two degree programs are offered. Students may earn either the Associate of Arts or the Associate of Science degree, with majors in either corrections or law enforcement.

## CRIMINAL JUSTICE CURRICULUMS

### Associate of Arts in Criminal Justice

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree

#### Major Requirements . . . . .18

CJ 100 Survey of Criminal Justice	3
CJ 110 Intro to Law Enforcement	3
CJ 120 Intro to Judicial Process	3
CJ 130 Intro to Corrections	3
CJ 202 Violence and Aggression	3
CJ 220 Intro to Substantive Law	3

#### Major Options (Select one) . . . . .12

<input type="checkbox"/> Law Enforcement . . . . . (12)	
CJ 200 Intro to Community Relations	3
CJ 210 Intro to Criminal Investigation	3
CJ 216 Criminal Justice Management	3
CJ 222 Procedural Law	3
<input type="checkbox"/> Corrections . . . . . (12)	
CJ 132 Intro to Probation and Parole	3
CJ 201 Juvenile Delinquency	3
CJ 225 Correctional Law	3
CJ 233 Community Based Corrections	3

#### Electives . . . . .15

Additional courses or approved CWE; psychology and sociology recommended.

90

### Associate of Science in Criminal Justice

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

#### Major Requirements . . . . .18

CJ 100 Survey of Criminal Justice	3
CJ 110 Intro to Law Enforcement	3
CJ 120 Intro to Judicial Process	3
CJ 130 Intro to Corrections	3
CJ 202 Violence and Aggression	3
CJ 220 Intro to Substantive Law	3

#### Major Options (Select one) . . . . .12

<input type="checkbox"/> Law Enforcement . . . . . (12)	
CJ 200 Intro to Community Relations	3
CJ 210 Intro to Criminal Investigation	3
CJ 216 Criminal Justice Management	3
CJ 222 Procedural Law	3
<input type="checkbox"/> Corrections . . . . . (12)	
CJ 132 Intro to Probation and Parole	3
CJ 201 Juvenile Delinquency	3
CJ 225 Correctional Law	3
CJ 233 Community Based Corrections	3

#### Electives . . . . .40

Additional criminal justice courses  
Additional courses or CWE;  
psychology and sociology recommended.

90

## CRIMINAL JUSTICE COURSES

### CJ 100 Survey of the Criminal Justice System (3 class hrs/wk 3 cr) F/W/Sp

Surveys the nature of crime and criminal responsibility, the criminal justice process, and the professionals in the criminal justice system.

### CJ 101 Introduction to Criminology (3 class hrs/wk 3 cr)

Introduction to major types of criminal behavior, role careers of offenders, factors which contribute to the production of criminality or delinquency, changes of law in crime control and treatment processes.

### CJ 110 Introduction to Law Enforcement (3 class hrs/wk 3 cr) F/Sp

Exploration of theories, philosophies and concepts related to role expectations of line enforcement officers, with emphasis on patrol, traffic and public service responsibilities and their relationship to administration of the justice system.

### CJ 120 Introduction to the Judicial Process (3 class hrs/wk 3 cr) W

Survey of justice process from arrest to returning the offender to society; the jurisdiction of city, county, state and federal police agencies; and the constitutional rights of individuals in America.

### CJ 130 Introduction to Corrections (3 class hrs/wk 3 cr) Sp

Examination of total correctional process from law enforcement through administration of justice, probation, prisons and correctional institutions and parole. History and philosophy oriented.

### CJ 132 Introduction to Parole and Probation (3 class hrs/wk 3 cr) W

Introduction to use of parole and probation as a means of controlling criminal offenders within the community. Includes philosophy, historical development and contemporary functioning of the agencies and officers.

### CJ 200 Introduction to Community Relations (3 class hrs/wk 3 cr) Sp

In-depth exploration of the roles of administration of justice practitioners, concentrating on role expectations among the various agencies and the public.

### CJ 201 Juvenile Delinquency (3 class hrs/wk 3 cr) F/Sp

Defines and surveys the development and patterns of delinquent behavior, institutional control and treatment, and legal methods of dealing with delinquency.

### CJ 202 Violence and Aggression (3 class hrs/wk 3 cr) W

An exploration and analysis of violence and aggression as viewed from a biological, psychological, and sociological perspective. Includes topics such as homicide, suicide, rape, assault, mob violence, terrorism, violence within the family and related phenomenon.

### CJ 210 Introduction to Criminal Investigation (3 class hrs/wk 3 cr) Sp

Introduces the fundamentals of criminal investigation theory and history, from the crime scene to the courtroom. Emphasizes techniques appropriate to specific crimes.

### CJ 216 Criminal Justice Management (3 class hrs/wk 3 cr) W

An examination and analysis of traditional concepts, techniques, policies and operational systems in the police component of the criminal justice system. Special attention will be given to contemporary methods of police administration.

### CJ 220 Introduction to Substantive Law (3 class hrs/wk 3 cr) F

Surveys the historical development and philosophy of law and constitutional provisions; definition and classification of crimes and their application to the system of administration of justice; and legal research, case law and concepts of law as a social force.

### CJ 222 Procedural Law (3 class hrs/wk 3 cr) W

Reviews the development of English common law and U.S. case law; the constitutional and statutory provisions relating to arrest, search and seizure; and the rights and responsibilities of citizens and criminal justice personnel and agencies.

### CJ 223 Rules of Evidence (3 class hrs/wk 3 cr)

Examines the origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence, and rules governing admissibility; and judicial decisions interpreting individual rights and case studies.

### CJ 224 Civil Law (3 class hrs/wk 3 cr)

Reviews fundamentals of contract, tort and personal property laws, including liens, landlord and tenant laws.

### CJ 225 Correctional Law (3 class hrs/wk 3 cr) Sp

An examination of past and present appellate court cases involving due process issues pertaining to prisoners, probationers and parolees.

### CJ 233 Community Based Corrections (3 class hrs/wk 3 cr) F

An exploration of philosophy and programs of juvenile and adult probation supervision, after-care parole, half-way homes, work and educational-release furlough, executive clemency and interstate compact practices. The dilemma of surveillance — custody/control factors vs. supervision/treatment — will be investigated.

**CJ 280 CWE Corrections**

(6-42 class hrs/wk 2-14 cr) F/W/Sp

An instructional program designed to give students practical experience in supervised employment related to corrections. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**CJ 280 CWE Criminal Justice**

(6-42 class hrs/wk 2-14 cr) F/W/Sp

An instructional program designed to give students practical experience in supervised employment related to criminal justice. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

## GEOGRAPHY

Geography is a descriptive science dealing with the surface of the earth; its division into continents and countries; and their various climates, plants, animals, natural resources, inhabitants and industries. Course work provides an introductory basis for further education leading to careers in business, industry, science and education.

## GEOGRAPHY COURSES

**GE 105 Natural Environments**

(3 class hrs/wk 3 cr) F

Survey of the physical environment, covering basic concepts of map interpretation, earth structure, land form processes, weather, climate, soils, natural vegetation and water resources.

**GE 106 World Regional Geography**

(3 class hrs/wk 3 cr) W

Regional survey of the world, including discussion of geographical conditions and their influences upon world affairs.

**GE 107 Cultural Geography**

(3 class hrs/wk 3 cr) Sp

Survey of man's major cultural characteristics and economic activities, as found in the United States and selected foreign countries. Emphasizes principles of economic development and resource utilization in advanced and developing nations.

**GE 190 Environmental Studies**

(3 class hrs/wk 3 cr)

Introduction to representative problems in man's relationship with the environment. Emphasis is on significant problems occurring in the Pacific Northwest, but others, typical of the United States as a whole, are included.

**GE 207 Geography of Oregon**

(3 class hrs/wk 3 cr)

Regional survey of Oregon landforms, climate, natural resources and history of settlement. Makes detailed examination of regions within the state, with emphasis on significant issues in environment and resource use.

## HISTORY

History courses provide the basis of knowledge essential to understanding the contemporary world. History helps develop the ability to weigh evidence and examine arguments, necessities in making perceptive judgments and sound decisions. The study of history provides students with a foundation for the pursuit of such careers as teaching, law, journalism, foreign service, government, the ministry and librarianship.

## HISTORY CURRICULUM

### Associate of Arts in History

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree  
WR 123 The Research Paper, to be taken concurrently with HS 199 Research Topics, is required.

#### Major Requirements . . . . .37

HS 101 History of Western Civilization	3
HS 102 History of Western Civilization	3
HS 103 History of Western Civilization	3
HS 199 Research Topics	1
HS 201 United States History	3
HS 202 United States History	3
HS 203 United States History	3

☐ Additional Social Science courses (18)  
anthropology/archaeology, economics,  
political science, sociology.

#### Electives . . . . .8

Additional courses or approved CWE to  
total a minimum of 90 credits.

90

## HISTORY COURSES

**HS 101, 102, 103 History of Western Civilization**

(3 class hrs/wk 3 cr) F/W/Sp

Survey of the origin and development of contemporary western civilization, emphasizing the influence of specific countries and historical periods. HS 101, Ancient to Medieval era; HS 102, Medieval era through French Revolution; HS 103, French Revolution to present.

**HS 199 History Research Topics**

(1 class hrs/wk 1 cr)

In-depth examination of a selected historical topic, intended primarily for the history major, to develop skills in independent research. Prerequisite: WR 123 The Research Paper, to be taken concurrently.

**HS 201, 202, 203 United States History**

(3 class hrs/wk 3 cr) F/W/Sp

Survey of the history of the United States of America. HS 201, Colonization to Jackson presidency; HS 202, Jackson presidency to WWI; HS 203 WWI to present.

**HS 207 History of the Frontier**

(3 class hrs/wk 3 cr)

A survey of western America, 1800 to 1900, covering the area from the Mississippi to the Pacific. Particular emphasis is paid to cultural and social history, including great trails, mining, pioneers and mountain men.

**HS 215 Social History of Oregon**

(3 class hrs/wk 3 cr)

Designed to familiarize students with the variety of social forces which have shaped Oregon over the last 150 years, emphasizing immigration patterns; changing modes of transportation from river, to rail, to highway; and prominent and not-so-prominent people and places in Oregon's past.

**HS 220 Labor History**

(3 class hrs/wk 3 cr)

Examination of the origins and growth of the labor movement in the U.S., from the colonial period through industrialization and up to the legitimization of organized labor in the '30s and '40s. Stress will be placed on the impact of industrialization upon labor, and its political, economic and ideological consequences.

**HS 224 Labor Today**

(3 class hrs/wk 3 cr)

Examination of the continuing interactions among unions, management and government, and the changing conditions of work due to technological development and the globalization of production. Emphasis is placed on problems resulting from these interactions and from changes in current economy, such as wages and managerial authority.

**HS 235 Oregon History**

(3 class hrs/wk 3 cr)

Exploration of the historical events which influenced development of the local area.

## POLITICAL SCIENCE

The political science curriculum helps provide an understanding of the possibilities of democratic citizenship in contemporary society and a basis for individuals to more effectively shape their lives. The study of political science may lead to careers in government, law, journalism, education, business and public service.



## POLITICAL SCIENCE CURRICULUM

### Associate of Arts in Political Science

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree  
WR 123 The Research Paper, to be taken concurrently with PS 199 Research Topics, is required.

#### Major Requirements . . . . .40

PS 199 Research Topics	1
PS 201 American Government	3
PS 202 American Government	3
PS 203 American Government	3
PS 205 International Relations	3
PS 207 Introduction to Political Science	3
PS 225 Political Ideology	3
PS 241 International Politics	3

□ Additional Social Science credits . (18)

anthropology/archaeology, economics, geography, history, psychology, sociology.

#### Electives . . . . .5

Additional courses or approved CWE. 90

## POLITICAL SCIENCE COURSES

### PS 199 Energy, Politics and Economics (3 class hrs/wk 3 cr)

Introduction to the economic and political implications of energy-use patterns in industrialized societies, particularly in the United States. Appropriate application of energy sources is stressed.

### PS 199 China: A New Society (3 class hrs/wk 3 cr)

General examination of contemporary China, with emphasis on the post-revolutionary period, 1949-present. Surveys strategies and experiences in the Chinese social organization.

### PS 199 Political Science Research Topics (1 class hr/wk 1 cr)

The student is required to make an in-depth review of current knowledge about a political science topic. Intended primarily for the political science major to develop skills in independent research. Prerequisite: WR 123 The Research Paper, to be taken concurrently.

### PS 201 American Government (3 class hrs/wk 3 cr) F

First course of a three-part sequence, focusing on the structure of power in the United States and the functions, sources and uses of power in American politics.

### PS 202 American Government (3 class hrs/wk 3 cr) W

Second course of a three-part sequence, focusing on public policy-making: what political institutions do and how they do it. Also emphasizes mechanisms and outcomes of the policymaking process.

### PS 203 American Government

(3 class hrs/wk 3 cr) Sp

Third course of a three-part sequence, focusing on local political institutions and the relationship of citizens to them, especially the significance and operation of participatory institutions.

### PS 205 International Relations

(3 class hrs/wk 3 cr)

An examination of the historical development of relations among nations, emphasizing predominant economic and political characteristics of the contemporary international system. Topics include problems of development, imperialism, world environmental and resource issues, and international conflict.

### PS 207 Introduction to Political Science

(3 class hrs/wk 3 cr)

Introduction to theories, concepts and research methods appropriate to understanding how conflicts among people are resolved. Emphasizes community political analysis and the organizations which operate to resolve conflict.

### PS 215 Contemporary Middle East

(3 class hrs/wk 3 cr)

A course examining the roots of the contemporary Middle East. Topics include Western imperialism in the Middle East, oil and Arab power, revolutionary and reactionary Arab states, the Arab-Israeli conflict and the future of the Palestinians.

### PS 225 Political Ideology

(3 class hrs/wk 3 cr)

An examination of the role of ideology, the organization of propaganda and the structure of mass political action in the modern state. Systems of 20th Century political thought, including liberal-democratic socialist, fascist, communist and religious, will be discussed. Particular emphasis is placed on the consequences of ideological conflict.

### PS 241 International Politics

(3 class hrs/wk 3 cr)

An analysis of the nature of relations among nations, specifically contemporary international issues. Contains the study of motivating factors, including nationalism, imperialism, economic rivalries and the quest for security. Also includes the problem of national sovereignty and its relationship to international cooperation. Emphasizes case studies illustrating overt and covert methods of managing international conflict.

### PS 280 CWE Political Science

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to political science. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

## PSYCHOLOGY

The psychology curriculum provides introductory courses leading to upper-division training in psychology. Students are given a sound understanding of the psychological concepts and principles of human behavior discovered through the scientific method. The study of psychology also contributes to the student's preparation for careers in education, business, law and journalism.

## PSYCHOLOGY CURRICULUM

### Associate of Arts in Psychology

#### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree  
WR 123 The Research Paper, to be taken prior to or concurrently with PY 199 Research Topics, is required.

#### Major Requirements . . . . .28

PY 199 Research Topics	1
PY 201 General Psychology	3
PY 202 General Psychology	3
PY 203 General Psychology	3

□ Additional Social Science credits . (18)

anthropology/archaeology, economics, geography, history, political science, sociology.

#### Electives . . . . .17

Additional psychology courses	6
Additional courses or approved CWE	11
	90

## PSYCHOLOGY COURSES

### PY 199 Psychology Research Topics

(1 class hr/wk 1 cr)

In-depth examination of a selected psychological topic, intended primarily for the psychology major, to develop skills in independent research. Prerequisite: PY 203 General Psychology; WR 123 The Research Paper, to be taken prior to or concurrently with PY 199.

### PY 201 General Psychology

(3 class hrs/wk 3 cr) F

Introduction to the use of objective, scientific procedures in the study of behavior and mental processes. Provides brief overview of the scope of psychology followed by a more concentrated study of biological and developmental processes, perception and consciousness. Note: Recommended for second-year students.

### PY 202 General Psychology

(3 class hrs/wk 3 cr) W

Survey of current knowledge in psychological processes of learning and memory, language and thought, motivation, emotion and individual mental abilities and their measurement. Note: Recommended for second-year students. Prerequisite: PY 201 General Psychology.

**PY 203 General Psychology**

(3 class hrs/wk 3 cr) Sp

Survey of current knowledge about personality and its assessment; conflict and stress; abnormal psychology, including methods of therapy; and social psychology. Note: Recommended for second-year students. Prerequisite: PY 202 General Psychology.

**PY 205 Applied Psychology**

(1-3 class hrs/wk 1-3 cr)

Offered as a supplement to the General Psychology sequence, course consists of three one-credit units in creative thinking, variety applications and behavior modification. Note: Credit may not transfer unless all three units are completed. Prerequisite: PY 201 General Psychology or instructor approval.

**PY 216 Social Psychology I**

(3 class hrs/wk 3 cr) F/W/Sp

Surveys the influence of psychology on culture, society, groups and individuals. Topics include group dynamics, leadership, socialization, attitude change and achievement of goals. Emphasis is on learning to use social psychology in life situations. Note: Will not substitute for PY 201, 202, 203 General Psychology sequence.

**PY 217 Social Psychology II**

(3 class hrs/wk 3 cr) F/W/Sp

Surveys the influence of psychology on culture, society, groups and individuals. Topics include altruism, aggression, sexual behavior, social exchange, cooperation and competition, environment and social behavior. Emphasis is on learning to use social psychology in life situations. Note: Will not substitute for PY 201, 202, 203 General Psychology sequence.

**PY 231 Human Sexuality**

(3 class hrs/wk 3 cr)

Physiology, terminology and varieties of human sexual response will be studied, with emphasis on the in-cultural and cross-cultural breadth of normal sexual expression. The kinds and treatment of sexual dysfunction, anomalous development and behavior will be considered.

**PY 280 CWE Psychology**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to psychology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

## SOCIOLOGY

Sociology is the study of the development, structure and function of human groups and societies. Sociologists are concerned with the scientific understanding of human behavior as it relates to and is a consequence of interaction within groups. Sociology majors gain an understanding of the rapid social changes in the modern world and are prepared to pursue further education leading to professional careers in social work, personnel work, recreation and teaching.

### SOCIOLOGY CURRICULUM

#### Associate of Arts in Sociology

##### General Education Requirements . . . . .45

See graduation requirements for Associate of Arts degree  
WR 123 The Research Paper, to be taken concurrently with SO 199 Research Topics, is required.

##### Major Requirements . . . . .37

SO 199 Research Topics	1
SO 204 General Sociology	3
SO 205 General Sociology	3
SO 206 General Sociology	3
SO 222 Marriage Relationships	3
PY 216 Social Psychology I	3
PY 217 Social Psychology II	3

☐ Additional Social Science credits . (18)

Anthropology/archaeology, economics, geography, history, political science, psychology

##### Electives . . . . .8

Additional courses or approved CWE. 90

### SOCIOLOGY COURSES

#### SO 199 Sociology Research Topics

(1 class hrs/wk 1 cr)

The student is required to make in-depth review of current knowledge about a sociological topic. Intended primarily for the sociology major to develop skills in independent research. Prerequisite: WR 123 The Research Paper, to be taken concurrently.

#### SO 204 General Sociology

(3 class hrs/wk 3 cr) F

Introduction to the sociological perspective: the components of society and social organization; culture; socialization and stratification.

#### SO 205 General Sociology

(3 class hrs/wk 3 cr) W

Analysis of major sociological institutions: family, political, economic, religious and educational.

#### SO 206 General Sociology

(3 class hrs/wk 3 cr) Sp

Survey of social issues and movements. Stresses application of basic concepts to contemporary problems in group life.

#### SO 222 Marriage Relationships

(3 class hrs/wk 3 cr)

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. Prerequisite: SO 204 General Sociology or instructor approval.

#### SO 280 CWE Sociology

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to sociology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### SOCIOLOGY/FILM ARTS COURSES

#### FA 257 Film Themes and Genres

(3 class hrs/wk 3 cr)

Examination of films representing particular genres (westerns, comedies, etc.) or expressing common themes. Attempts to focus on the various directors involved and the diverse styles, techniques and personal expression they bring to their subject.

#### FA 259 Films and Society

(3 class hrs/wk 3 cr)

Introduction to movies used to create and reflect our view of society. Themes include American films of the '30s, propaganda films, films from the Silent Era, American documentaries, anti-war films, and "serious" films of the '50s, '60s and '70s.

### WOMEN'S STUDIES COURSES

#### WS 100 Women in Transition

(3 class hrs/wk 3 cr)

Exploration of role conflict and ambiguity; methods and tools for change; and alternative behaviors, attitudes and world views.

#### WS 101 Introduction to Women's Studies

(3 class hrs/wk 3 cr)

Examination of the research and theories of sex-role stereotyping from the sociological perspective. Examines the diversified roles and status of women in the community and their involvement in education, politics, business, economics, religion and the family.

# INDUSTRIAL/APPRENTICESHIP DIVISION

DIRECTOR: Marvin E Seeman



A student in a Vocational Study Skills class uses Jorgenson clamps to fasten a cabinet section.

**T**he Industrial and Apprenticeship Division offers programs of study in the following subject areas: auto body repair, automotive technology, cabinet-making, construction technology, heavy equipment mechanics/diesel, machine tool technology, metallurgy technology, small engine repair, refrigeration/heating/air conditioning and welding.

Courses are designed to provide training to students seeking initial employment opportunities within their chosen field. Up-grading and skill improvement in new technologies and production techniques are provided for those already employed.

Students may, upon recommendation of the faculty advisor and the Cooperative Work Experience staff, receive transfer or non-transfer college credit by participating in the CWE program. Further information may be found in the "Cooperative Work Experience" section of this catalog.

The Associate of Science degree may be earned upon completion of specified curriculums within the division.

Information on entrance procedures and requirements for apprenticeship-related training is available from the Industrial/Apprenticeship Division office.

## AUTO BODY REPAIR

### Faculty:

John Griffiths, Department Chair  
Clifford Harris, Daryl Hogan

The Auto Body Repair program is designed to develop the skills and knowledge necessary in vehicle collision repair and refinishing. The program's curriculum emphasizes particular fields, such as frame straightening, supervision, custom painting and insurance adjusting.

The Auto Body Repair program combines variable credit, open-entry/open-exit block classes with individualized, hands-on instruction. A student may enroll at the beginning of each term, on a space available basis. This system places students of all training levels within a block class, thereby creating an industry-type environment.

Block classes are held Monday through Thursday. Students are encouraged to participate in the Friday open laboratory session. This six-hour study skills period offers opportunity for special learning activities and additional credit.

Previous auto body repair experience may be accredited through a performance test and/or written test.

A variety of auto body hand tools are required for use in the courses offered. In addition to the usual books and supplies, students should expect to spend between \$265 and \$280 over the two-year period for a personal set of tools.

The Auto Body Repair curriculum leads to an Associate of Science degree.

## APPRENTICESHIP PROGRAM

The Industrial/Apprenticeship Division serves as the center for apprenticeship training. Specialized curricular offerings have been developed to meet the needs of apprentices working full time in various trades. Individualized learning materials have been adapted for the apprentices in those trades which have a limited audience for related training.

Apprenticeship is a two-fold program: the indentured apprentice learns skills through on-the-job work experience and receives approximately 144 clock hours of related training in the classroom.

Classes currently are being offered for the following crafts and trades: machinist, industrial carpenter, industrial maintenance mechanic, industrial pipefitters, industrial welder, manufacturing plant electrician, power lineman, industrial instrumentation and industrial millwright. Being an indentured apprentice is a condition for entering related training classes.

Upon completion of the required training program, the apprentice is eligible to take a state-required examination for journeyman standing. LBCC also offers the journeyman the opportunity to earn an associate degree in the industrial trades. The recognized journeyman will be granted 45 credits toward the industrial crafts and trades degree. An additional 45 credits must be earned; of these credits, 20 must be general education courses.



## AUTO BODY REPAIR CURRICULUM

### Associate of Science in Auto Body Repair

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree  
2.515 Business Math with Calculators, recommended for math requirement.

#### Major Requirements . . . . .72

Fall—First Year	
3.511 Auto Body Repair I	10
4.151 Welding I	2
Winter	
3.512 Auto Body Repair II	10
4.108 Industrial Safety	3
4.152 Welding II	2
Spring	
3.513 Auto Body Repair III	10
4.153 Welding III	2
Fall — Second Year	
3.514 Auto Body Repair IV	10
Winter	
2.415 Human Relations in Business	3
3.515 Auto Body Repair V	10
Spring	
3.516 Auto Body Repair VI	10
Electives . . . . .	4
3.195 Auto Body Lab or approved CWE	96

## AUTO BODY REPAIR COURSES

### 1.280 CWE Auto Body Repair

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to auto body repair. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 3.195 Auto Body Skills Laboratory

(6 class hrs/wk 1-3 cr) F/W/Sp

Individualized, hands-on instruction to provide additional skills and knowledge in auto rebuilding and refinishing practices. On a space available basis, the study skills lab offers opportunity for special learning activities and additional credit.

### 3.511 Auto Body Repair I

(20 class hrs/wk 10 cr) F/W/Sp

Introduction to correct shop procedure, cleanliness, care, use and safety of tools and equipment. Includes types and use of sandpaper and grinding discs, operation and maintenance of paint guns, masking, priming, sealing and panel painting, auto body and chassis construction, procedures of metal working, assembly and disassembly of components, alignment practices, preparation of vehicle surfaces, use of solder and plastic material, application of primer and spray painting surface finishes.

### 3.512 Auto Body Repair II

(20 class hrs/wk 10 cr) F/W/Sp

Procedures for repairing areas of impact, including pulling out, shrinking and restressing metal areas; sheet metal corrections; and damage correction planning. Includes principles of heat correction to metal, filing, picking and metal finishing.

### 3.513 Auto Body Repair III

(20 class hrs/wk 10 cr) F/W/Sp

Minor collision damage repair, including alignment of doors, fenders, hood and trunk lids; reforming curvature of metal; repairing holes in panels; sectioning; and welding of torn and damaged areas. Also introduces door and panel replacement, including sectioning, sanding, priming and painting and diagnosing and correcting water and dust leaks.

### 3.514 Auto Body Repair IV

(20 class hrs/wk 10 cr) F/W/Sp

Surveys principles of conventional and unitized frame member construction and alignment, including straightening frame damage, replacing necessary members, tramping, heating and methods of damage correction. Also covers steering geometry, front end system alignment, alignment of sheet metal, and replacement of glass, moulding, hardware, headlinings and interior trim.

### 3.515 Auto Body Repair V

(20 class hrs/wk 10 cr) F/W/Sp

Introduction to unitized body repair and major section replacement, including alignment, panel replacement, custom styling and fabrication. Also covers principles of estimating collision damage, refinishing, parts and materials purchasing, retail labor rate, flat rate, time and materials jobs and judgment items.

### 3.516 Auto Body Repair VI

(20 class hrs/wk 10 cr) F/W/Sp

Major collision rebuilding, vehicle structure fabrication, major section replacement, detailing, final repairs and complete refinishing. Also discusses employer-employee relations and job search techniques for occupational employment. Includes principles of insurance claim handling, policies, coverage and types of loss.

## CONSTRUCTION TECHNOLOGY

### Faculty:

Harry Armstrong, Department Chair  
Bill Harris

The Construction Technology program is designed to develop the skills, knowledge and attitudes necessary for a broad range of jobs in the construction industry. Students may specialize in carpentry or cabinet-making.

Students working in well-equipped laboratories and classrooms learn the use of tools, machines, equipment and materials associated with the trade.

In the Construction Technology program, the first-year student gains experience through classroom, laboratory and project work. Both the school and the community serve as laboratories for work projects, including those organized as Cooperative Work Experience positions. A maximum of 12 second-year students are selected to participate in a college-sponsored house construction project.

Students who choose the Cabinet-making option work together to lay out, build, finish and install complete sets of residential cabinets. A significant amount of time also is reserved for individual projects.

In addition to the usual books and supplies, students should expect to spend about \$200 for a personal set of carpentry tools.

Beginning salaries for carpenters and cabinetmakers range from \$5.50 to \$10 per hour.

The Construction Technology curriculum leads to an Associate of Science degree or a one-year certificate in cabinet-making.

## CONSTRUCTION TECHNOLOGY CURRICULUM

### Associate of Science in Construction Technology

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree  
4.202 Math II is required.

#### Major Requirements . . . . .68

##### Fall — First Year

3.205 Carpentry I	4
3.208 Carpentry Practices & Procedures	2
3.229 Shop Safety	1
3.238 Tool Maintenance	1
4.100 Blueprint Reading	2
4.109 Tech Sketching	1

##### Winter

3.206 Carpentry II	4
3.231 Automated Production Methods	2
3.232 Residential Codes	2
3.233 Basic Plumbing	2
3.234 Laminates & Finishes	2
6.330 Voc Electricity	2

##### Spring

3.207 Carpentry III	4
3.209 Construction Site Layout	1
3.233 Basic Plumbing	2
3.235 Estimating & Detailing	2
3.237 Basic Masonry	2
3.584 Basic Sheet Metal Practices	2

##### Fall — Second Year

3.211 Construction Tech IV	10
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##### Winter

3.212 Construction Tech V	10
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##### Spring

3.213 Construction Tech VI	10
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#### Electives . . . . .8

1.134 Voc. Study Skills or approved CWE	2
Additional construction courses	6
	<b>96</b>

### One-year Certificate in Cabinetmaking

#### Major Requirements . . . . .39

##### Fall

3.220 Cabinetmaking I	7
3.229 Shop Safety	1
3.238 Tool Maintenance	1
4.100 Blueprint Reading	2
HE 112 First Aid: Multi-Media	1

##### Winter

3.221 Cabinetmaking II	5
3.250 Cabinet Production Methods	2
3.251 Cabinet Finishes	2
4.109 Tech Sketching	1
4.202 Math II	4

##### Spring

3.222 Cabinetmaking III	5
3.224 Cabinet/Furniture Design	2
3.242 Laminates	1
3.253 Cabinet Layout & Estimation	1
WR 121 English Comp: Occupational	3

#### Electives . . . . .10

1.134 Voc Study Skills or approved CWE	6
Additional construction courses	4
	<b>49</b>

## CONSTRUCTION TECHNOLOGY COURSES

### 1.280 CWE Cabinetmaking

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su  
An instructional program designed to give students practical experience in supervised employment related to cabinetmaking. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 1.280 CWE Construction Technology

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su  
An instructional program designed to give students practical experience in supervised employment related to construction technology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 1.134 Vocational Study Skills

(2-6 class hrs/wk 1-3 cr) F/W/Sp  
Course allows student use of shop facilities on Fridays to gain proficiency using equipment and working on individual projects. Note: Safety certification is a prerequisite to lab usage.

### 3.205-3.207 Carpentry I-III

(8 class hrs/wk 4 cr) F/W/Sp  
A laboratory for beginning construction students to learn practical methods and procedures in building construction. Proper use of the tools of the trade will be emphasized. Students will be involved in hands-on projects. Note: Requires a minimum list of hand tools, to be specified by the instructor.

### 3.208 Carpentry Practices & Procedures

(2 class hrs/wk 2 cr) F  
Lecture course paralleling the carpentry lab which covers techniques and practices of construction, including layout, framing, roofing methods, interior and exterior finishing and construction terminology.

### 3.209 Construction Site Layout

(2 class hrs/wk 1 cr) Sp  
Lab class providing experience in site preparation and layout, use of builder's level and batter boards, staking out for excavation and finding bench marks.

### 3.211 Construction Technology IV

(20 class hrs/wk 10 cr) F  
Residential and commercial construction techniques, including job safety, proper use and maintenance of hand and power tools, site selection and layout of building, concrete construction types, wood construction and framing methods, selection of materials and quantities and sequence scheduling (CPM).

### 3.212 Construction Technology V

(20 class hrs/wk 10 cr) W  
Lab course in rough framing, exterior finish, materials selection and quantities, job safety and CPM scheduling.

### 3.213 Construction Technology VI

(20 class hrs/wk 10 cr) Sp  
Lab course in interior wall and ceiling systems, interior finishes, material selection and quantities, CPM scheduling and job safety.

### 3.216-3.218 Construction Technology VII-IX

(6 class hrs/wk 3 cr)  
Residential and commercial construction techniques, including materials take off, purchasing procedures, job-site supervision, coordination of materials and deliveries, sub-contracting and man-hour scheduling. This course follows the schedule of the Construction Technology IV, V and VI.

### 3.220 Cabinetmaking I

(12 class hrs/wk 7 cr) F  
Introduces basics of residential cabinetmaking, including tool use, layout, cabinet construction, wood structure and joinery.

### 3.221 Cabinetmaking II

(10 class hrs/wk 5 cr) W  
Structured lab time in which cabinetmaking program students apply and develop basic skills. A complete set of kitchen and bathroom cabinets will be the class project.

### 3.222 Cabinetmaking III

(10 class hrs/wk 5 cr) Sp  
Structured lab time designed to allow opportunity to become more proficient in all areas of cabinetmaking. A complete set of residential cabinets will be the class project. Individual, advanced cabinetry projects will be completed by each student.

### 3.224 Cabinet and Furniture Design

(1 class hrs/wk 2 cr) Sp  
Design theory will be applied to criteria for valid design and then applied to specific conditions. Innovative and traditional styles will be studied.

### 3.229 Shop Safety

(2 class hrs/wk 1 cr) F  
Laboratory class to teach safe use of all cabinetmaking and carpentry tools.

### 3.231 Automated Production Methods

(2 class hrs/wk 2 cr) W  
Course exposes students to the nature and extent of automation within the construction industry. Combines lecture with numerous field trips.

### 3.232 Residential Codes

(2 class hrs/wk 2 cr)  
Course emphasizes appropriate building methods for code compliance, procedures for plan approval, permit acquisition and ordinance compliance with the Uniform Building Code.

### 3.233 Basic Plumbing

(3 class hrs/wk 2 cr) Sp  
Lecture, reinforced by lab experience, covers the basic plumbing terminology, tools, materials and procedures.

**3.234 Laminates and Finishes**

(3 class hrs/wk 2 cr) W

Introduces selection and application of appropriate laminates and finishes, including pre-finishes, fillers, stains, sealers and finish coats.

**3.235 Estimating and Detailing**

(2 class hrs/wk 2 cr) Sp

Introduction to interpreting plans and estimating labor and materials, from site layout to interior finish. Cabinet plans will be sketched on site and detailed to scale in classroom for building in Cabinet Shop.

**3.237 Basic Masonry**

(3 class hrs/wk 2 cr) F/W/Sp

Introductory class for non-majors, covering basic brick and block laying, wood stove installation and fireplace construction theory.

**3.238 Tool Maintenance**

(2 class hrs/wk 1 cr) F

Lab class covering care and preventive maintenance of common hand and power woodworking tools. Includes general shop and home tool maintenance.

**3.239 Beginning Cabinetmaking**

(3 class hrs/wk 2 cr) W/Sp/Su

Introductory course for students entering the program out-of-sequence or students seeking only a basic knowledge of cabinetmaking. Hand and power tool usage, wood selection and identification, cabinet and furniture construction methods and layout techniques will be introduced.

**3.240 Advanced Cabinetmaking**

(3 class hrs/wk 2 cr)

Introduction to custom cabinetry and specialized methods of joinery. Students will be expected to build an advanced project.

**3.250 Cabinet Production Methods**

(2 class hrs/wk 2 cr) W

Introduction to common cabinet shop production tools, systems and personnel organizations. Students will tour at least five local cabinet shops of varying size and efficiency, as well as design a production system.

**3.251 Cabinet Finishes**

(3 class hrs/wk 2 cr) W

Introductory course in industrial finishes used for residential cabinets. The finishes lab will provide opportunity for considerable hands-on experience.

**3.252 Laminates**

(2 class hrs/wk 1 cr) Sp

Introduction to selection and application of plastic laminates for residential and commercial cabinets. Countertop work will be emphasized.

**3.253 Cabinet Layout and Estimation**

(2 class hrs/wk 2 cr) Sp

Provides familiarity with the most common methods of cabinet layout and estimating material costs for residential cabinets. Story poles and cutting lists will be emphasized.

**3.254 Furniture Construction**

(7 class hrs/wk 4 cr)

Design and construction of individual student projects. Prerequisite: Any woodworking class or instructor approval.

# MACHINE TOOL TECHNOLOGY

**Faculty:**

John Griffiths, Department Chair  
Michael Burke

The Machine Tool Technology curriculum is designed to develop skills in a wide variety of machining processes, including operating the drill press, engine lathe, tracer lathe, vertical and horizontal milling machine, surface and cylindrical grinder, tool cutter grinder and other machines associated with the machinist's trade.

Students learn the basics of transforming raw material into finished parts, including the principles of blueprint interpretation, material selection, operational sequence, machine operation, metal removal rates, deburring and final dimension inspection.

Students work through a sequence of assignments ranging from simple exercises to complex assemblies. Hands-on experience, lecture and discussion, textbooks, manuals, audio-visual aids and field trips are employed throughout. The "people skills" in finding and keeping a job and in employer-employee relations are emphasized continually.

The lab facilities and the machines selection are designed to allow comprehensive instruction in the basic tools of the machinist's trade. Care has been taken to allot enough time in actual machine operation for the student to become competent. Students need not have their own tools to enter the program; however, they are urged to purchase tools before graduation and employment.

Prior machining experience for students entering the program is optional. It is recommended, however, that the student have mechanical interest or some demonstrated aptitude toward manipulative skills.

The Machine Tool Technology curriculum leads to an Associate of Science degree.

## MACHINE TOOL TECHNOLOGY CURRICULUM

### Associate of Science in Machine Tool Technology

**General Education Requirements . . . . . 20**

See graduation requirements for Associate of Science degree  
4.202 Math II is required.

**Major Requirements . . . . . 78**

Fall — First Year	
3.403 Machine Tool Tech I	10
4.100 Blueprint Reading	2
Winter	
3.404 Machine Tool Tech II	10
4.108 Industrial Safety	3
Spring	
3.405 Machine Tool Tech III	10
4.151 Welding I	2
4.204 Math III	4
Fall — Second Year	
3.406 Machine Tool Tech IV	10
4.152 Welding II	2
Winter	
3.407 Machine Tool Tech V	10
3.446 Intro to Machine Tool Metallurgy	2
Spring	
3.408 Machine Tool Tech VI	10
MT 173B Microcomputers: Basic	3
	<b>98</b>

## MACHINE TOOL TECHNOLOGY COURSES

**1.280 CWE Machine Tool Technology**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to machine tool technology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**3.403 Machine Tool Technology I**

(20 class hrs/wk 10 cr) F/W/Sp

Introductory information for the student seeking a machinist career. Emphasis is on safe operation of engine lathes, drill press and band saw; fundamental precision measurement; and blueprint reading. Students will sharpen lathe tool bits and twist drills.

**3.404 Machine Tool Technology II**

(20 class hrs/wk 10 cr) F/W/Sp

Involves more advanced engine lathe work, including internal and external tapers and single point threads of various forms. Vertical milling machine operations and surface plate inspection procedures are introduced. Tool selection, cutting speeds and feed rates are emphasized. Prerequisite: 3.403 Machine Tool I or instructor approval; 4.100 Blueprint Reading or instructor approval; 4.200 Math I or equivalent.



**3.405 Machine Tool Technology III**

(20 class hrs/wk 10 cr) F/W/Sp

Previously acquired skills are expanded and updated, with right angle trigonometry employed in set-ups. Projects typically require the use of two or more machine tools, and various horizontal milling operations are frequently involved. Prerequisite: 3.404 Machine Tool II.

**3.406 Machine Tool Technology IV**

(20 class hrs/wk 10 cr) F/W/Sp

Advanced lathe and milling machine training, including dividing heads and rotary tables and simple tracer lathe work, with emphasis on industry-accepted metal removal rates. Production of iron, steel, and ferrous and non-ferrous alloys is studied. Assigned projects require use of the surface grinder and other abrasive metal removal techniques. Prerequisite: 3.405 Machine Tool III; 4.204 Math III or equivalent.

**3.407 Machine Tool Technology V**

(20 class hrs/wk 10 cr) F/W/Sp

Project assemblies will require using a combination of machine tools to produce items such as spur gears and racks. Emphasis is on precision, with tolerances much closer than in previous terms. Metal processing is covered, including heat treating, hardening, tempering and annealing. Prerequisite: 3.406 Machine Tool IV.

**3.408 Machine Tool Technology VI**

(20 class hrs/wk 10 cr) F/W/Sp

Engine lathe and milling machine skills will be extended, with emphasis on quality and speed. Includes an introduction to cylindrical grinding, tool and cutter grinding, and jig boring. Prerequisite: 3.407 Machine Tool V; MT 173B Microcomputers: Basic.

**4.130 Machine Processes**

(3 class hrs/wk 2 cr) F/W/Sp

Designed for students from other majors, this course provides an overview of the machine tool metalworking trades and the relationship between the technical trades. The class consists of lecture-discussion, demonstration and hands-on lab time. Prerequisite: 3.294 Industrial Concepts or instructor approval.

# MECHANICS

**Faculty:**

David E. Carter, Department Chair  
Lee Hansen, Mike Henich, Allan Jackson,  
Keith Pond, Carl Reeder

The Mechanics department offers programs in automotive technology, heavy equipment mechanics/diesel and small engine/recreational vehicle repair. The curriculums offered lead to an Associate of Science degree.

## AUTOMOTIVE TECHNOLOGY

The Automotive Technology program provides students with the facilities, equipment and instruction necessary to develop skills and abilities in auto mechanical work. The curriculum is designed to permit student entry into the program at the beginning of each term.

Upon completing the program, a student may enter the auto service trade as an auto mechanic, specialty shop operator or in a related position. Starting salaries range from \$5 to \$11 per hour.

Former LBCC students are employed in many other states, signifying the mobility of the auto mechanic. The Student Placement Center of the college or department faculty will provide assistance in obtaining a post-college position.

The Automotive Technology curriculum leads to an Associate of Science degree.

In addition to the usual books and supplies, students should expect to purchase a general mechanics tool set, as prescribed by the department.

Note: Entering students must enroll in 3.294 Industrial Concepts. This course provides student evaluation; department chair may assign credit for previous knowledge or experience. Students with demonstrated deficiencies will be required to complete appropriate course work prior to program enrollment.

## AUTOMOTIVE TECHNOLOGY CURRICULUM

### Associate of Science in Automotive Technology

**General Education Requirements . . . . .20**

See graduation requirements for Associate of Science degree  
4.202 Math II is required.

**Major Requirements . . . . .73**

2.415 Human Relations in Business	3
3.295 Mechanics I	10
3.296 Mechanics II	10
3.297 Mechanics III	10
3.298 Auto Mechanics IV	10
3.299 Auto Mechanics V	10
3.300 Auto Mechanics VI	10
3.447 Metallurgy for Mechanics	2
3.529 Mobile Air Conditioning	3
4.108 Industrial Safety	3
4.130 Machine Processes	2
4.151 Welding I	2

**Electives . . . . .3**

Additional technical courses or approved  
CWE; 4.152 Welding II and 3.301 Auto  
Mechanics VII are recommended.

## AUTOMOTIVE TECHNOLOGY COURSES

**1.280 CWE Automotive Technology**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to automotive technology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**3.294 Industrial Concepts**

(20 class hrs/wk 1-10 cr) F

A prerequisite introductory course covering competencies required for entrance into various mechanical areas. Students must demonstrate mastery of basic concepts related to industrial operations before receiving a specific project assignment. Note: Content of course may be challenged.

**3.295 Mechanics I**

(20 class hrs/wk 1-10 cr) F/W/Sp

A study of the complete power train system, with emphasis on the theory, application and servicing of clutch systems, manual transmissions, transfer cases, drive lines, universal joints and differential assemblies. Prerequisite: 3.294 Industrial Concepts.

**3.296 Mechanics II**

(20 class hrs/wk 1-10 cr) F/W/Sp

Fundamental principles of automotive suspension systems, with emphasis on frames, steering systems, alignment and wheel balancing. In addition, a comprehensive study of disc and drum braking systems and their components is included. Prerequisite: 3.294 Industrial Concepts.

**3.297 Mechanics III**

(20 class hrs/wk 1-10 cr) F/W/Sp

Introduces principles and terminology of fuel and carburetion systems and testing, servicing and repairing of electrical systems. Students will work with techniques and overhaul procedures for carburetors, fuel pumps, fuel tanks, fuel gauges, fuel lines, fittings, charging systems, starting systems and other electrical components. Prerequisite: 3.294 Industrial Concepts.

**3.298 Auto Mechanics IV**

(20 class hrs/wk 1-10 cr) F

Problem-solving course designed to develop knowledge and skills in auto tune-up. Emphasis will be placed on selection and use of equipment, including electrical test equipment, the oscilloscope, emission test equipment and the dynamometer to find malfunctions, and on making necessary repairs for optimum engine performance.

**3.299 Auto Mechanics V**

(20 class hrs/wk 1-10 cr) W

Surveys operating principles, maintenance, repair and overhaul of the internal combustion engine. Includes study of the various engine types, their component parts and related accessories. In conjunction with training in correct engine machining skills, an engine is rebuilt, returned to manufacturer's specifications and tested for performance.

**3.300 Auto Mechanics VI**

(20 class hrs/wk 1-10 cr) Sp

Surveys operating principles, testing and repairing procedures of the automatic transmission. Directed towards accurately analyzing performance factors and diagnosing malfunctions of these systems through overhauling and rebuilding various types of live units.

**3.301 Auto Mechanics VII**

(2-20 class hrs/wk 1-10 cr) F/W/Sp

Advanced instruction and practice in diagnosing and servicing automotive problems, designed to summarize all the learning units in the auto technology two-year program. Emphasis will be on the attitudes and philosophy of automotive employees who must frequently meet and deal with supervisory personnel and with the public. Experiences will be provided to simulate the work of an auto technician.

**3.529 Mobile Air Conditioning**

(6 class hrs/wk 3 cr) W/Sp

Study of the fundamental principles of auto and heavy equipment air conditioning systems. Emphasis will be on basic design and components of the A/C systems and the function, adjustment, service and testing of the components.

## HEAVY EQUIPMENT MECHANICS/DIESEL

The curriculum of the Heavy Equipment Mechanics/Diesel program is designed to give the student a balance of theory and practical experience, gained by diagnosing, servicing, repairing and rebuilding components and live equipment.

Diesel mechanics repair and maintain diesel engines, which power railroad trains, ships, generators, and construction, highway and farm equipment. To become a diesel mechanic, a student should have a mechanical aptitude and a knack for shop work, mathematics and science. Being able to read with understanding also is essential, because considerable time is spent in reading service manuals.

Students may be admitted to advanced standing upon confirmation of appropriate education or experience, which is evaluated through transcripts, work experience and competence examination. Permission of the division director is required to gain advanced standing.

In addition to the usual books and supplies, students should expect to spend about \$500 for a personal set of diesel mechanic hand tools.

Upon completing the program, the student may gain employment in service departments of distributors and dealers that sell diesel-powered autos, trucks, and farm and construction equipment. Bus lines, railways, and truck and marine industries also employ diesel mechanics. Electric power plants, local industries, and both state and federal government have a great need for trained mechanics. Starting salaries range from \$1,000 to \$1,500 per month.

The Heavy Equipment Mechanics/Diesel curriculum leads to an Associate of Science degree.

Note: Entering students must enroll in 3.294 Industrial Concepts. This course provides student evaluation; department chair may assign credit for previous knowledge or experience. Students with demonstrated deficiencies will be required to complete appropriate course work prior to program enrollment. Students also can improve their skills through laboratory experience in 3.301 Auto Mechanics VII.

## HEAVY EQUIPMENT MECHANICS/DIESEL CURRICULUM

### Associate of Science in Heavy Equipment Mechanics/Diesel

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree  
4.202 Math II is required.

#### Major Requirements . . . . .76

2.415 Human Relations in Business	3
3.295 Mechanics I	10
3.296 Mechanics II	10
3.297 Mechanics III	10
3.128 Heavy Equip Mechanics IV	10
3.129 Heavy Equip Mechanics V	10
3.130 Heavy Equip Mechanics VI	10
3.134 Industrial Fluid Power	3
3.529 Mobile Air Conditioning	3
4.108 Industrial Safety	3
4.151 Welding I	2
4.152 Welding II	2

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## HEAVY EQUIPMENT MECHANICS/DIESEL COURSES

**1.280 CWE Diesel**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to diesel. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**1.280 CWE Heavy Equipment Mechanics**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to heavy equipment mechanics. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**3.128 Heavy Equipment Mechanics IV**

(20 class hrs/wk 1-10 cr) F

Study of fuel injection theory and component repair. Fuel system components will be studied, tested, repaired and adjusted, emphasizing inline, opposed piston and pressure-timed pumps, and a variety of injectors and governors. Turbo and superchargers and cooling system maintenance will be included.

**3.129 Heavy Equipment Mechanics V**

(20 class hrs/wk 1-10 cr) W

Operating principles, maintenance, repair and overhaul of various types and sizes of diesel engines comprise this unit. Includes both two- and four-stroke diesel engines, their component parts and related accessories, and standardized manufacturer's specifications.

**3.130 Heavy Equipment Mechanics VI**

(20 class hrs/wk 1-10 cr) Sp

Study of diesel tuneup and techniques for optimum engine performance, including diagnostic troubleshooting, load testing and engine break-in procedure through use of the dynamometer.

**3.134 Industrial Fluid Power**

(6 class hrs/wk 3 cr)

Course designed to provide background in hydraulic and pneumatic systems mechanics, their components and the operation and function of each.

## SMALL ENGINE REPAIR

The Small Engine Repair curriculum covers such equipment as garden tractors, rototillers, mowers, edgers and motorized lawn sweepers. The recreational vehicle section includes work on snowmobiles, motorcycles and all-terrain vehicles (ATVs). Students also may study the repair of portable industrial tools, outboard marine engines, chain saws, drills and generators. During their instruction, students gain work experience on equipment in need of repair and become qualified mechanics.

Entry level salaries for trained repairmen range from \$3.50 to \$5.50 per hour. Self-employment in some areas is good.

The Small Engine Repair curriculum leads to an Associate of Science degree.

## SMALL ENGINE REPAIR CURRICULUM

### Associate of Science in Small Engine Repair

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

2.515 Business Math with Calculators, recommended for math requirement.

#### Major Requirements . . . . .76

3.294 Industrial Concepts	10
5.560 Small Engine Repair I	6
3.561 Small Engine Repair II	6
3.562 Small Engine Repair III	6
3.563 Small Engine Repair IV	6
3.570 Small Engine Repair V	6
3.571 Small Engine Repair VI	6
3.295 Mechanics I (Auto Drive Trains)	6
3.297 Mechanics III (Fuels 4-Elect. 6)	10
3.134 Industrial Fluid Power	3
3.447 Metallurgy for Mechanics	2

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## SMALL ENGINE REPAIR COURSES

### 1.280 CWE Small Engine Repair

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to small engine repair. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar.

Note: Credits are based on identified objectives and number of hours worked.

Prerequisite: CWE coordinator approval.

### 3.560 Small Engine Repair I

(10 class hrs/wk 6 cr) F/W/Sp

Operating theory of 2-stroke and 4-stroke cycle engines and performance of specific electrical, carburetion, service, maintenance and overhaul techniques on lawn and garden equipment.

### 3.561 Small Engine Repair II

(10 class hrs/wk 6 cr) F/W/Sp

Expands skills and proficiency in service and repair of lawn and garden equipment.

Prerequisite: 3.560 Small Engine Repair I.

### 3.562 Small Engine Repair III

(10 class hrs/wk 6 cr) F/W/Sp

Introduction to operating principles of engines used for chain saws, garden tractors and industrial tools. Develops proficiency in specific electrical, carburetion, service, maintenance and overhaul techniques.

Prerequisite: 3.560 Small Engine Repair I.

### 3.563 Small Engine Repair IV

(10 class hrs/wk 6 cr) F/W/Sp

Expands skills and proficiency in service and repair of chain saws, outboard marine components and snowmobiles. Prerequisite: 3.560 Small Engine Repair I.

### 3.570 Small Engine Repair V

(10 class hrs/wk 6 cr) F/W/Sp

Introduction to operating principles of engines used for motorcycles, snowmobiles and A.T.V.s. Develops proficiency in specific electrical, carburetion, service, maintenance and overhaul techniques. Prerequisite: 3.560 Small Engine Repair I.

### 3.571 Small Engine Repair VI

(10 class hrs/wk 6 cr) F/W/Sp

Expands skills and proficiency in service and repair of the motorcycle, snowmobile and A.T.V. Prerequisite: 3.570 Small Engine Repair V.

## METALLURGY TECHNOLOGY

### Faculty:

L. Carl Love, Department Chair

The Metallurgy Technology program provides training in the extraction and purification of metals and the examination, analysis and testing related to quality control and product development. Metallurgical theory, as presented, deals with the processing of raw products to metals, internal structure of metals, the influence of microstructure on properties and the influence of alloying elements as they are conditioned by mechanical working and heat treatment.

The Metallurgy Technology curriculum leads to an Associate of Science degree.

## METALLURGY TECHNOLOGY CURRICULUM

### Associate of Science in Metallurgy Technology

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

1.110 Elements of Algebra is required.

#### Major Requirements . . . . .70

##### Fall — First Year

4.151 Welding I	2
6.281 Non-Destructive Testing I	3
6.293 Intro to Metallurgy	4
GS 104 Physical Science	4

##### Winter

3.445 Welding Metallurgy II	4
4.100 Blueprint Reading	2
6.276 Physical Metallurgy	4
6.282 Non-Destructive Testing II	3
6.298 Metallography I	3

##### Spring

4.108 Industrial Safety	3
4.120 Fund of Specification	3
6.283 Non-Destructive Testing III	3
6.299 Metallography II	3

##### Fall — Second Year

4.122 Strength of Materials	3
4.161 Materials Testing I	3
CH 101 General Chemistry	4

##### Winter

4.162 Materials Testing II	3
6.285 Ultrasonics	3
CH 102 General Chemistry	4

##### Spring

4.130 Machine Processes	2
4.163 Materials Testing III	3
6.284 Radiography	3
6.294 Process Metallurgy	4

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## METALLURGY TECHNOLOGY COURSES

### 1.280 CWE Metallurgy Technology

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to metallurgy. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 3.444 Welding Metallurgy I

(5 class hrs/wk 3 cr) Sp

Introduction to physical and mechanical properties of weld metal and the effect of soldering, brazing and fusion processes on structural and service requirements of metal joints. Investigations will be made to determine operator responsibility in completing joints in welded metals capable of matching or exceeding the strength and reliability of the base metals.



**3.445 Welding Metallurgy II**

(5 class hrs/wk 4 cr) W

Introduction to the basic processes of welding fabrications. Investigates structural characteristics of metals related to quality, low-cost welded assemblies.

**3.446 Introduction to Machine Tool Metallurgy**

(3 class hrs/wk 2 cr) F

Introduction to crystalline and atomic structures of metals and alloys related to machining and manufacturing of metal products. Emphasizes heat treating and evaluation of heat-treated materials.

**3.447 Metallurgy for Mechanics**

(3 class hrs/wk 2 cr)

Introduction to metallic structure, including its composition and properties, how it might be recognized, what could be done to improve or hinder its function and how simple evaluation can be made to determine its ability to perform.

**4.120 Fundamentals of Specification**

(3 class hrs/wk 3 cr) Sp

Designed to acquaint students with preparation and interpretation of manufacturing and fabrication specifications. Practical problems will be assigned relating classwork to industry.

**4.122 Strength of Materials**

(3 class hrs/wk 3 cr) F

Introduction to the mechanics of tension, compression, torsion and shear, involving the major factors of metals, time and force. Included are mechanical properties relating to service performance. Prerequisite: 1.110 Elements of Algebra.

**4.161, 4.162 Materials Testing I, II**

(4 class hrs/wk 3 cr) F/W

Study of the properties of engineering materials. Includes elastic and plastic deformation, fracture, creep, fatigue, impact, temperature effects and corrosion; destructive and non-destructive evaluation; and elementary principles of measurement, methodology test equipment, instrumentation and analysis of data.

**4.163 Materials Testing III**

(4 class hrs/wk 3 cr) Sp

Surveys testing techniques, including bend, elevated temperature, non-metallic creep, flare and burst; corrosion of coated surfaces; and reliable conversion of test data to identify related mechanical properties.

**6.270 Metallurgy Readings and Conferences**

(1-30 class hrs/wk 1-10 cr)

Topics covered and credit to be assigned are agreed upon by the instructor and the student. Subject areas of particular interest to the student or areas where the student needs additional work can be covered within this course. Prerequisite: Instructor approval.

**6.276 Physical Metallurgy**

(6 class hrs/wk 4 cr) W

Study of concepts, structures, properties, heat treatment and methods of forming and evaluating metals and alloys. Prerequisite: 6.293 Introduction to Metallurgy or instructor approval.

**6.281 Non-Destructive Testing I**

(4 class hrs/wk 3 cr) F

Introduction to theory and applied techniques of liquid penetrant and magnetic particle inspection; industrial applications as an integral part of metals fabrication; and development, testing and inspection processes in quality control.

**6.282 Non-Destructive Testing II**

(4 class hrs/wk 3 cr) W

Continuation of 6.281 Non-Destructive Testing I, with emphasis on ultrasonic and eddy current methods of testing and inspection.

**6.283 Non-Destructive Testing III**

(4 class hrs/wk 3 cr) Sp

Continuation of 6.282 Non-Destructive Testing II, with emphasis on X-ray and gamma ray testing and inspection.

**6.284 Radiography**

(4 class hrs/wk 3 cr) Sp

Introduction to production problems and non-destructive testing to reveal the presence of discontinuities using short wave-length energy from X-rays or radioactive isotopes to penetrate metal.

**6.285 Ultrasonics**

(3 class hrs/wk 3 cr) W

Introduction to production problems and non-destructive testing that employs high frequency sound waves to determine metallic qualities.

**6.288 Vacuum Technology**

(3 class hrs/wk 3 cr)

Surveys several phases of vacuum technology, beginning with basic terminology and progressing through industrial applications and equipment selection. Includes specific information about what happens in a vacuum, the need for vacuum and vacuum chamber requirements. Stresses maintenance of equipment.

**6.293 Introduction to Metallurgy**

(6 class hrs/wk 4 cr) F

Surveys metallurgical principles, including raw material requirements for metals-processing furnaces and refractories, fabrication of metal products, destructive evaluation and non-destructive testing.

**6.294 Process Metallurgy**

(6 class hrs/wk 4 cr) Sp

Study of metallurgical principles, including raw material requirements for metals-processing furnaces and refractories, furnace fuels and combustions, heat flow, energy balances and alloy systems. Prerequisite: CH 101, 102 Basic Chemistry.

**6.295 Quality Control**

(2 class hrs/wk 2 cr)

Surveys methods of cost reduction through quality control; emphasizes documentation and accounting for savings.

**6.298, 6.299 Metallography I, II**

(4 class hrs/wk 3 cr) W/Sp

Introduction to use of metallurgical equipment, including specimen procurement, mounting, polishing, etching, visual examination, sketching of structural characteristics, photomicrography and photomicrography of ferrous and non-ferrous materials.

# REFRIGERATION, HEATING AND AIR CONDITIONING

The Refrigeration, Heating and Air Conditioning program is designed to help students acquire mechanical skills necessary to install, maintain and repair refrigeration, heating and air conditioning equipment and accessory units common in residences and businesses.

Working on refrigeration, heating and air conditioning systems requires a high degree of skill and precision. Success requires good work and safety habits, sound judgment, and the ability to plan ahead and work cooperatively with other skilled craftsmen.

Entering students should have good math and reading skills or be prepared to improve them while enrolled in the program. Courses relating to the program include math, electricity, welding and sheet metal. Students learn to read, interpret and work from sketches, layouts and blueprints; develop knowledge of standard practices, methods, tools and materials of the trade; analyze machine operation and diagnose faulty performance; and develop skills in making replacements or repairs.

A variety of tools and specialized instruments are required. In addition to the usual books and supplies, students should expect to spend about \$800 over the two-year period for a personal set of tools.

Job prospects in this field are good. Beginning pay ranges from \$6.50 to \$12.50 per hour. Qualified workers may advance to positions as supervisors.

The Refrigeration, Heating and Air Conditioning curriculum leads to an Associate of Science degree.

## REFRIGERATION, HEATING AND AIR CONDITIONING CURRICULUM

### Associate of Science in Refrigeration, Heating and Air Conditioning

#### General Education Requirements . . . . .20

See graduation requirements for  
Associate of Science Degree  
4.202 Math II or 4.204 Math III is required.

#### Major Requirements . . . . .77

##### Fall — First Year

1.134 Voc Study Skills	1
3.580 Intro to Ref/Heat/AC	6
3.581 Layout Procedures	3
4.100 Blueprint Reading	2
4.151 Welding I	2
6.336 Tech Electricity I	3

##### Winter

3.447 Metallurgy for Mechanics	2
3.583 Prin of Refrigeration	6
3.584 Basic Sheet Metal Practices	2
6.337 Tech Electricity II	3

##### Spring

3.585 Prin of Heating	6
3.586 Mech Installation Procedures	4
4.204 Math III (may be used to fill general education requirement)	4

##### Fall — Second Year

3.587 Operation Prin of AC and Air Movement	6
3.588 Pneumatic Controls	4

##### Winter

3.589 Diagnosis, Service & Repair	4
3.590 Control Applications	6
4.108 Industrial Safety	3

##### Spring

3.591 Commercial & Industrial Refrigeration	6
3.592 Systems Design	4

#### Electives . . . . .2

Additional technical courses or approved  
CWE

99



A welding student wears protective clothing and helmet while working on his project.

## REFRIGERATION, HEATING AND AIR CONDITIONING COURSES

### 1.280 CWE Refrigeration, Heating and Air Conditioning

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to refrigeration, heating and air conditioning. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 3.528 Automotive Refrigeration

(3 class hrs/wk 2 cr) F

A study of refrigeration and air conditioning in transportation, including automotive, trucking and marine industries.

### 3.580 Introduction to Refrigeration, Heating and Air Conditioning (9 class hrs/wk 6 cr) F

Designed to convey theories and principles of the heating and refrigeration technology, including safety and tube types, soldering, piping and handling.

### 3.581 Layout Procedures (Sheet Metal) (4 class hrs/wk 3 cr) F

Instruction and practical application in techniques and procedures of designing, graphically illustrating and laying out materials relative to sheet metal processes.

### 3.583 Principles of Refrigeration (9 class hrs/wk 6 cr) W

General lecture/laboratory course dealing with domestic refrigeration system operations, components and electrical diagrams.

### 3.584 Basic Sheet Metal Practices (3 class hrs/wk 2 cr) W

Introductory course in use of hand tools, layout procedures, machine forming and fastening procedures.

### 3.585 Principles of Heating (9 class hrs/wk 6 cr) Sp

Lecture/laboratory course in usage, repair and maintenance of residential heating systems. Includes instruction in types of controls, window air conditioners, heat pumps, advanced trouble-shooting and repair.

### 3.586 Mechanical Installation Procedures (6 class hrs/wk 4 cr) Sp

Basic course in equipment installation, covering domestic refrigeration, freezers, air conditioners and commercial split systems.

### 3.587 Operational Principles of Air Conditioning and Air Movement (9 class hrs/wk 6 cr) F

The introduction of psychrometrics will increase ability to analyze and understand air conditioning technology. Practical aspects of design, sizing, maintenance and trouble-shooting will be emphasized.

### 3.588 Pneumatic Controls (6 class hrs/wk 4 cr) F

Introduction to pneumatic controls and air compressing equipment.

### 3.589 Diagnosis Service and Repair (6 class hrs/wk 4 cr) W

Provides practical experience in trouble-shooting and decision making for repairs. Lecture/lab approach includes repair and rebuilding experiences in simulated live situations.

### 3.590 Control Applications (9 class hrs/wk 6 cr) W

Examines the functions and operations of electro-mechanical systems.

### 3.591 Commercial and Industrial Refrigeration (9 class hrs/wk 6 cr) Sp

A lecture/lab introduction to commercial and industrial refrigeration systems and control circuits. Includes instruction in trouble-shooting methods, specific repairs and the use of charts and graphs.

### 3.592 Systems Design (6 class hrs/wk 4 cr) Sp

Lecture/lab course promoting use of problem-solving techniques and ingenuity in new product development and application. Includes tube sizing and installation.

### 3.593 Basic Refrigeration (Domestic & Light Commercial) (6 class hrs/wk 4 cr)

Introduction to principles and operation of small refrigeration systems. Designed for those interested in appliance repair and sales and vending machine owner/operators.

## WELDING TECHNOLOGY

### Faculty:

John Alvin, Department Chair  
Elgin Rau, Ed Stewart, Dennis Wood

The Welding Technology program offers training for entry-level employment in a broad variety of welding fields. The program begins in fall term; however, a student with prior welding experience may enter during winter term with department approval. The second year of the program provides valuable experience in specific areas, such as layout, fabrication and welding repair.

Welding requires a general interest in mechanical concepts and good hand and eye coordination. Because welders may work outdoors, indoors in confined areas or in high places, depending on the industry, the student should be in good physical condition and able to maneuver well.

Job prospects in this field are good. Beginning pay ranges from \$5 to \$9 per hour.

The Welding Technology curriculum leads to an Associate of Science degree. A welding certificate is also offered. Check with the Industrial/Apprenticeship Division office for curriculum.

## WELDING TECHNOLOGY CURRICULUM

### Associate of Science in Welding Technology

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree  
2.415 Human Relations in Business or 4.124 Technical Drawing I, recommended for elective requirement.  
4.202 Math II is required

#### Major Requirements . . . . .74

##### Fall — First Year

4.100 Blueprint Reading	2
4.240 Basic Arc Welding	6
4.242 Basic Oxyacetylene Welding	4

##### Winter

4.241 Intermediate Arc Welding	6
4.243 Welding Projects I	4
4.247 Interp Metal Fab Drawings	3

##### Spring

3.444 Weld Metallurgy I	4
4.245 Layout Procedures for Welding	3
4.246 Advanced Arc Welding	6
4.250 Welding Projects II	4

##### Fall — Second Year

4.130 Machine Processes	2
3.134 Industrial Fluid Power	3
4.255 Fab Repair I	6

##### Winter

3.445 Welding Metallurgy II	4
4.256 Fab Repair II	6
6.330 Voc Electricity	2

##### Spring

4.108 Industrial Safety	3
4.257 Fab Repair III	6



## WELDING COURSES

### 1.280 CWE Welding

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to welding. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 4.154 Welding Seminar

(2-8 class hrs/wk 1-4 cr) F/W/Sp

Open-entry/open-exit course providing skills upgrading.

### 4.240 Basic Arc Welding

(14 class hrs/wk 6 cr) F

Introduction to arc welding practices on mild steel of various thicknesses and joint configurations in all positions.

### 4.241 Intermediate Arc Welding

(14 class hrs/wk 6 cr) W

Continuation of 4.240 Basic Arc Welding, including arc welding of mild steel and special ferrous and non-ferrous alloys. Employs the manual arc, TIG and MIG processes.

### 4.242 Basic Oxyacetylene Welding

(8 class hrs/wk 4 cr) F

Introduction to oxyacetylene welding practices on mild steel of various thicknesses and joint configurations in all positions.

### 4.243 Welding Projects I

(8 class hrs/wk 4 cr) W

Lecture/laboratory course in fundamentals of welding fabrication and repair. Basic procedures in planning, sketching, cost evaluation, ordering, layout, metal preparation, tack-up and final welding will be introduced. Prerequisite: 4.240 Basic Arc Welding; 4.242 Basic Oxyacetylene Welding.

### 4.245 Layout Procedure for Welding

(5 class hrs/wk 3 cr) Sp

Introduces layout principles and applications. Tools and equipment for layout are studied in respect to their operating performance, with emphasis on maintenance. Includes planning and construction of templates, layout and specific fabrication to examine process quality. Prerequisite: 4.247 Interpreting Metal Fabrication Drawings.

### 4.246 Advanced Arc Welding

(14 class hrs/wk 6 cr) Sp

Continuation of 4.241 Intermediate Arc Welding. Preparation for welder certifications in the manual arc process.

### 4.247 Interpreting Metal Fabrication Drawings

(4 class hrs/wk 3 cr) W

Introduction to the principles of interpretation and application of industrial fabrication drawings. Basic principles and techniques of metal fabrication are introduced by planning and construction of templates, layout and other fixtures used in fabrication from drawings. Basic tools and equipment for layout-fitting of welded fabrications are utilized.

### 4.250 Welding Projects II

(8 class hrs/wk 4 cr) Sp

Continuation of 4.243 Welding Projects I, providing a more in-depth approach to welding design, fabrication and repair. Prerequisite: Instructor approval.

### 4.255, 4.256, 4.257 Fabrication & Repair Practices I, II, III

(14 class hrs/wk 6 cr) F/W/Sp

Sequence providing advanced information and skills in welding repair and fabrication. Group or individual projects require knowledge gained from related classes, including blueprint reading, cost estimating, ordering and inventory of materials, layout skills, fabrication and final assembly.

## WELDING COURSES FOR NON-MAJORS

The following courses are designed as electives for students with majors in other mechanical/industrial/technical areas who would benefit from welding training.

### 4.151 Welding I

(4 class hrs/wk 2 cr) F/W/Sp

Introductory course stressing safety and equipment familiarization, with lab exercises for skill development in basic gas and electric arc welding. Includes technical information lectures in related subjects.

### 4.152 Welding II

(4 class hrs/wk 2 cr) F/W/Sp

Designed to provide welding skill level required in minor industrial applications. Includes basic electric and gas arc welding, an introduction to gas-shielded arc processes and MIG and TIG welding. Lab and technical information on related welding subjects included. Prerequisite: 4.151 Welding I.

### 4.153 Welding III

(4 class hrs/wk 2 cr) F/W/Sp

Advanced course for non-welding majors, designed for a higher degree of welding competency in trade applications. Standard welding practices, welder qualifications and industrial standards are covered as related subjects. Prerequisite: 4.152 Welding II or instructor approval.

The following courses are designed primarily to upgrade skills for part-time students already employed in the industry.

### 9.148 Preparation for Welder Certification

(8 class hrs/wk 4 cr) F/W/Sp

Course provides information and skill development for the welder certification test administered by state of Oregon, Dept. of Commerce, Boiler Division. The test is provided upon completion of the course. Prerequisite: 4.152 or 9.152 Welding II or instructor approval.

### 9.151 Welding I

(4 class hrs/wk 2 cr) F/W/Sp

Introductory course stressing safety and equipment familiarization, with lab exercises in basic gas and electric arc welding. Includes technical information lectures in related subjects.

### 9.152 Welding II

(4 class hrs/wk 2 cr) F/W/Sp

Designed to provide the welding skill level expected in minor industrial applications. Includes basic electric and gas arc welding, an introduction to gas shield arc processes and MIG and TIG welding. Lab and technical information on related welding subjects included. Prerequisite: 9.151 Welding I.

### 9.153 Welding III

(4 class hrs/wk 2 cr)

Advanced course, designed for a higher degree of welding competency in trade applications. Standard welding practices, welder qualifications and industrial standards are covered as related subjects. Prerequisite: 9.152 Welding II.

# SCIENCE & TECHNOLOGY DIVISION

DIRECTOR: Peter C Scott



Local livestock operations are used as instructional laboratories by the Animal Technology program.

**T**he Science & Technology Division offers curriculums meeting the needs of students pursuing professional careers in science or science-related fields.

Science-related, associate degree programs are offered in agriculture, engineering technologies and science laboratory technology. Programs in mathematics, and physical and biological science serve the general education needs of the college as a whole and provide the technical background for students majoring in engineering, forestry, medicine and similar transfer programs.

The entire division is involved in community development, providing educational opportunities outside the traditional education setting. Upgrading for personnel presently employed in science-related fields within the district is provided through a variety of workshops and evening classes.

Students may, upon recommendation of the faculty advisor and the Cooperative Work Experience staff, receive transfer or non-transfer college credit by participating in the CWE program. Further information may be found

in the "Cooperative Work Experience" section of this catalog.

The Science & Technology Division offers programs leading to Associate of Science degrees or certificates in agriculture, engineering technologies and science laboratory technology.

## AGRICULTURAL SCIENCES

### Faculty:

Stewart Floyd, James Lucas, Bruce Moos, Gregory Paulson

The Agricultural Science Department offers vocational curriculums in agriculture, animal technology and horticulture, leading to an Associate of Science degree. A one-year certificate of completion also is available in agriculture or horticulture.

Farm Management/Records Analysis is an educational outreach program serving local farm families.

## AGRICULTURE/ HORTICULTURE

The aims of the Agriculture and Horticulture programs are to prepare vocational students for careers in agriculture, hor-

ticulture and related service occupations; to offer supplemental instruction for individuals already employed; and to provide avocational instruction in agriculture or horticulture.

The vocational curriculums are based on necessary competencies identified by industry and reviewed by advisory committees. Students learn facts and skills necessary for entry-level and technical employment. Instructional facilities, including the labs, greenhouse, gardens, land lab and campus grounds, are used for demonstrations, skill building and evaluation.

The Agriculture and Horticulture curriculums lead to Associate of Science degrees or one-year certificates.

## AGRICULTURE / HORTICULTURE CURRICULUMS

### Associate of Science in Agriculture

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

#### Major Requirements . . . . .53

##### Fall — First Year

8.100 Computers in Ag	1
8.125 Soils I	3
8.131 Pest Management	3
8.165 Plant Science	4

##### Winter

8.126 Soils II	3
8.130 Ag Chemicals	4

##### Spring

8.127 Soils III	3
8.166 Vegetable Tech	3
8.167 Forage Crops	3

##### Fall — Second Year

8.138 Irrigation & Drainage	3
CH 101 General Chemistry	4

##### Winter

AE 111 Ag Economics	3
CH 102 General Chemistry	4

##### Spring

1.201 CWE Seminar	1
1.280 CWE Agriculture	11

#### Electives . . . . .17

Industrial courses (minimum 5 credits)	5
Business courses (minimum 9 credits)	9
Additional courses	3

## One-year Certificate in Agriculture

### Major Requirements .....27

Fall	
8.100 Computers in Ag	1
8.125 Soils I	3
8.131 Pest Management	3
8.165 Plant Science	4
Winter	
8.126 Soils II	3
8.130 Ag Chemicals	4
Spring	
8.127 Soils III	3
8.166 Vegetable Tech	3
8.167 Forage Crops	3

## Associate of Science in Horticulture

### General Education Requirements .....20

See graduation requirements for Associate of Science degree

### Major Requirements .....59

Fall — First Year	
8.100 Computers in Ag	1
8.125 Soils I	3
8.140 Landscape Maintenance	3
8.165 Plant Science	4
Winter	
8.126 Soils II	3
8.135 Turf Management I	3
Spring	
8.127 Soils III	3
8.136 Turf Management II	3
8.168 Plant ID	3
Fall — Second Year	
8.131 Pest Management	3
8.138 Irrigation & Drainage	3
8.169 Tree ID	3
CH 101 General Chemistry	4
Winter	
8.130 Ag Chemicals	4
8.132 Arboriculture I	3
8.141 Landscape Planning	3
CH 102 General Chemistry	4
Spring	
8.133 Arboriculture II	3
8.137 Plant Propagation	3
Electives	11
Additional courses or approved CWE. Recommended: Business, math, science, industrial, communication skills, drafting graphics.	

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## One-year Certificate in Horticulture

### Major Requirements .....26

Fall	
8.100 Computers in Ag	1
8.125 Soils I	3
8.140 Landscape Maintenance	3
8.165 Plant Science	4
Winter	
8.126 Soils II	3
8.135 Turf Management I	3
Spring	
8.127 Soils III	3
8.136 Turf Management II	3
8.168 Plant ID	3

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## AGRICULTURE / HORTICULTURE COURSES

### 1.280 /AG 280 CWE Agriculture

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to agriculture. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 1.280 CWE Horticulture

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to horticulture. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 8.100 Computers in Agriculture

(1 class hr/wk 1 cr) F

A computer literacy course for vocational agriculture students.

### 8.125 Soils I (4 class hrs/wk 3 cr) F

Provides necessary soil science background for work with fertilizers, irrigation, drainage and other management practices. Physical, chemical and biological properties of the soil are discussed in relation to plant growth.

### 8.126 Soils II (4 class hrs/wk 3 cr) W

Second phase of soils instruction, dealing with plant nutrition and the proper use of fertilizer and other soil amendments.

Diagnosing plant problems, soil testing, fertilizer recommendations, methods of application, and storage and handling are emphasized.

### 8.127 Soils III (4 class hrs/wk 3 cr) Sp

Third course in sequence, giving practical application to knowledge of fertilizers. Special emphasis is given to field projects to promote understanding and skill.

### 8.130 Agriculture Chemicals

(5 class hrs/wk 4 cr) W

Background information in use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of materials, safety in handling, and storage and method of application are emphasized. Students develop ability to interpret and explain to customers the directions and precautions to be observed with agriculture chemicals. Attention also is given procedures in keeping current with new product development.

### 8.131 Pest Management

(4 class hrs/wk 3 cr) F

Includes the classification, anatomy, growth, life history, recognition and control principles of selected weeds, diseases and insect pests.

### 8.132 Arboriculture I

(4 class hrs/wk 3 cr) W

A course in ornamental horticulture, including how to plant, train, prune, protect and repair trees. Note: Course is offered alternate years only.

### 8.133 Arboriculture II

(4 class hrs/wk 3 cr) Sp

A course in ornamental horticulture, covering how to identify and correct tree problems. Topics will include nonparasitic injuries, insects, diseases, inspection and diagnosis, spraying and equipment, tree appraisal, tree removal and climbing. Note: Course is offered alternate years only.

### 8.135 Turf Management I

(4 class hrs/wk 3 cr) W

Introduces and develops the art and science of turf-grass culture. Grass identification and maintenance; fertilizer and water requirements; weed, insect and disease identification and control; and other turf problems are emphasized. Note: Course is offered alternate years only.

### 8.136 Turf Management II

(4 class hrs/wk 3 cr) Sp

Provides opportunity to adapt and apply principles and theories taught in 8.135 Turf Management I. Includes business practices and procedures and field trips to observe common practices, maintenance and management of turf areas. Note: Course is offered alternate years only.

### 8.137 Plant Propagation

(4 class hrs/wk 3 cr) Sp

Introduction to principles, methods, techniques and facilities used to propagate ornamentals.

### 8.138 Irrigation and Drainage

(4 class hrs/wk 3 cr) F

Introduction to principles and practices of irrigation, including soil, water and plant relations, and water sources, quality, methods of distribution and measurement. System design and selection also are emphasized, including surface and subsurface drainage systems.

### 8.140 Landscape Maintenance

(5 class hrs/wk 3 cr) F

Introduces principles, methods, techniques and use of equipment for maintenance of landscape and turf areas. Note: Course is offered in alternate years only.

### 8.141 Landscape Planning

(5 class hrs/wk 3 cr) W

Surveys basic layout and design, site utilization and orientation of landscape facilities. Includes landscape contours, grading, trees, shrubs, floral selection, utilization and fertilization.

### 8.165 Plant Science

(5 class hrs/wk 4 cr) F

A study of the structure and function of flowering plants, with emphasis on crop and ornamental plants. Includes environmental effects on growth and other physiological processes, elementary genetics and recognition of major plant groups.



**8.166 Vegetable Technology**

(4 class hrs/wk 3 cr) Sp

Applied study in the major vegetable crops. Cultural practices such as fertilization, irrigation, cultivation, pest control, harvesting, marketing and cost analysis are emphasized.

**8.167 Forage Crops** (4 class hrs/wk 3 cr) Sp

Emphasizes practices that produce maximum economic returns for land devoted to hay, pasture or range. Includes establishment and management, fertilization, pest control, rotations, irrigation and renovation.

**8.168 Plant Identification**

(4 class hrs/wk 3 cr) Sp

Introductory course to woody plants used for landscape purposes. Students learn to identify each plant by its seasonal characteristics. The form, habit, height, spread, soil requirements, root system, flower, fruit and horticultural usefulness are studied. Plant taxonomy is considered and botanical names are stressed.

**8.169 Tree Identification**

(4 class hrs/wk 3 cr) F

Introductory course in trees and large woody shrubs used for landscaping purposes. Students will learn to recognize each tree by its seasonal characteristics: leaves, fruits, flowers and stems. The form, habit, spread, soil requirements and horticultural usefulness are studied. Note: Course is offered in alternate years only.

**8.170 Farm Management**

(3 class hrs/wk 3 cr) F

Selection, organization and operation of the modern farm, emphasizing basic economic and agricultural principles upon which the farm business is organized and operated. Laboratory periods provide time for observing and practicing farm operations and management.

**AE 111 Agricultural Economics**

(3 class hrs/wk 3 cr) W

Application of economics to agriculture, including production economics, marketing, agriculture policy and a discussion of agribusiness.

**H 111 Home Gardening and Landscaping**

(4 class hrs/wk 3 cr) F/Sp

Survey of the art and science of gardening and landscaping for students interested in plant growth and propagating and landscape design and maintenance.

The Animal Technology courses are designed to provide a maximum of practical experience through hands-on laboratory sessions. For those already employed in specific agricultural fields, skills can be upgraded. Students in the program also have an opportunity to participate in competitive collegiate livestock judging.

The program has an open door policy so that students interested in a particular aspect of the program may enroll for any portion of the program. The institution supplies an adequate line of equipment and tools that are utilized during lab sessions.

The Animal Technology curriculum leads to an Associate of Science degree.

## ANIMAL TECHNOLOGY CURRICULUM

### Associate of Science in Animal Technology

#### General Education Requirements . . . . .20

See graduation requirements for Associate of Science degree

#### Major Requirements . . . . .58

##### Fall — First Year

8.100 Computers in Ag	1
8.125 Soils I	3
8.152 Beef Production	4

##### Winter

8.126 Soils II	3
8.143 Anat & Phys of Farm Animals	3
8.150 Animal Genetics	4
8.153 Sheep Production	4

##### Spring

8.146 Intro to Livestock Selection	4
8.154 Swine Production	4

##### Fall — Second Year

☐ Biology or Chemistry Option . . . (4)

BI 101 General Biology	4
CH 101 General Chemistry	4

##### Winter

8.130 Ag Chemicals	4
8.144 Animal Nutrition	4
AE 111 Ag Economics	3

☐ Biology or Chemistry Option . . . (4)

BI 102 General Biology	4
CH 102 General Chemistry	4

##### Spring

8.145 Feeds & Feeding	3
8.167 Forage Crops	3

☐ Livestock Diseases Option . . . . . (3)

8.156 Livestock Diseases I	3
8.157 Livestock Diseases II	3

#### Electives . . . . .12

Additional courses or approved CWE.

## ANIMAL TECHNOLOGY COURSES

**1.280 CWE Animal Technology**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to animal technology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**8.143 Anatomy & Physiology of Farm Animals**

(4 class hrs/wk 3 cr) W

Basic background in the physiology of farm animals, emphasizing practical information and application. Includes male and female reproductive systems, respiratory and circulatory systems, muscles and skeleton, and exocrine and endocrine systems.

**8.144 Animal Nutrition**

(5 class hrs/wk 4 cr) W

Applied course in animal nutrition that covers protein, vitamins, minerals, fat, carbohydrates, feed additives and the utilization of nutrients by livestock. Includes methods of determining feed values, types of feed, feed characteristics, nutritional requirements and composition, and methods of feeding.

**8.145 Feeds & Feeding**

(4 class hrs/wk 3 cr) Sp

Introduction to formulating and analyzing rations for livestock, balancing nutritional needs and choice of ingredients in relation to cost and suitability. Includes economics of livestock feeding and performance indicators.

**8.146 Introduction to Livestock Selection**

(5 class hrs/wk 4 cr) Sp

Introduces criteria and principles in the physical evaluation of beef, sheep and swine. Emphasizes correctness of body type, relation of type to production, market standards, soundness and body parts. Extensive time is spent on applying techniques in evaluating live animals.

**8.147 Livestock Selection Techniques**

(6 class hrs/wk 4 cr) F

Course designed for first-year students interested in competitive livestock judging. Concentrates on techniques, selection and comparative judging of beef, sheep and swine, and intensive work on developing oral reasons and terminology. Members of this class are selected for the first step in competitive judging, including travel to collegiate contests.

**8.148 Advanced Livestock Selection**

(6 class hrs/wk 4 cr) F

Advanced course in developing of judging skills and techniques, with emphasis on oral reasons, market and breed type and characteristics. Members of this class are selected to participate in the top level of intercollegiate competitive livestock judging contests. Prerequisite: 8.146 Introduction to Livestock Selection; 8.147 Livestock Selection Techniques.

## ANIMAL TECHNOLOGY

LBCC is the only community college in the Willamette Valley with an Animal Technology program. The program uses the community as a natural instructional laboratory and provides students with knowledge and skills useful in returning to the farm, in working in production livestock occupations, in entering into livestock related fields or in transferring to four-year institutions to continue study.

**8.150 Animal Genetics**

(5 class hrs/wk 4 cr) W

Introduction to basic, practical concepts of improving livestock through a variety of genetic programs, including genetic possibilities, utilizing heritability for production gains, inbreeding coefficient, systems of breeding and improvement programs.

**8.152 Beef Production**

(5 class hrs/wk 4 cr) F

Basics of modern beef production and management, including cattle breeds, mating systems and reproduction, nutrition, marketing, production testing, diseases and parasites, and other management practices. Particular emphasis is on developing beef husbandry skills.

**8.153 Sheep Production**

(5 class hrs/wk 4 cr) W

Fundamentals of modern sheep production, including sheep breeds, nutrition, reproduction, diseases and parasites, wool evaluations, marketing and modern management practices.

**8.154 Swine Production**

(5 class hrs/wk 4 cr) Sp

Introduction to modern swine production, including swine breeds, marketing, breeding, feeding, production testing, diseases and parasites, and production problems.

**8.156 Livestock Diseases I**

(4 class hrs/wk 3 cr) W

Course covers the nature of livestock diseases caused by living organisms, including common infectious diseases, diagnosis, treatment and prevention. Modern drugs and medications, immunology and basic microbiology also are included.

**8.157 Livestock Diseases II**

(4 class hrs/wk 3 cr) Sp

Course covers the nature of noninfectious diseases and parasites. Nutritional, metabolic- and chemical-related diseases are studied, as well as internal and external parasites. Emphasizes diagnosis, control, treatment and prevention of economically important diseases.

**8.158 Artificial Insemination**

(5 class hrs/wk 4 cr) Sp

Agricultural instruction includes reproductive organs, hormones, diagnosis of heat, semen collection, insemination techniques, semen evaluation, pregnancy testing, freezing and dilution methods. Hands-on experience is stressed. Note: Recommended for second year students.

**8.160 Introduction to Animal Science**

(5 class hrs/wk 4 cr) F

Introduction to the livestock industry, including the importance of the various types of livestock enterprises, terminology, marketing, basic production practices and management techniques. Lab sessions provide first-hand experience with people in livestock production.

**8.162 Horse Production**

(5 class hrs/wk 4 cr) F

Basic course in commercial horse production and management, including breeds, breeding systems, nutrition, reproduction, diseases and marketing outlets. Also develops basic skills in handling, foot care, feeding, selection and health management.

## FARM MANAGEMENT / RECORDS ANALYSIS

Farm Management/Records Analysis is a specialized adult program for local farm families — including all members of the farm unit — actively farming or ranching with intent to profit. The program is a service as well as an educational program. Enrollment will be for a period of one year. However, the entire program is designed for a three-year sequence of study.

The three-year program consists of scheduled class meetings, monthly farm visits by the instructor, keeping basic farm records for each farm business and annual computer analysis for each completed record, including group averages. The program requires the enrolled farm unit to be actively engaged in farming with intent to profit and to be able and willing to maintain basic farm records.

Application of analysis information to improve management and organization of each business is stressed. (Individual records are confidential.)

Individual enrollment may extend beyond three years on a seminar basis, if desired, with the frequency of class sessions and instructor visits reduced.

## FARM MANAGEMENT COURSES

**9.835 Farm Management/Records****Analysis I**

(30 class hrs/mo 8 cr) F/W/Sp/Su

A series of classroom sessions, supplemented by regularly scheduled farm visits by the instructor. Includes family goal setting, net worth statement, inventories and depreciation, budgeting income and expenses, cash flow projections, tax management, decision making and credit planning.

**9.836 Farm Management/Records****Analysis II**

(30 class hrs/mo 8 cr) F/W/Sp/Su

A series of classroom lectures and on-farm visits devoted to methods of maintaining an adequate set of farm records with enterprise accounting. Includes enterprise accounting, interpreting farm records, fertilizer economics, labor records and management, machinery management, and profit and loss statements.

**9.837 Farm Management/Records****Analysis III**

(30 class hrs/mo 8 cr) F/W/Sp/Su

A series of classroom lectures supplemented by instructor on-farm conference, emphasizing use of farm records in management decisions and for modification of farm organization and operations. Includes evaluating the farm business, computers and computer programs in agriculture, marketing, purchasing or leasing farmland, alternative farm planning, tax management, optimum production levels and planning investments in building and equipment.

**9.838 Farm Management/Records****Analysis IV**

(5 class hrs/mo 4 cr) F/W/Sp/Su

Classroom lectures and instructor visits as needed to continue the maintenance and utilization of farm records in management of the student's farm. Includes farm organization, enterprise analysis, labor management, estate planning, commodity futures and control of production resources.

## BIOLOGICAL SCIENCES

**Faculty:**

Carolyn Lebsack, Department Chair  
Henrietta Chambers, Richard Liebaert,  
Robert Ross

The Biology Department provides biological skills and knowledge for personal understanding, vocational training or fulfillment of requirements for an academic degree. Students are helped to understand life processes, the diversity of life, their relationship with the natural environment and their responsibility as stewards of the environment that sustains them. Most of the courses are lab or field oriented.

## BIOLOGICAL SCIENCES COURSES

**4.215 Microbiology for Nurses**

(4 class hrs/wk 3 cr) W

Introductory microbiology course with emphasis on health-related topics. Includes morphology, metabolism, growth and genetics topics related to pathogenicity, immunity, disinfection and epidemiology.

**4.220, 4.221 Integrated Basic Science I, II (Dental)**

(4-6 class hrs/wk 3-4 cr) F/W

Integrated science course for dental assistant students. 4.220, general principles of anatomy and physiology, and anatomy and physiology of the head and the teeth; 4.221, anatomy and physiology of the head and teeth, embryonic development of the mouth and teeth, microbiology and pharmacology.

**BI 101, 102, 103 General Biology**

(5 class hrs/wk 4 cr) F/W/Sp/Su

Lab science course, designed for non-majors. BI 101, cells, inheritance and evolution; BI 102, structure, function and behavior of plants and animals; BI 103, diversity and ecology of living things.

**BI 101 Human Diseases**

(5 class hrs/wk 4 cr)

Introduction to cell biology and inheritance, including errors of metabolism, birth defects, cancer, nutritional diseases and infectious diseases. Note: May be substituted for BI 101 General Biology.

**BI 102 Human Body** (5 class hrs/wk 4 cr)

Introduction to the structure and function of the organ systems of the body and some common disease processes affecting these systems. Lab studies will include dissection of a cat, sheep heart and brain, and cow eye, plus various human physiological experiments. Note: May be substituted for BI 102 General Biology.

**BI 103 Marine Biology**

(5 class hrs/wk 4 cr) Sp

Introduction to what we know about life in the sea, concentrating on the behavior and ecology of the main groups of marine animals. Explores the life cycles and food chains which highlight the interrelationships of animals and plants in the sea, considers how biological and physical factors affect a marine community, and looks at how man alters and interferes with the balance of life in the sea. Note: May be substituted for BI 103 General Biology.

**BI 107 Natural History of Oregon**

(2 class hrs/wk 3 cr)

Introduction to the major ecological communities of Oregon, the organisms which live in them, how they are affected by the environment and how the environment is shaped by Oregon's geological history and climate. Lectures, discussions and field trips explore ecological concepts and representative communities, including tide pool, sand dune, estuary, desert, lake, river, marsh, bog, hot spring, woodland and forest ecosystems. Note: Requires field trips.

**BI 112 Nature Photography**

(4.5 class hrs/wk 3 cr)

Course deals with camera functions and how they affect the photographic image, things of significance in nature and aspects of perceiving images for scientific documentation or artistic expression. Students are given specific assignments in the field in order to reinforce classroom concepts and theories. Note: A 35mm SLR camera with close-up capabilities is recommended for use in this course.

**BI 123 Microbiology**

(5 class hrs/wk 4 cr)

Introductory course, covering all forms of microbial life, with emphasis on bacterial forms. Applications of microbiology to everyday living in medicine, industry, food, water and sanitation will be reviewed.

**BI 221, 222, 223 Human Biology**

(4-5 class hrs/wk 3-4 cr) F/W/Sp

An introduction to the structure and function of the human body. This course is of particular benefit to students in the health professions and physical education, but is valuable to others interested in the anatomy and physiology of the body. BI 221, structure and function of the cell, basic biochemistry, tissues, integumentary system, skeletal system and muscular system; BI 222, respiratory system, urinary system, fluid and electrolyte balance, endocrine system, blood and cardiovascular system; BI 223, lymphatic and immune system, digestive system, metabolism, senses, nervous system and reproductive system. Prerequisite: CH 101, 102 General Chemistry or one year of high school chemistry taken within the last five years; 1.110 Elements of Algebra or one year of high school algebra taken within the last five years.

**BI 251 Principles of Wildlife Conservation**

(3 class hrs/wk 3 cr) W

Introduction to the interrelationships between the physical environment and wild animal populations. Examines the history of wildlife conservation and natural resource use, man's relationship to his natural environment, dynamics of animal populations, principles and practices of fisheries and wildlife management, and the role of wildlife biologists.

**BI 280 CWE Biology**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to biology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**BO 201 General Botany**

(6 class hrs/wk 4 cr) F

Survey of the plant kingdom, including bacteria, algae, fungi, mosses and vascular plants (ferns and allied gymnosperms and angiosperms). Some fossil plants are included. Note: A recent background in high school-level science and mathematics is recommended.

**BO 202 General Botany**

(6 class hrs/wk 4 cr) W

Survey of morphology (structure), physiology (functions) and genetics of seed plants (mostly angiosperms, although gymnosperms are discussed when obviously different). Prerequisite: BO 201 General Botany or instructor approval.

**BO 203 General Botany**

(6 class hrs/wk 4 cr) Sp

Identification of flowering plants, both native and introduced weeds. Includes nomenclature and classification of important families, their floral morphology and vegetative characteristics.

**FN 225 Nutrition**

(4 class hrs/wk 4 cr) F/W/Sp

Introduction to nutrients, their functions, sources, effects of deficiency and individual recommended daily allowances. Includes digestion and metabolism, socio-economic influences, infant nutrition and obesity. Current areas of interest in nutrition and food fads are discussed. Note: A background in chemistry is recommended.

**GS 107 Oceanography**

(3 class hrs/wk 3 cr) F

Introductory course in oceanography, examining the four major categories of oceanographic study: geological, physical, chemical and biological. Emphasizes the geological and geophysical aspects of the seafloor; physical and chemical properties of seawater, waves, tides, ocean circulation and currents; marine ecosystems; and ocean utilization.

**GS 199 Field Ecology**

(1-12 class hrs/wk 1-3 cr)

A variety of courses in the biology and ecology of the Northwest, emphasizing field study of plants, animals, land, water and climate. Includes courses such as Columbia River Biology, Malheur Ecology, Yaquina Bay Biology, Cascade Lakes Ecology and Crater Lake Ecology. Note: Most courses involve a weekend field trip with pre- and post-trip evening meetings. May be taken as electives by transfer students, but also generally valuable for learning more about the environment.

**GS 199 Human Biology Preparation**

(3 class hrs/wk 3 cr) Su

A course designed to prepare prenursing students for the human biology program, recommended for those who have not been in school for a while or who need a basic human biology review. Course will provide a basic understanding of the structure and function of the various systems of the body, with emphasis on terminology.

**GS 199 General Science/Special Studies**

(1-12 class hrs/wk 1-4 cr) F/W/Sp/Su

Students desiring to take another General Biology alternative under the same course number or to carry independent studies in the life sciences may do so under this number and receive transferable credits. Note: Students will be screened for transferable credit. The number of credits given depends upon the nature of the study and the amount of effort needed to accomplish the task.



**ZO 201, 202, 203 General Zoology**

(6 class hrs/wk 4 cr) F/W/Sp

Introduction to the study of animal life. ZO 201, structure and function of vertebrate animals, cells and biological molecules; ZO 202, molecular genetics, Mendelian genetics, reproduction, animal development and evolution; ZO 203, classification, structure and function of animals representing the major animal groups and ecology. Note: General Zoology sequence may be substituted for "core biology" (BI 211, 212, 213) at four-year institutions. Prerequisite: High school science and math; concurrent enrollment in chemistry and math. Recommended for science majors.

## CIVIL ENGINEERING AND DRAFTING TECHNOLOGY

**Faculty:**

Lann Richardson, Department Chair  
Dave Emigh, Mark Rohde

## CIVIL ENGINEERING TECHNOLOGY

The Civil Engineering Technology program offers technical-level training in drafting, surveying, problem solving and computer programming skills. Students enrolling in the two-year vocational program may learn essential technical skills allowing them to work with civil engineers in the planning, designing and construction of highways, bridges, dams, buildings, process facilities and other industrial structures. Tasks performed by civil engineering technicians include layout and detail drafting, specification writing, surveying, inspection, programming and supervision of other technicians.

Students expecting to graduate in two years should have a strong interest in design, mathematics, sciences and conceptualization. They should have sufficient mathematics and writing skills to enroll in 6.551 Technical Mathematics I and WR 121 English Composition. Upon entering the program they should be prepared to purchase the basic drafting tools and equipment, at an approximate cost of \$100.

The Civil Engineering Technology curriculum leads to an Associate of Science degree. An additional examination is required to become a Certified Engineering Technician.

## CIVIL ENGINEERING TECHNOLOGY CURRICULUM

### Associate of Science in Civil Engineering Technology

#### General Education Requirements . . 16-20

See graduation requirements for

Associate of Science degree

6.551 Tech Math I may substitute for math requirement.

SP 112 Fundamentals of Speech is required.

#### Major Requirements . . . . . 80

##### Fall — First Year

4.128 Drafting Fundamentals	4
6.214 Tech Physics	4
6.340 Tech Calculations I	2
6.551 Tech Math I (substitutes for general ed requirement)	4

##### Winter

4.131 Drafting I	4
6.341 Tech Calculations II	3
6.552 Tech Math II	4

##### Spring

4.132 Drafting II	4
4.133 Production Methods & Materials	4
6.202 Statics	3
6.216 Tech Physics	4
6.553 Tech Math III	4

##### Fall — Second Year

4.148 Practical Descriptive Geometry	3
6.200 Surveying I	3
6.203 Strength of Materials	3
6.218 Intro to Sanitary Engineering	2
WR 227 Tech Report Writing	3

##### Winter

6.205 Civil Drafting I	3
6.235 Applied Hydraulics	4
6.217 Intro to Soil Mechanics	2

##### Spring

6.201 Surveying II	2
6.204 Computer Applications	3
6.206 Civil Drafting II	3
6.210 Engineering Design Project	3
6.211 Prin of Road Design	2

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100

## DRAFTING TECHNOLOGY

The two-year Drafting Technology program is a technical curriculum designed to assist students in acquiring basic attitudes, skills and knowledge necessary to successfully enter drafting occupations.

The first year of study provides a sound general background; the second year provides broader coverage of subject selection while permitting the student to work with such specialties as civil, mechanical, electronic, architectural and technical illustration.

All entering drafting technology students planning to complete the program within a two-year period are advised, as a minimal requirement, to have a ninth-grade reading level and be prepared to register for 6.550 Pre-Technical Mathematics.

Students new to the subject area should be prepared to purchase the basic tools of the profession, at an approximate cost of \$100.

The Drafting Technology curriculum leads to an Associate of Science degree.

## DRAFTING TECHNOLOGY CURRICULUM

### Associate of Science in Drafting Technology

#### General Education Requirements . . 16-20

See graduation requirements for Associate of Science degree  
6.550 Pre-Tech Math may substitute for math requirement.

#### Major Requirements . . . . . 75

##### Fall — First Year

4.128 Drafting Fundamentals	4
4.131 Drafting I	4
6.550 Pre-Tech Math (substitutes for general ed requirement)	4

##### Winter

4.132 Drafting II	4
6.551 Tech Math I	4

##### Spring

4.133 Production Methods & Materials	4
6.552 Tech Math II	4
MT 173B Microcomputers: BASIC	3
WR 227 Tech Report Writing	3

##### Fall — Second Year

4.141 Advanced Drafting I	4
4.148 Practical Descriptive Geometry	3
6.200 Surveying I	3
6.214 Tech Physics	4

##### Winter

4.123 Illustration	4
4.142 Advanced Drafting II	4
4.149 Applied Mechanics	3
6.205 Civil Drafting I	3

##### Spring

4.143 Advanced Drafting III	4
4.144 Computer-Assisted Drafting	4
4.150 Drafting Design Project	2
6.206 Civil Drafting II	3

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## CIVIL ENGINEERING AND DRAFTING TECHNOLOGY COURSES

### 1.280 CWE Drafting

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to drafting. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### 4.100 Blueprint Reading: Construction

(3 class hrs/wk 1-2 cr)

Individualized course for students in construction programs, providing job-related skills in interpreting construction drawings and symbols and in the preparation of idea-explanation freehand sketches. Topics include terminology, dimensioning, plot plans and construction working drawings.

### 4.100 Blueprint Reading: General

(3 class hrs/wk 1-2 cr)

Individualized course for students in vocational programs, providing job-related skills in interpreting drawings and symbols. Includes terminology and preparation of idea-explanation sketches.

### 4.100 Blueprint Reading: Metals

(3 class hrs/wk 1-2 cr)

Individualized course for students in metal-working occupational programs, providing job-related skills interpreting industrial drawings and symbols, and in the preparation of idea-explanation freehand sketches. Topics include dimensions, tolerances, threads, holes, material specifications, notes, lists, detail, assembly and fabrication drawings.

### 4.100 Blueprint Reading: Water/Wastewater

(3 class hrs/wk 1-2 cr)

Individualized course for students in water/wastewater occupational program. Provides job-related skills in interpreting water/wastewater treatment plant drawings. Topics include architecture, building construction, plot plan and electrical, plumbing, heating, ventilation and air conditioning plans for treatment plants.

### 4.109 Technical Sketching

(2 class hrs/wk 1 cr) F

Freehand sketching course designed to develop skills for technical and industrial applications. Includes spatial visualization, multi-view theory and pictorial views.

### 4.123 Illustration

(6 class hrs/wk 4 cr) W

Introduction to techniques and skills involved in graphic production of illustrations for brochures, catalogs and service manuals. Includes production of detailed isometric drawings and exploded assembly drawings, pencil, ink and color assignments. Prerequisite: 4.132 Drafting II or instructor approval.

### 4.124 Technical Drawing I

(3 class hrs/wk 2 cr) F

Introductory course, providing instruction and drafting practice related to basic graphic communication and interpretive needs of industrial, occupational and technical students.

### 4.128 Drafting Fundamentals

(6 class hrs/wk 4 cr) F/W

Introduction to the basic attitudes, knowledge and skills required of an engineering technician or drafter. The course will build skills and knowledge in line language, lettering, technical sketching; the use of drafting equipment, print machines and various drafting media; and basic types of drawing. Prerequisite: 6.550 Pre-Technical Math, to be taken concurrently.

### 4.131 Drafting I

(6 class hrs/wk 4 cr) W/Sp

Course designed to provide basic skills and knowledge in drafting techniques. Includes the use and application of drafting instruments, dimensioning techniques, orthographic projection, pictorial drawings, fasteners and machine finishes. Prerequisite: 4.128 Drafting Fundamentals.

### 4.132 Drafting II

(6 class hrs/wk 4 cr) W/Sp

Course in drafting techniques, continuing work on concepts introduced in 4.131 Drafting I. Emphasizes auxiliary views, section views, tolerances, inking and metric dimensioning. Prerequisite: 4.131 Drafting I.

### 4.133 Production Methods & Materials

(5 class hrs/wk 4 cr) Sp

A fundamental course in the materials and processes used in the construction and manufacturing industries, providing familiarity with terminology, tools, equipment, standards and materials.

### 4.136 Technical Lettering

(2 class hrs/wk 1 cr)

Course develops skills related to technical and industrial graphic applications. Study will include letter forms, spacing, layout and balance, and upper and lower case.

### 4.141 Advanced Drafting I

(6 class hrs/wk 4 cr) F

Advanced course in the preparation of various machine working drawings. Emphasizes speed and accuracy in preparation of layouts, assembly and detail drawings. Prerequisite: 4.132 Drafting II.

### 4.142 Advanced Drafting II

(6 class hrs/wk 4 cr) W

Advanced course in the preparation of various architectural working drawings. Emphasizes construction details, planning, site layout and architectural styles. Prerequisite: 4.132 Drafting II.

### 4.143 Advanced Drafting III

(6 class hrs/wk 4 cr) Sp

Advanced course in the preparation of various electronics drawings and schematics. Emphasizes component recognition, graphic symbols, drawing types and drafting techniques used in the electronics industry. Prerequisite: 4.132 Drafting II.

### 4.144 Computer-Assisted Drafting

(6 class hrs/wk 4 cr) Sp

Introduction to the techniques and skills involved in producing computer drawings. Emphasizes terminology, hardware and software characteristics, design procedures and drawing production. Prerequisite: 4.132 Drafting II.

### 4.148 Practical Descriptive Geometry

(4 class hrs/wk 3 cr) F

Course in spatial graphics for the drafting and engineering technician. Course will include design problems incorporating auxiliary views, true length of lines, true size and shape of angles-planes, and points of intersection. Development from point-line-plane through the use of revolution and auxiliary projection will be included. Prerequisite: 4.132 Drafting II.

**4.149 Applied Mechanics**

(3 class hrs/wk 3 cr) W

A basic course in elementary statics and engineering mechanics for drafting technicians. Emphasizes graphical and analytical solutions to engineering problems, vector analysis and processes for problem solving. Prerequisite: 6.553 Technical Math III; four credits of physics or instructor approval.

**4.150 Drafting Design Project**

(3 class hrs/wk 2 cr) Sp

Advanced study in an area of student interest, selected or assigned. Problems require analysis, mathematical calculations and use of reference materials. Prerequisite: Department approval or satisfactory completion of four terms of the technical program.

**6.200 Surveying I**

(4 class hrs/wk 3 cr) F

Basic course in surveying techniques. Includes fundamentals of chaining and leveling, use of basic surveying instruments and office procedures. Practical application of procedures and instruments is provided through appropriate field problems. Prerequisite: 4.132 Drafting I; 6.551 Technical Math I.

**6.201 Surveying II**

(4 class hrs/wk 2 cr) Sp

Advanced course in surveying practice, stressing practical problems in plane, cadastral, route and construction surveying. Practical applications of contemporary surveying equipment and computational devices are used to help students develop skills as engineering technicians. Prerequisite: 6.200 Surveying I; 6.205 Civil Drafting I.

**6.202 Statics**

(3 class hrs/wk 3 cr) Sp

A basic course for technicians, involving analysis of forces on structures in equilibrium. Emphasizes problem solving and problem solving techniques. Prerequisite: 6.214 Technical Physics; 6.553 Technical Math III.

**6.203 Strength of Materials**

(3 class hrs/wk 3 cr) F

An algebra-based, mechanics of materials course, emphasizing analysis of stresses and strains produced in structural elements under typical loading conditions. From this analysis students will design beams, trusses, columns and footings, using standard techniques and practices. Prerequisite: 6.555 Technical Math III; 6.202 Statics; 6.216 Technical Physics.

**6.204 Computer Applications**

(5 class hrs/wk 3 cr) Sp

Advanced course in computer methods for problem solution, with emphasis on the microcomputer as a tool for graphics and analytic problem solving in the engineering field. Prerequisite: 6.340 Technical Calculations II; 6.205 Civil Drafting I; 6.203 Strength of Materials or instructor approval.

**6.205 Civil Drafting I**

(6 class hrs/wk 3 cr) W

Introductory course in drafting practices and problems related to the civil engineering field. Emphasizes land survey drawings, legal descriptions, mapping and residential design. Prerequisite: 4.132 Drafting II; 6.200 Surveying I.

**6.206 Civil Drafting II**

(6 class hrs/wk 3 cr) Sp

Advanced course in drafting related to the civil engineering field. Emphasizes preparation of drawings for construction of a variety of structures. Includes discussions of piping systems, highway structures, dams, roads, bridges and other structures as introduction to civil engineering structures. Prerequisite: 6.205 Civil Drafting I.

**6.210 Engineering Design Project**

(6 class hrs/wk 3 cr) Sp

Advanced course for engineering technicians, emphasizing practical design experience. Students will develop engineering designs using contemporary techniques and practices and will produce data, drawings and problems for civil engineering projects. Prerequisite: 6.203 Strength of Materials; 6.205 Civil Drafting I.

**6.211 Principles of Road Design**

(4 class hrs/wk 2 cr) Sp

Introductory course in road construction and design. Emphasizes calculations for earthwork, drawings for construction and techniques for layout. Prerequisite: 6.205 Civil Drafting I.

**6.217 Introduction to Soil Mechanics**

(2 class hrs/wk 2 cr) W

An overview of soil characteristics, physical properties and mechanical load carrying characteristics. Emphasizes calculations and procedures for sampling soils. Prerequisite: 6.203 Strength of Materials; 6.201 Surveying I.

**6.218 Introduction to Sanitary****Engineering** (2 class hrs/wk 2 cr) F

Designed to give engineering technicians an overview of equipment used in the water/wastewater industry. Topics include watershed management, water and wastewater treatment, pumping installations, water distribution and sanitary sewage collection. Prerequisite: 6.553 Technical Math III; 6.216 Technical Physics.

# ELECTRICITY / ELECTRONICS TECHNOLOGY

**Faculty:**

Dale Trautman, Department Chair  
Fred Badal, Kent Hansen, Don Hopper

The Electricity/Electronics Technology Department offers a two-year program which prepares students for occupations as electrical or electronic technicians. Course work is approximately half theoretical and half practical in content. Department courses and instructional techniques are continually reviewed to assure that student and industrial needs are met.

Department staff actively promote effective industrial relations and seek out prospective student employers. Former students have been employed by Tektronix, Intel, Applied Theory, Hewlett-Packard, White's Electronics, General Instruments, City of Corvallis, Neptune MicroFloc, Lafayette Electronics and GE medical systems.

Entering students must be prepared to enroll in 6.551 Technical Math I or MT 101 College Algebra in fall term of the first year. Students are expected to have 12th-grade reading and communication abilities and the motivation to become involved in an increasingly complex technical field.

The Electricity/Electronics curriculum leads to an Associate of Science degree.



## ELECTRICITY/ELECTRONICS TECHNOLOGY CURRICULUM

### Associate of Science in Electricity/Electronics Technology

#### General Education Requirements . . 16-20

See graduation requirements for Associate of Science degree  
1.103 Occupational Speech is required.  
6.551 Tech Math I or MT 101 College Algebra may substitute for math requirement.

#### Major Requirements . . . . .91

##### Fall — First Year

1.150 Reading Skills	1
6.214 Tech Physics	4
6.316 Intro to Electronics	1
6.320 Direct Current	6
6.343 Electronics Lab Skills I	1

☐ Math (Select one) . . . . . (4)

6.551 Tech Math I (substitutes for general ed requirement)	4
MT 101 College Algebra (substitutes for general ed requirement)	4

##### Winter

1.134 Voc Study Skills	1
6.215 Tech Physics	4
6.321 Alternating Current	6

☐ Math (Select one) . . . . . (4)

6.552 Tech Math II	4
MT 102 College Trigonometry	4

##### Spring

4.124 Tech Drawing I	2
6.215 Tech Physics	4
6.322 Semiconductors	8

☐ Math (Select one) . . . . . (4)

6.553 Tech Math III	4
MT 110 Analytical Geometry	4

##### Fall — Second Year

6.223 Analog Circuits I	5
6.340 Tech Calculations I	2
6.346 Digital Circuits I	5
6.344 Electronic Lab Skills II	1

##### Winter

6.324 Analog Circuits II	5
6.341 Tech Calculations II	2
6.347 Digital Circuits II	5

##### Spring

6.235 Instrumentation	5
6.338 Tech Electricity III	3
6.349 Microprocessors	5
WR 227 Tech Report Writing	3

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## ELECTRICITY/ELECTRONICS COURSES

### 6.316 Introduction to Electronics

(1 class hrs/wk 1 cr) F

Preparatory course designed to help the student better understand his or her role in electronics. The Electricity/Electronics program, Cooperative Work Experience and job placement will be outlined and discussed. Note: All electronics career students are required to take this course.

### 6.320 Direct Current Theory and Application

(10 class hrs/wk 6 cr) F

Introduction to electricity and electronics and basic theories and laws relating to DC electricity. Prerequisite: High school algebra and geometry or equivalent; 6.551 Technical Mathematics or MT 101 College Algebra, to be taken concurrently; 6.214 Technical Physics or PH 201 General Physics, to be taken concurrently.

### 6.321 Alternating Current Theory and Application

(10 class hrs/wk 6 cr) W

A continuation of 6.320 Direct Current Theory, providing knowledge and use of basic theories and laws relating to AC electricity. Basic usage skills for the oscilloscope, function generator and power supply also are included. Prerequisite: 6.320 Direct Current Theory or instructor approval; 6.551 Technical Math I or MT 101 College Algebra; 6.552 Technical Math II or MT 102 College Trigonometry, to be taken concurrently; 6.214 Technical Physics or PH 202 General Physics, to be taken concurrently.

### 6.322 Basic Semiconductors

(13 class hrs/wk 8 cr) Sp

Introduction to theory and application of electronic devices such as semiconductor diodes and BJT/FET transistors, recorder use, component testing and troubleshooting. Prerequisite: 6.321 Alternating Current Theory or instructor approval; 6.552 Technical Math II or MT 102 College Trigonometry.

### 6.323 Analog Circuits I

(9 class hrs/wk 5 cr) F

Introduction to circuit theory and practical application of linear circuits with and without feedback, some composed of discrete components and some integrated circuits (ICs). Prerequisite: 6.322 Basic Semiconductors or instructor approval.

### 6.324 Analog Circuits II

(9 class hrs/wk 5 cr) W

General survey of basic nonlinear circuits. Covers nonlinear circuits associated with wave shaping, multivibrators, power control and communication receivers. Prerequisite: 6.323 Analog Circuits I or instructor approval.

### 6.325 Instrumentation Techniques

(9 class hrs/wk 5 cr) Sp

Survey of instrumentation techniques, covering transducers, signal conditioning, data recording and control loops. Prerequisite: 6.324 Analog Circuits II or instructor approval.

### 6.330 Vocational Electricity

(3 class hrs/wk 2 cr)

Introduction to basic electrical safety, meter use and DC theory. Emphasizing avoidance of hazardous situations and correct, basic power tool repair.

### 6.336 Technical Electricity I

(4 class hrs/wk 3 cr) F

Introduction to basic electrical theory, safety and DC meter use. Designed to prepare the student for basic electrical troubleshooting required in other industrial trades. Prerequisite: 1.110 Elements of Algebra.

### 6.337 Technical Electricity II

(4 class hrs/wk 3 cr) W

Introduction to basic AC measurements and calculations. Includes basic theory and practical application of AC motors, alternators and motor controls. Prerequisite: 6.336 Technical Electricity I; 4.204 Math III.

### 6.338 Technical Electricity III

(4 class hrs/wk 3 cr) Sp

Study of the operation theory of motors, generators, transformers, batteries and industrial motor controls. Provides entry-level skills and technical information required for the electrical trades. Prerequisite: 6.336, 6.337 Technical Electricity I and II; 6.550 Pre-Technical Math.

### 6.343 Electronic Lab Skills I

(3 class hrs/wk 1 cr)

Basic course in electronic lab skills, including safety, VOM usage, component identification, wire terminal and component soldering, circuit board loading and circuit board desoldering.

### 6.344 Electronic Lab Skills II

(2 class hrs/wk 1 cr)

Electronic lab skills course in oscilloscope and function generator usage, printed circuit board layout, fabrication, loading and soldering. Includes a term project in which a power supply is mechanically designed, fabricated per schematic and tested per specification. Prerequisite: 6.343 Electronic Lab Skills I.

### 6.346 Digital Circuits I

(9 class hrs/wk 5 cr) F

Analysis and application of basic digital circuits — gates through counters. Prerequisite: 6.322 Basic Semiconductors or instructor approval.

**6.347 Digital Circuits II**

(9 class hrs/wk 5 cr) W

Covers theory and application of digital concepts and circuits based primarily around integrated circuits, counter through basic digital computing systems. Prerequisite: 6.346 Digital Circuits I or instructor approval.

**6.349 Basic Microprocessors**

(9 class hrs/wk 5 cr) Sp

Introduction to medium- and large-scale integrated digital circuit concepts, aimed primarily at microprocessors and support hardware. Prerequisite: 6.347 Digital Circuits II or instructor approval.

# ENGINEERING TRANSFER

Fred Badal, Advisor

The Engineering Transfer program is designed for students who plan to take the first half of their undergraduate studies at LBCC, then transfer to a four-year institution to complete their undergraduate education.

Each engineering curriculum includes a number of courses that are appropriate for all engineering students. Because of their commonality, these are called common core courses. These classes have their roots in mathematics and basic science and serve as a bridge between science and engineering. They involve the application of scientific method to practical engineering situations and lead to solution of problems that are fundamental in analysis, design and synthesis.

Each engineering program has unique requirements during the first two years. This factor, coupled with the differing levels of academic preparation, requires that each student follow a unique sequence of classes to accomplish his or her education objectives. The following curriculum is provided as a general guide for the first two years of the engineering transfer student.

## ENGINEERING TRANSFER CURRICULUM

### General Education Requirements . . . . .9

<input type="checkbox"/> Composition . . . . .	(3)
WR 121 English Composition . . . . .	3
<input type="checkbox"/> Speech . . . . .	(3)
SP 112 Fund of Speech . . . . .	3
<input type="checkbox"/> Physical Education . . . . .	(3)
PE 185 Activity Courses (repeated for three credits) . . . . .	3

### Major Requirements . . . . .73

<input type="checkbox"/> Math . . . . .	(32)
MT 101 College Algebra . . . . .	4
MT 102 Trigonometry . . . . .	4
MT 110 Analytic Geometry . . . . .	4
MT 200 Calculus . . . . .	4
MT 201 Calculus . . . . .	4
MT 202 Calculus . . . . .	4
MT 203 Calculus . . . . .	4
MT 221 Applied Differential Equations . . . . .	4
<input type="checkbox"/> Chemistry . . . . .	(12)
CH 201 General Chemistry . . . . .	4
CH 202 General Chemistry . . . . .	4
CH 203 General Chemistry . . . . .	4
<input type="checkbox"/> Physics . . . . .	(12)
PH 211 General Physics . . . . .	4
PH 212 General Physics . . . . .	4
PH 213 General Physics . . . . .	4
<input type="checkbox"/> Engineering . . . . .	(17)
GE 101 Engineering Orientation . . . . .	2
GE 102 Engineering Orientation . . . . .	2
GE 115 Engineering Graphics . . . . .	3
GE 211 Statics . . . . .	3
GE 212 Dynamics . . . . .	3
GE 221 Electric Circuit Fund . . . . .	4

### Electives . . . . .26

Humanities, social sciences courses or approved CWE.

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## ENGINEERING TRANSFER COURSES

### GE 101 Engineering Orientation

(2 class hrs/wk 2 cr) F/W

Department engineering orientation: develops skills in problem solving; introduces statics. Prerequisite: MT 101 College Algebra, to be taken concurrently.

### GE 102 Engineering Orientation

(3 class hrs/wk 2 cr) F/W

Provides the student opportunity to write computer programs using a procedure- or problem-oriented language. A high level compiler-based language is used. Topics covered are: input/output, arithmetic statements, transfer and control statements, arrays and subprograms.

### GE 103 Engineering Orientation

(2 class hrs/wk 2 cr) Sp

Provides introduction to elementary statics and strength of materials.

### GE 115 Engineering Graphics

(6 class hrs/wk 3 cr) Sp

Introduction to graphic communication, including multiview and pictorial representation, conceptual design, spatial analysis, engineering applications, graphic analysis and solutions, and industrial procedures. Prerequisite: MT 101 College Algebra, to be taken concurrently.

### GE 211 Statics

(3 class hrs/wk 3 cr) F

Introductory course in engineering statics, including the laws of mechanics, vector algebra, moments, force systems, equilibrium, trusses, beams, cables, friction, centroids and moments of inertia. Prerequisite: MT 200 Calculus.

### GE 212 Dynamics

(3 class hrs/wk 3 cr) W

A study of dynamics of rigid bodies, including the kinematics and dynamics of single particles and systems of particles. Linear momentum, moments of momentum, relative motion kinetics, energy and impulse momentum. Prerequisite: GE 211 Statics; MT 200, 201 Calculus.

### GE 213 Strength of Materials

(3 class hrs/wk 3 cr) Sp

Course in the properties of structural materials. Includes analysis of stress and deformation in axially loaded members, circular shafts and beams, and in statically indeterminate systems containing these components. Prerequisite: GE 211 Statics; MT 201 Calculus.

### GE 221 Electric Circuit Fundamentals

(6 class hrs/wk 4 cr) F/W

Fundamentals of operating electrical circuits, including the resistive, inductive and capacitive elements driven by D.C., sinusoidal and exponential signals. Teaches the solution to problems involving voltages and currents in complex RLC networks. Note: Available only to second-year engineering students. Prerequisite: MT 201 Calculus.

### GE 222 Electric Control Fundamentals

(6 class hrs/wk 4 cr) Sp

Basic electric network theory, including mutual coupling and two-port representation. Provides introduction to three-phase circuits and instrumentation required to measure power and VARS. Also provides introduction to transient phenomena and use of the Laplace transforms for solution of differential equations. Use of the "S" plane concept, transfer functions and block diagram representation for signal flow are introduced. Note: Available only to second-year engineering students. Prerequisite: MT 201 Calculus; GE 221 Electrical Circuit Fundamentals.

**GE 280 CWE Electronics**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to electronics. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**GE 280 CWE Engineering**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to engineering. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

## MATHEMATICAL SCIENCES

**Faculty:**

Bob Ulrich, Department Chair  
Steve Johnson, Ron Mason, Mike Morgan,  
Wally Reed, Lynn Trimpe

Mathematical Sciences is a service department to the various technical and occupational programs of the college. The department also offers a full complement of developmental courses and a comprehensive curriculum of transfer mathematics through the first two years. The department operates a mathematics laboratory which features a testing facility and individualized instruction in mathematics at the developmental level.

## MATHEMATICAL SCIENCES COURSES

**1.109 Pre-Business Mathematics**

(4 class hrs/wk 1-3 cr) F/W/Sp

Preparation for 2.515 Business Mathematics. Includes a review of fundamental operations with whole numbers, fractions, decimals and percentages. Note: A minimum competency level is required to pass this course.

**1.110 Elements of Algebra**

(4 class hrs/wk 1-4 cr) F/W/Sp

Development of the basic operations with algebraic expressions and methods for solving linear equations. Introduces rational expressions, factoring, graphing and solving quadratic equations by factoring. Designed for the student who has no previous algebra or needs a review of elementary algebra. Note: A minimum competency level is required to pass this course.

**4.200 Math I** (4 class hrs/wk 1-4 cr) F/W/Sp

Thorough review of arithmetic, including fundamental operations with whole numbers, fractions, decimals, percentages and measurement. Provides a basis for 4.202 Math II or 1.110 Elements of Algebra. Note: A minimum competency level is required to pass this course.

**4.202 Math II**

(4 class hrs/wk 1-4 cr) F/W/Sp

Develops skills for solving problems in various occupations, including measurement and conversion, integers, algebra, equations, ratio and proportion. Note: A minimum competency level is required to pass this course. Prerequisite: 4.200 Math I or equivalent.

**4.204 Math III**

(4 class hrs/wk 1-4 cr) F/W/Sp

Introduces occupational formulas and related applied problems in geometry, graphs, right triangle trigonometry, logarithms and exponents. Note: A minimum competency level is required to pass this course. Prerequisite: 4.202 Math II or equivalent.

**6.340 Technical Calculations I**

(2 class hrs/wk 2 cr) F

Designed to meet the calculating needs of the technician in electronics, civil and structural engineering, and technical drafting. Engineering methods and related problem solving will be considered. Prime emphasis will be placed on using hand-held, programmable calculators. Prerequisite: 1.110 Elements of Algebra or equivalent.

**6.341 Technical Calculations II**

(2 class hrs/wk 3 cr) W

Course emphasizing electronic computing devices and related problem solutions. The programming language BASIC will be used to write programs with application to student needs or curriculum requirements. Problem solution will be structured in terms of analysis, formulation, calculation and clear presentation. Prerequisite: 6.340 Technical Calculations I or instructor approval.



Lab courses allow biological science students to apply knowledge gained through classroom lectures.



**6.550 Pre-Technical Mathematics**

(4 class hrs/wk 4 cr) F/Sp

Applied, intuitive geometry for students who did not take geometry in high school. Prerequisite: MT 100 Intermediate Algebra.

**6.551 Technical Mathematics I**

(4 class hrs/wk 4 cr) F/W

Mathematics for students in technical programs with emphasis on solving applied problems. Reviews basic algebra, scientific notation, metric measurement and conversion. Includes an introduction to trigonometry. Prerequisite: 6.550 Pre-Technical Mathematics or equivalent; MT 100 Intermediate Algebra.

**6.552 Technical Mathematics II**

(4 class hrs/wk 4 cr) W/Sp

Mathematics for students in technical programs with emphasis on solving applied problems. Includes trigonometry, exponents and logarithms, quadratic equations and analytic geometry. Prerequisite: 6.551 Technical Math I or equivalent.

**6.553 Technical Mathematics III**

(4 class hrs/wk 4 cr) Sp

Mathematics for students in technical programs with emphasis on solving applied problems. Includes differential and integral calculus. Prerequisite: 6.552 Technical Math II or equivalent.

**MT 100 Intermediate Algebra**

(4 class hrs/wk 1-4 cr) F/W/Sp

Introduces rational algebraic expressions, radicals, factoring, inequalities, absolute value, logarithms, linear and quadratic equations. Note: A minimum competency level is required to pass this course. Prerequisite: 1.110 Elements of Algebra or equivalent.

**MT 101 College Algebra**

(4 class hrs/wk 4 cr) F/W/Sp

Introduction to relations and linear, quadratic, exponential, polynomial and logarithmic functions. Includes theory of equations, linear inequalities, systems of equations, matrices and determinants. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**MT 102 Trigonometry**

(4 class hrs/wk 4 cr) F/W/Sp

Introduction to the circular functions, trigonometric functions, complex numbers, polar coordinates, right triangle trigonometry and identities. Prerequisite: MT 101 College Algebra or equivalent.

**MT 110 Analytic Geometry**

(4 class hrs/wk 4 cr) F/W/Sp

Introduction to conic sections, polar coordinates, polar graphs, vectors, translations and rotations. Prerequisite: MT 102 Trigonometry or equivalent.

**MT 161 Mathematics for the Biological, Management and Social Sciences**

(4 class hrs/wk 4 cr) F/W

Survey of linear equations, inequalities, linear programming, the simplex methods and mathematics of finance. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**MT 162 Mathematics for the Biological, Management and Social Sciences**

(4 class hrs/wk 4 cr) F/W/S

Survey of probability and probability models, with an introduction to statistics. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**MT 163 Mathematics for the Biological, Management and Social Sciences**

(4 class hrs/wk 4 cr) F/W/S

Intuitive development of the calculus of polynomial, exponential and logarithmic functions, and extrema theory and applications. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**MT 171 Math with Pocket Calculators**

(2-8 class hrs/wk 1-4 cr)

Individualized instruction in the use of a basic (non-programmable) calculator. Prerequisite: 1.110 Elements of Algebra or equivalent.

**MT 173B Microcomputers: BASIC**

(4 class hrs/wk 3 cr) F/W/Sp

Introduction to the BASIC language in computing devices and its use in solving problems related to the student's field of interest.

**MT 173P Microcomputers: PASCAL**

(4 class hrs/wk 3 cr)

Introduction to the PASCAL language in computing devices and its use in solving problems related to the student's field of interest.

**MT 174B Microcomputers: Advanced BASIC**

(4 class hrs/wk 3 cr)

A continuation of MT 173B Microcomputers: BASIC, plus string operations, graphics, file handling and computer modeling. Prerequisite: MT 173B Microcomputers: BASIC or 6.341 Technical Calculations II.

**MT 200 Calculus**

(4 class hrs/wk 4 cr) F/W/Sp

Traditional calculus sequence for students of mathematics, science and engineering. Includes differentiation, extrema, related rates, antidifferentiation, the definite integral and the fundamental theorem of calculus. Prerequisite: MT 110 Analytic Geometry.

**MT 201 Calculus**

(4 class hrs/wk 4 cr) F/W/Sp

Second course in traditional calculus sequence for students of mathematics, science and engineering. Includes areas, volumes of revolution, hyperbolic functions, centroids, work, liquid pressure, techniques of integration and numerical integration. Prerequisite: MT 200 Calculus.

**MT 202 Calculus**

(4 class hrs/wk 4 cr) F/W/Sp

Third course in traditional calculus sequence for students of mathematics, science and engineering. Includes indeterminate forms, improper integrals, polar coordinates, infinite series and 2-space vectors. Prerequisite: MT 201 Calculus.

**MT 203 Calculus**

(4 class hrs/wk 4 cr) F/W/Sp

Fourth course in traditional calculus sequence for students of mathematics, science and engineering. Includes 3-space vectors, multi-variable calculus, line integrals, extrema for bivariate functions, LaGrange multipliers, spherical coordinates and multiple integration. Prerequisite: MT 202 Calculus.

**MT 204 Calculus**

(4 class hrs/wk 4 cr)

An intermediate treatment of calculus with a vector approach that provides mathematical skills for courses in advanced calculus, fluid mechanics and electromagnetic theory. Prerequisite: MT 203 Calculus.

**MT 214 Statistics for Scientists and Engineers**

(4 class hrs/wk 4 cr)

Probability and inferential statistics applied to scientific and engineering problems. Includes random variables, expectation, sampling, estimation, hypothesis testing, regression, correlation and analysis of variance. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**MT 221/222 Applied Differential Equations**

(4 class hrs/wk 4 cr)

Introduction to ordinary differential equations, applications, systems of linear differential equations, Laplace transforms, numerical methods, Bessel functions and Fourier series. Prerequisite to MT 221: MT 201 Calculus. Prerequisite to MT 222: MT 203 Calculus. MT 241 Elementary Linear Algebra is recommended for MT 222.

**MT 233F Introduction to Numerical Computation: FORTRAN**

(4 class hrs/wk 4 cr)

FORTRAN programming and numerical methods applied to problems in business, mathematics, physics, biology, engineering and other sciences. Prerequisite: MT 200 Calculus; knowledge of a programming language, preferably FORTRAN.

**MT 241 Elementary Linear Algebra**

(4 class hrs/wk 4 cr)

Applications of matrices, determinants, linear equations, vector spaces, eigenvalues and diagonalization. Prerequisite: MT 200 Calculus.

**MT 280 CWE Mathematics**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to mathematics. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

# PHYSICAL SCIENCES

## Faculty:

David Benson, John Kraft, Raymond David Perkins, Steve Rasmussen

The Physical Science Department offers a two-year program in science laboratory technology and provides physical science instruction for other occupational programs and for lower division transfer students. The department has excellent teaching laboratories and lecture rooms plus an analytical instrument laboratory. Courses are offered in physics, chemistry, astronomy, geology, meteorology, laboratory procedures and scientific glassblowing.

# SCIENCE LABORATORY TECHNOLOGY

The Science Laboratory Technology program provides training for those planning careers in science and science-related laboratories. Specific career opportunities include analytical, biological, environmental and agricultural testing; metals production and testing; pulp and paper products; food processing; academic research and governmental laboratory positions. Laboratory technicians assist engineers, scientists and government agencies in basic research, development, quality control and monitoring work. Course work develops practical and theoretical knowledge of biological and physical science laboratory procedures.

Two curriculum options are available in the Science Laboratory Technology program. The associate degree curriculum shown is designed to provide skills for direct employment as laboratory technicians. Based on student interests and aptitudes, transfer-numbered courses approved by the program advisor may be substituted for some of the specified curriculum. A listing follows the degree curriculum.

The Science Laboratory Technology curriculum leads to an associate degree.

Note: The Science Laboratory Technology curriculum currently is undergoing review. Check with the department adviser, David Benson, for program requirements and options.

## PHYSICAL SCIENCE COURSES

### 6.214, 6.215, 6.216 Technical Physics (7 class hrs/wk 4 cr) F/W/Sp

Introductory course for students in technical fields, such as drafting, electricity/electronics and metallurgy, who need a background in physical principles. 6.214, mechanics; 6.215, electricity, magnetism and heat; 6.216, wave motion, sound, light, optics, elementary atomic and nuclear physics. Note: Must be taken in sequence. Prerequisite to 6.214: 6.550 Pre-Technical Math. Prerequisite to 6.215: 6.551 Technical Math.

### 9.645 Scientific Glassblowing (6 class hrs/wk 3 cr) Sp

Introduction to basic techniques of scientific glassblowing, including properties of glass, construction, repair and modification of glass laboratory equipment.

### AS 101 Rudiments of Meteorology (1 class hrs/wk 1 cr)

Descriptive treatment of weather phenomena, including winds, air masses, fronts, clouds and precipitation. Note: Video course.

### CH 101, 102 General Chemistry (6 class hrs/wk 4 cr) F/W

Introductory sequence for vocational students and students preparing for CH 201 General Chemistry. Includes inorganic and organic chemistry with integrated laboratory experiments. Note: Must be taken in sequence. Prerequisites to CH 101: 1.110 Elements of Algebra or equivalent.

### CH 104, 105, 106 General Chemistry (7 class hrs/wk 5 cr) F/W/Sp

A three-term survey of the principles of inorganic, physical, organic, nuclear and biological chemistry for students in science-related fields, including health occupations, agriculture, animal science and home economics. Note: Must be taken in sequence. A calculator with scientific notation is required. Prerequisite to CH 104: 1.110 Elements of Algebra or equivalent; high school physical science or equivalent. Prerequisite to CH 105: MT 100 Intermediate Algebra.

### CH 201, 202, 203 General Chemistry (6 class hrs/wk 4 cr) F/W/Sp

A three-term sequence for science and engineering students. Introduces physical and chemical aspects of inorganic and organic chemistry. Topics include atomic structure, chemical bonding, chemical equilibrium, rates of reaction, acids and bases, oxidation and reduction, nuclear chemistry, organic chemical compounds and polymers. Note: Must be taken in sequence. A calculator with scientific notation is required. Prerequisite to CH 201: CH 102 General Chemistry, high school chemistry or equivalent; MT 101 College Algebra to be taken concurrently. Prerequisite to CH 202: MT 101 College Algebra.

### CH 226, 227, 228 Organic Chemistry (3-6 class hrs/wk 3-4 cr) F/W/Sp

An introductory course in structures and reactions of carbon compounds, including hydrocarbons; compounds with functional groups containing oxygen, nitrogen, sulfur and halogen atoms; and compounds of biological interest. Note: Must be taken in sequence. Prerequisite to CH 226: CH 104, 105, 106 or CH 201, 202, 203 General Chemistry sequence.

### CH 234 Quantitative Analysis (6 class hrs/wk 4 cr) W

Service course for students of biological and physical sciences. Includes theoretical and practical aspects of gravimetric, volumetric and instrumental methods of chemical analysis. Prerequisite: CH 104, 105, 106 or CH 201, 202, 203 General Chemistry sequence.

### CH 280 CWE Chemistry (6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to chemistry. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

### GS 104, 105, 106 General Science (5 class hrs/wk 4 cr) F/W/Sp

Survey course providing liberal arts students and non-science majors with a broad background in physical sciences. GS 104, fundamental principles of physics; GS 105, principles of chemistry; GS 106, nuclear energy, astronomy, meteorology and earth science. Note: May not be taken if six or more hours of college-level chemistry or physics have been completed. Prerequisite: 1.110 Elements of Algebra or equivalent.

### GS 111 Energy: Problems and Solutions (3 class hrs/wk 3 cr) F

A survey of traditional and alternative energy sources proposed as solutions to our current energy supply problems.

### GS 112 Astronomy (3 class hrs/wk 3 cr) Sp

Introductory course covering rudiments of astronomy, including studies of the solar system, our galaxy and the universe.

### GS 199 General Science Special Topics (1-4 class hrs/wk 1-4 cr)

General, introductory courses in physical sciences. Topics may include chemistry, physics, astronomy and geology.

**GS 280 CWE Physical Science**

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to physical science. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**P 201, 202, 203 General Physics**

(7 class hrs/wk 4 cr) F/W/Sp

College-level course for students planning transfer to a four-year college or university. Includes the study of motion, forces, momentum and energy, vibrations, wave motion, sound and light, optics, heat, electricity and magnetism, elementary atomic and nuclear physics, and special relativity. Note: Must be taken in sequence. Calculator with trigonometric functions and scientific notation required. Prerequisite to P 201: 6.551 Tech Math I or MT 101 College Algebra. Prerequisite to P 202: 6.552 Tech Math II or MT 102 Trigonometry. Prerequisite to P 203: 6.553 Tech Math III or MT 110 Analytic Geometry.

**P 211, 212, 213 General Physics**

(6 class hrs/wk 4 cr) F/W/Sp

Calculus-based principles of physics for students of science and engineering. Includes mechanics, electricity and magnetism, wave motion, light, sound and heat. Note: Must be taken in sequence. Prerequisite to P 211: MT 200 Calculus; MT 201 Calculus to be taken concurrently. Prerequisite to P 212: MT 202 Calculus, to be taken concurrently.

# WATER / - WASTEWATER TECHNOLOGY

**Faculty:**

Ronald M Sharman, Department Chair  
E E "Skeet" Arasmith, John W Carnegie,  
Paul H Kloppling, John F Wooley

Water/Wastewater Technology offers two programs: a one-year Water/Wastewater Plant Operations program and a two-year Water/Wastewater Technology program. Both programs cover all phases of water and wastewater plant operations, wastewater collection systems, water distribution systems and maintenance of related equipment.

The one-year Water/Wastewater Plant Operations program prepares students for employment as water or wastewater treatment plant operators. A firm background is provided in chemistry and microbiology laboratory procedures required for plant operations. Students are required to complete 4.204 Math III.

The Water/Wastewater Plant Operations curriculum requires enrollment for four consecutive quarters. Students

completing the one-year program may choose to transfer credits to the two-year Associate of Science degree program.

The seven-term Water/Wastewater Technology program prepares its graduates to work at the technician level in either the water or wastewater treatment fields. The course work develops graduates qualified as plant operators, engineering technicians and technical representatives for various manufacturing concerns. A firm foundation in chemistry and microbiology laboratory procedures and fluid hydraulics is provided, as well as specialized courses in maintenance, management, supervision and advanced operations.

The Water/Wastewater Technology curriculum requires enrollment for seven consecutive quarters. Due to the technical nature of the field, students must be prepared to enroll in 6.551 Technical Mathematics I fall quarter of their sophomore year and complete 6.552 Technical Mathematics II winter quarter of their sophomore year.

Students in both the one-year certificate program and the two-year associate degree program must complete an in-plant practicum during the summer quarter. This may require relocation of the student for one term. There is no guarantee of funding for students during this period.

The Water/Wastewater Technology curriculums lead to an Associate of Science degree or a one-year certificate.

## WATER / WASTEWATER CURRICULUMS

### One-year Certificate in Water / Wastewater Plant Operations

**Major Requirements . . . . . 69**

Fall	
4.200 Math I	4
6.190 Intro to W/WW Operations	6
6.193 Intro to Aquatic Chem & Micro	4
HE 112 First Aid: Multi-Media	1
WR 115 Intro to Expository Writing	3
Winter	
4.100 Blueprint Reading	2
6.180 W/WW Mechanics I	2
6.191 Water Systems Operations	6
6.194 Basic Aquatic Chem & Micro	4
4.202 Math II	4
Spring	
6.181 W/WW Mechanics II	3
6.192 Primary & Secondary Treatment	6
6.195 Intermediate Aquatic Chem & Micro	4
4.204 Math III	4
Summer	
6.168 In-Plant Practicum	16

## Associate of Science in Water / Wastewater Technology

**General Education Requirements . . . . . 20**

See graduation requirements for Associate of Science degree  
6.551 Technical Mathematics I substitutes for math requirement.  
HE 112 First Aid: Multi-Media is required; recommended for completion fall term, first year.

**Major Requirements . . . . . 96**

Fall - First Year	
6.190 Intro to W/WW Operations	6
6.193 Intro to Aquatic Chem & Micro	4
Winter	
4.100 Blueprint Reading	2
6.180 W/WW Mechanics I	2
6.191 Water Systems Operations	6
6.194 Basic Aquatic Chem & Micro	4
Spring	
6.181 W/WW Mechanics II	3
6.192 Primary & Secondary Treatment	6
6.195 Intermediate Aquatic Chem & Micro	4
Summer	
6.168 In-Plant Practicum	16
Fall - Second Year	
6.154 Advanced Process Control	6
6.164 Water Sources	4
6.169 Map Reading	1
6.182 W/WW Mechanics III	3
Winter	
6.161 W/WW Management I	3
6.166 Water Purification Systems	4
6.235 Applied Hydraulics	4
6.552 Tech Math II	4
Spring	
6.162 W/WW Management II	4
6.165 Water Distribution	4
6.174 Intermediate Aquatic Chem	4

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## WATER / WASTEWATER TECHNOLOGY COURSES

**6.115 Basic Protozoology**

(3 class hrs/wk 2 cr)

Course will deal with microbiology and the relationship of protozoan population dynamics to wastewater treatment. Emphasis will be placed on examination, identification and ecology of protozoa. Aerobic biological wastewater treatment process control, using the following analytical procedures, is also discussed: respirometry, staining, phase contrast and bright field microscopy, suspended solids, volatile solids and centrifuge analysis of solids inventory, sludge settleability using settleometer and sludge volume index.

**6.154 Advanced Process Control**

(8 class hrs/wk 6 cr)

Course deals with wastewater treatment process interaction and advanced concepts of purification beyond secondary treatment. Included are discussions of phosphorus removal; nitrification and nitrogen removal; filtration; activated carbon; disinfection; materials balance; solids handling and inventory control; and primary, secondary and tertiary process troubleshooting. Prerequisite: 6.192 Primary and Secondary Treatment.



**6.158 Sanitary Seminar**

(1-3 class hrs/wk 1-3 cr) Sp

Water and wastewater concepts, including chemistry, microbiology, mathematics, hydraulics and practical operational procedures.

**6.161 Water/Wastewater Management I**

(3 class hrs/wk 3 cr) W

Introduction to supervisory management of water and wastewater systems. Included is delegation and motivation, problem solving and communication, planning and organization, staffing and labor unions. Note: Recommended for new students and those already in the field.

**6.162 Water/Wastewater Management II**

(4 class hrs/wk 4 cr) Sp

Survey of the basic philosophies of management and their application to municipal systems. State and local government, planning, organizational structures, motivation, communication, budget control and leadership are covered and applied to the municipal setting.

**6.164 Water Sources**

(6 class hrs/wk 4 cr) F

Study of surface and groundwater sources. Included for surface water: water rights, classification, selection and management of watersheds, water quality measurement, collection and storage. Included for groundwater: search, measurement and flow. Emphasis is given to dealing with the water source as a basic ecological system that includes the study of geology, soils, vegetations, wildlife and aquatic habitat.

**6.165 Water Distribution**

(6 class hrs/wk 4 cr) Sp

Basic course in the techniques of installation, operation and maintenance of water distribution systems. Includes materials selection, population projections, fire hydrant repair, repair of broken lines, cross-connection control programs, meter installation and water quality management.

**6.166 Water Purification Systems**

(6 class hrs/wk 4 cr) W

Study of the theory and operation of water purification, including mixing, sedimentation, coagulation and flocculation, filtration (via single and mixed media), water softening, removal of nuisance organisms and materials.

**6.168 In-Plant Practicum**

(40 class hrs/wk 2-16 cr) Su

In-Plant Practicum consists of full-time work in a water or wastewater treatment facility. Skills and knowledge developed in prerequisite courses will be combined with on-the-job training by both plant supervisory personnel and LBCC visiting instructors. Prerequisite: 6.190 Introduction to Water and Wastewater Operations; 6.191 Water Systems Operation; 6.192 Primary and Secondary Treatment; HE 112 First Aid; Multi-Media.

**6.169 Map Reading**

(2 class hrs/wk 1 cr) F

Introduces basic skills necessary to read general road maps, USGS and Forest Service maps, aerial photo maps, topographic maps, plot plans, and property and boundary descriptions.

**6.174 Intermediate Aquatic Chemistry**

(6 class hrs/wk 4 cr) Sp

The student will be able to properly obtain samples and use proper procedures to perform and calculate results for the following tests: nitrate, nitrite, chloride, fluoride, phosphate, iron, manganese and aluminum. Will review solids, BOD, pH, chlorine residual and coliform tests. The student will be able to relate data obtained in the above tests to water and wastewater treatment operational controls. Prerequisite: 6.193, 6.194, 6.195 Aquatic Chemistry and Microbiology sequence.

**6.175 Advanced Aquatic Chemistry**

(6 class hrs/wk 4 cr)

Course emphasizes instrumental analysis as it relates to water and wastewater treatment control tests. Tests include total organic carbon, gas and liquid chromatograph, phenols, surfactants, grease and oil. Prerequisite: 6.174 Intermediate Aquatic Chemistry.

**6.180 Water/Wastewater Mechanics I**

(4 class hrs/wk 2 cr) W

The first course of a three-term sequence dealing with basic mechanical skills. This course covers hand tools, threaded fasteners, packing, lubrication gaskets, gauges, identification of small plumbing fittings and connecting PVC pipes. These skills are then applied to repair and maintain valves, fire hydrants and chlorine stations.

**6.181 Water/Wastewater Mechanics II**

(6 class hrs/wk 3 cr) Sp

The second course in a three-term sequence dealing with basic mechanical skills. This course covers steel and copper pipe, precision instruments, gears, belts, chains, control panels and motors. These basic skills are then used to repair and maintain centrifugal and piston pumps. Prerequisite: 6.180 Water/Wastewater Mechanics I.

**6.182 Water/Wastewater Mechanics III**

(6 class hrs/wk 3 cr) F

The third course in a three-term sequence dealing with basic mechanical skills. This course uses skills acquired in the two previous courses to repair and maintain chemical feed pumps, speed reducers, level, temperature and flow sensors, basic instrumentation, and recorder and control circuits. Prerequisite: 6.181 Water/Wastewater Mechanics II.

**6.190 Introduction to Water and Wastewater Operations**

(12 class hrs/wk 6 cr) F

Introduction to water and wastewater treatment plant operations, including basic hydraulics and flow measurements, water sources, water treatment and distribution, wastewater collection and pre-treatment.

**6.191 Water Systems Operation**

(12 class hrs/wk 6 cr) W

Course develops a basic understanding of water systems operations, including surface water source and watershed management, groundwater sources and development, raw water storage and intakes, coagulation, flocculation, sedimentations, filtration, disinfection, and finished water storage and distribution. Prerequisite: 6.190 Introduction to Water and Wastewater Operations.

**6.192 Primary and Secondary****Treatment** (12 class hrs/wk 6 cr) Sp

Course develops a basic understanding of wastewater systems operations, including primary sedimentation, disinfection, aerobic and anaerobic sludge digestion, oxidation ponds, bio-filters and bio-reactors, and solids handling and disposal. Prerequisite: 6.190 Introduction to Water and Wastewater Operations.

**6.193 Introduction to Aquatic Chemistry and Microbiology**

(8 class hrs/wk 4 cr) F

A basic chemistry and microbiology course for water and wastewater technology students. Basic concepts will be supported by lab experiments relevant to the water/wastewater field.

**6.194 Basic Aquatic Chemistry and Microbiology**

(8 class hrs/wk 4 cr) W

A continuation of 6.193 Introduction to Aquatic Chemistry and Microbiology. Basic concepts will be applied to common water and wastewater analytical techniques, including pH, temperature, dissolved oxygen, alkalinity, hardness, solids, microscopic identification, total plate count and total coliform. Water tests are stressed.

**6.195 Intermediate Aquatic Chemistry and Microbiology**

(8 class hrs/wk 4 cr) Sp

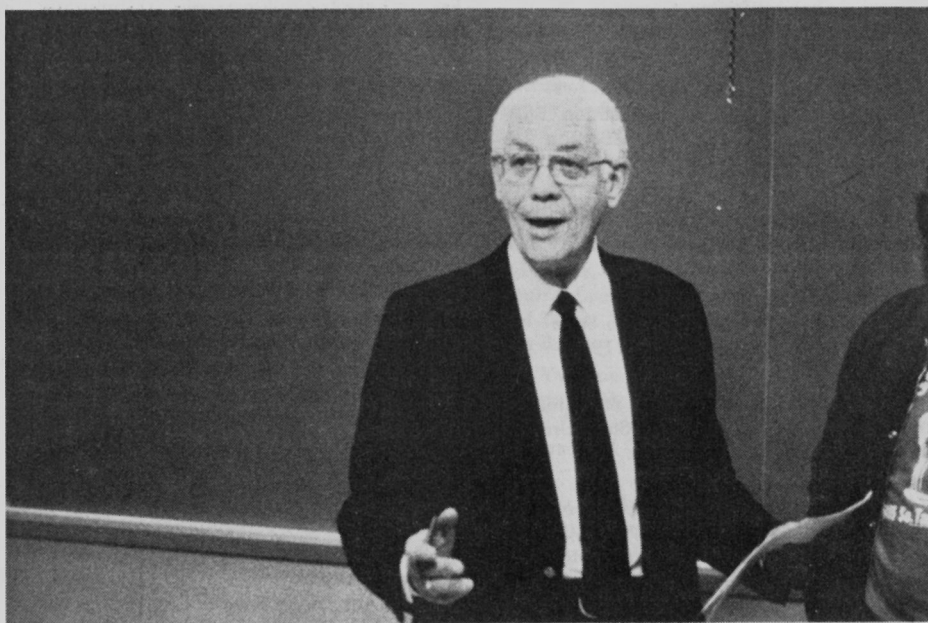
A continuation of 6.194 Basic Aquatic Chemistry and Microbiology. Basic concepts will be applied to common water and wastewater analytical techniques, including activated sludge, biochemical oxygen demand, volatile acids, chemical oxygen demand, chlorine residual and fecal coliforms. Wastewater tests are stressed. Prerequisite: 6.193 Introduction to Aquatic Chemistry and Microbiology.

**6.235 Applied Hydraulics**

(4 class hrs/wk 4 cr) W

A practical course enabling use and understanding of common flow charts for flow and head loss calculations to make open channel flow calculations, and to read and use pump curves. Application is made to water distribution and sewage collection systems. Prerequisite: 6.552 Technical Math II, to be taken prior to or concurrently.

# COLLEGE PERSONNEL



LBCC's faculty and staff take a personal interest in the student's educational experience.

## FACULTY AND ADMINISTRATIVE STAFF

### Aikman, John

Faculty, Graphic Arts. BA, Oregon State University; MFA, University of Wyoming. At Linn-Benton since 1980.

### Alvin, John

Faculty, Welding. BS, Oregon State University; State of Oregon Welding Certifications; 7 years Journeyman welding experience. At Linn-Benton since 1968.

### Arasmith, Everett

Faculty, Water/Wastewater Technology. AS, Oregon Institute of Technology. At Linn-Benton since 1973.

### Armstrong, Harry

Faculty, Construction Technology/Carpentry. BA, Oregon State University; related construction experience. At Linn-Benton since 1975.

### Atwood, Illa

Faculty, Secretarial Skills. BS, MEd, Oregon State University. At Linn-Benton since 1971.

### Ayers, Peggy

Faculty, Data Processing, Business Management. BS, Oregon State University. At Linn-Benton since 1980.

### Badal, Fred B

Faculty, Electricity/Electronics Technology. AA, Modesto Junior College; BS and MS, California State University, San Jose; MBA, Santa Clara University; Degree of Engineering, Stanford University. At Linn-Benton since 1979.

### Baker, Carol

Coordinator, College/Community Relations. BA, Wake Forest University. At Linn-Benton since 1982.

### Bakley, David

Faculty, Health & Physical Education. BA, Westmar College; MA, Oregon State University. At Linn-Benton since 1972.

### Barrios, Al J

Coordinator, Financial Aids. AS, Air University; AA, AS, Linn-Benton Community College. BS, Oregon State University. At Linn-Benton since 1979.

### Bennett, Rosemary

Career Counselor. BS, Oregon State University; MS, University of Oregon. At Linn-Benton since 1979.

### Benson, David

Faculty, Physical Science. BS, University of the Pacific, Stockton. At Linn-Benton since 1978.

### Bergeman, Richard

Faculty, Journalism/Photography. BS, Bowling Green State University; MA, Oregon State University. At Linn-Benton since 1976.

### Bervin, Arthur

Faculty, Language Arts. BA, Portland State University; MA, University of Redlands. At Linn-Benton since 1970.

### Bewley, Larry

Faculty, Farrier, Community Education. Certificate, OSU Farrier School. Related job experience. At Linn-Benton since 1980.

### Bible, Laurel

Faculty, ABE/GED/ESL. BA, University of Oregon. At Linn-Benton since 1975.

### Boyse, Peter

Assistant to the President. BA, Albion College; MS, University of Michigan; MS, Oregon State University. At Linn-Benton since 1976.

### Brem, Janet

Guidance Counselor. BS, MEd, Oregon State University. At Linn-Benton since 1969.

### Brooks, Jay

Faculty, Secretarial Skills & Business Management. AA, San Jose City College; BS, MEd, Oregon State University. At Linn-Benton since 1968.

### Brown, Brian H

Director, Human Resources. BS, University of Oregon; MA, San Jose State University; PhD, Oregon State University. At Linn-Benton since 1976.

### Bruer, Leon C

Director, Information Processing. BS, University of Michigan; MA, PhD, Wayne State University. At Linn-Benton since 1981.

### Bryson, Timothy

Faculty, Performing Arts/Drama. BA, Brigham Young University; MFA, University of Utah. At Linn-Benton since 1981.

### Burke, Michael

Faculty, Machine Tool Technology. AA, Santa Ana College; 16 years field experience. MDSI certification. At Linn-Benton since 1974.

### Call, Shirley

Faculty, Language Arts. BA, Goshen College; MA, University of Oregon. At Linn-Benton since 1967.

### Carnahan, Jon

Director, Admissions & Academic Support Services. BA, MEd, Central Washington University. At Linn-Benton since 1973.

### Carnegie, John W

Faculty, Water/Wastewater Technology. BS, MS, PhD, Oregon State University. At Linn-Benton since 1971.

### Carter, David

Faculty, Automotive Technology. Eugene Technical Vocational School; General Motors Training School; Toyota Training School; IGOA Master Technician certificate; Colorado State University Vehicle Emission Certificate. At Linn-Benton since 1969.

### Chambers, Henrietta

Faculty, Biology. BA, Maryville College; MA, University of North Carolina; PhD, Yale University. At Linn-Benton since 1971.

**Chambers, Maynard**

Faculty, Business Management. BS, MBA, Oregon State University. At Linn-Benton since 1970.

**Chase, Thomas**

Faculty, Language Arts. BA, University of Colorado, Boulder; MA, California State University. At Linn-Benton since 1971.

**Cheney, Kenneth D**

Director, Humanities/Social Sciences. AB, MA, Northern Colorado University. At Linn-Benton since 1969.

**Chester, Patsy**

Faculty, Secretarial Skills. BS, Idaho State University; MED, Oregon State University. At Linn-Benton since 1967.

**Clark, Douglas**

Faculty, Political Science. BA, MA, University of Oregon; N.E.H. Fellow. At Linn-Benton since 1972.

**Clark, Katherine**

Faculty, Developmental Studies. BA, University of California, Santa Cruz; MA, Stanford University. At Linn-Benton since 1975.

**Clark, Philip V**

Director, Business Division. BS, MBA, San Jose State College. At Linn-Benton since 1969.

**Conner, Gerald H**

Faculty, Business Management and Economics. MBA, University of Oregon; MST, Portland State University; BA, Park College. At Linn-Benton since 1974.

**Cope, Marian**

Faculty, Cooperative Work Experience. AA, BS, Western Montana State University; MED, Oregon State University. At Linn-Benton since 1973.

**Cripe, Sue**

Assistant Registrar. Attended University of California, Berkeley. At Linn-Benton since 1968.

**Crisp, Ann C**

Director, Benton Center, Community Education. BSEd, Ball State University; MHEc, Oregon State University. At Linn-Benton since 1975.

**Crosman, Arlene**

Faculty, Physical Education. BS, MED, Oregon State University. At Linn-Benton since 1972.

**Dallmann, Charles R**

Faculty, Culinary Arts & Restaurant Management. Professional Cooking Certificate, Laney Community College; Community College Teaching Certificate - Food Services, California; BA, University of Connecticut. At Linn-Benton since 1974.

**Dangler, David R**

Faculty, Physical Education & Health. BS, Western Oregon State College; MS, Portland State. At Linn-Benton since 1976.

**Deems, "Dee" Mary Delores**

Director, Lebanon Center, Community Education. BS, Willamette University. At Linn-Benton since 1979.

**Dixon, Barbara**

Assistant to Vice President, Instruction. BS, Oregon State University. At Linn-Benton since 1969.

**Donovan, Jane**

Faculty, Performing Arts/Speech-Drama. BA, Illinois State University; MA, University of Illinois. At Linn-Benton since 1979.

**Durham, Russell**

Faculty, History. BA, MA, Arizona State University. At Linn-Benton since 1967.

**Eastburn, Harold (Hal)**

Faculty, Performing Arts/Music. BS, Minot State University; MA, Colorado State University. At Linn-Benton since 1979.

**Easton, Joyce**

Guidance Counselor. RN, Methodist Hospital School of Nursing, Los Angeles; BS, MED, Oregon State University. At Linn-Benton since 1971.

**Emigh, David**

Faculty, Drafting/Engineering. BA, MS, Washington State University. At Linn-Benton since 1980.

**Farnell, Vernon E**

Vice President, Business Affairs. BS, MED, University of Idaho. At Linn-Benton since 1967.

**Fish, Kelly**

Faculty, ABE/GED, Community Education. AA, Stephens College; BA, Occidental College; MA, University of California, Santa Barbara. At Linn-Benton since 1980.

**Floyd, Stewart**

Faculty, Farm Management. BS, MS, New Mexico State University. At Linn-Benton since 1978.

**Gilson, Melvin L**

Coordinator, Special Programs, Instructional Support Services. BMus, Willamette University. At Linn-Benton since 1970.

**Gonzales, Thomas**

President. BS, Colorado State University; MA, EdS, University of Northern Colorado; EdD, University of Colorado. At Linn-Benton since 1981.

**Gregory, Russell**

Faculty, Developmental Studies. BA, MED, Colorado State University. At Linn-Benton since 1975.

**Griffiths, John**

Faculty, Machine Technology. BS, MED, Utah State University; Professional Counseling Certificate; Journeyman machinist experience. At Linn-Benton since 1972.

**Grigsby, Paula**

Faculty, Special Programs, Instructional Support Services. BS, Portland State University; MS, Oregon College of Education. At Linn-Benton since 1973.

**Hagfeldt, Rachael**

Faculty, Associate Degree Nursing. BSN, MS-Ed, University of Oregon. At Linn-Benton since 1981.

**Hanhi, Dennis**

Faculty, Electricity/Electronics, Community Education. AS, Southwestern Oregon Community College; BS, Oregon State University. At Linn-Benton since 1981.

**Hansen, Kent**

Faculty, Electricity/Electronics Technology. AS, Oregon Institute of Technology; BS, MED, Oregon State University. At Linn-Benton since 1974.

**Hansen, LeRoy (Lee)**

Faculty, Auto/Diesel. Attended University of Wisconsin; related experience. At Linn-Benton since 1974.

**Harding, Vera**

Faculty, Foreign Language/Spanish and Portuguese. BA, Catholic University of Rio de Janeiro; MA, University of Oregon. At Linn-Benton since 1980.

**Harris, William**

Faculty, Carpentry Technology. Related construction experience. At Linn-Benton since 1976.

**Harrison, Clifford W**

Faculty, Auto Body Repair. Certified from Provinces of Alberta and Ontario, Canada. At Linn-Benton since 1977.

**Hatfield, Peg**

Coordinator, Retired Senior Volunteer Program. Related experience in RSVP; Volunteer Management training, University of Colorado. At Linn-Benton since 1973.

**Henich, Michael**

Faculty, Auto Mechanics/Diesel. BGS, University of Nebraska; MSE, University of Southern California. At Linn-Benton since 1979.

**Hogan, Daryl**

Faculty, Auto Body Repair. Training School certificates from Chrysler Corporation, General Motors and Ford Motor Company; related field experience. At Linn-Benton since 1976.

**Hopper, Donald**

Faculty, Electricity/Electronics. BS, University of Minnesota; MED, Oregon State University. At Linn-Benton since 1983.



## COLLEGE PERSONNEL

**Horton, Richard**

Coordinator, Cooperative Work Experience. BS, Fort Hays University; MS, Kansas State University. At Linn-Benton since 1979.

**Irvin, Jean**

Faculty, Physical Education. BA, Slippery Rock State College; MA, Ohio State University. At Linn-Benton since 1975.

**Jackson, Allan**

Faculty, Heavy Equipment Mechanics/Diesel. AS, Oregon Institute of Technology; Related field experience. At Linn-Benton since 1978.

**Jean, Raymond A**

Director, Facilities. Attended University of Florida and Portland State University. State of Oregon Special Inspector Certificates; related experience. At Linn-Benton since 1971.

**Johnson, Jerome A**

Director, Instructional Support Services. BA, Western Washington State College; MAEd, University of Puget Sound; EdD, Oregon State University. At Linn-Benton since 1977.

**Johnson, Lyndall**

Faculty, Associate Degree Nursing. Diploma, Nursing, Emanuel Hospital; BS, Pacific Lutheran University; MEd, Oregon State University. At Linn-Benton since 1976.

**Johnson, Stephen**

Faculty, Mathematics. BS, Iowa State University; MAT, Oregon College of Education. At Linn-Benton since 1980.

**Kauffman, F Michael**

Faculty, Business Management/Accounting. BBA, University of Notre Dame; MBA, Pepperdine University. At Linn-Benton since 1977.

**Keyser, John S**

Vice President, Instruction. BA, MA, PhD, University of Colorado. At Linn-Benton since 1982.

**Kimpton, Verlund (Butch)**

Faculty, Physical Education. BS, MS, University of Oregon. At Linn-Benton since 1970.

**Kleine, Carroyl**

Assistant Director, Human Resources. BA, Northern Colorado State University; MA, Adams State College. At Linn-Benton since 1976.

**Klopping, Paul H**

Faculty, Water/Wastewater Technology. BS, California State University, Long Beach. At Linn-Benton since 1976.

**Kraft, John R**

Faculty, Physical Science. BA, Willamette University; MS, Oregon State University. At Linn-Benton since 1973.

**Lambert, Rita A**

Director, Financial Aid. BS, Mt. Angel College; MS, Oregon State University. At Linn-Benton since 1971.

**Lamberton, Bobbie**

Faculty, Health Occupations; Coordinator, Continuing Education. RN, BS, Walla Walla College. At Linn-Benton since 1976.

**Lawrence, Dorothy**

Faculty, Secretarial Skills. BS, MS, Oregon State University; Certified Professional Secretary. At Linn-Benton since 1972.

**Lebsack, Carolyn J**

Faculty, Biology. BS, MS, Oregon State University. At Linn-Benton since 1976.

**Ledbetter, Ward**

Faculty, Business Management. BS, University of Tulsa; MBEd, Indiana University. At Linn-Benton since 1971.

**Lee, Yvonne**

Librarian. BA, Ewha Women's University, Korea; BA, Oregon State University; MLS, University of Oregon. At Linn-Benton since 1968.

**Lenhart, Richart**

Faculty, Business Management. BS, MBA, San Jose State University. At Linn-Benton since 1978.

**Liebaert, Richard M**

Faculty, Biology. BS, Michigan State University; MA, University of California, Davis. At Linn-Benton since 1978.

**Lieberman, Max**

Faculty, Sociology. BS, Defiance College; MA, Miami University; MA, California State University, San Jose. At Linn-Benton since 1969.

**Lind, Peggy**

Faculty, Secretarial Sciences. BS, MS, Southern Oregon College. At Linn-Benton since 1978.

**Liverman, Earl**

Security Supervisor. BBA, Southern Methodist University; MS, Southern Oregon State College. At Linn-Benton since 1976.

**Love, L Carl**

Faculty, Metallurgical Technology. BS, MS, Oregon State University; EdD, Laurence University; San Diego Vocational School Welding Certification; Eggets Electronic Institute, One-year Certificate. At Linn-Benton since 1968.

**Lucas, James**

Faculty, Farm Management. BS, University of California, Davis; MS, California State University, Fresno. At Linn-Benton since 1978.

**Lundstrom, Annamay**

Faculty, Benton Center, Community Education. BA, San Jose State College. At Linn-Benton since 1978.

**Maier, William D**

Director, Accounting and Finance. BBA, Southwest Texas State College. At Linn-Benton since 1969.

**Mann, Charles**

Faculty, Developmental Studies. BS, MA, Oregon State University. At Linn-Benton since 1968.

**Mason, Ronald**

Faculty, Mathematics. BA, MA, University of Southern Florida. At Linn-Benton since 1978.

**McClain, H Richard (Dick)**

Director, Health Occupations and Physical Education. BS, MS, University of Oregon. At Linn-Benton since 1969.

**McKillip, Barbara**

Librarian. BA, Central Missouri State University; MA, Colorado State University; MLS, University of Oregon. At Linn-Benton since 1980.

**McPheeters, Mary Lou**

Faculty, Secretarial Sciences. BS, MEd, Oregon State University. At Linn-Benton since 1978.

**Metcalf, Carol**

Faculty, Nursing Assistant. BSN, Barry College. At Linn-Benton since 1979.

**Miles, Marty**

Faculty, Associate Degree Nursing. BSN, University of New Mexico. At Linn-Benton since 1979.

**Miller, Carolyn**

Faculty, Special Programs, Instructional Support Services. Attended Utah State University, Portland State University, Oregon College of Education and Seattle University; related experience. At Linn-Benton since 1974.

**Miller, Raymond D**

Guidance Counselor. BA, California State College, Los Angeles; MS, University of Oregon. At Linn-Benton since 1969.

**Miller, Robert A**

Director, Auxiliary Services. BS, Southern Oregon State College; MS, PhD, Oregon State University. At Linn-Benton since 1969.

**Mills, Ann**

Faculty, Math, Community Education. BS, College of William and Mary; MS, Oregon State University. At Linn-Benton since 1978.

**Minnick, Donald**

Faculty, Language Arts. BA, Cornell College; MA, University of Iowa. At Linn-Benton since 1968.

**Montgomery, Maribel**

Faculty, Psychology. BA, MA, University of California, Berkeley. At Linn-Benton since 1969.

**Moore, Beverly**

Faculty, Emergency Medical Training. Diploma of Nursing, Massachusetts School of Nursing; related experience. At Linn-Benton since 1977.

**Moos, Bruce**

Faculty, Agriculture/Animal Technology. BS, Fresno State; Vocational Certificate, University of California, Davis. At Linn-Benton since 1975.

**Moreira, Joyce L**

Faculty, Secretarial Skills. BS, MEd, Oregon State University. At Linn-Benton since 1971.

**Morgan, Gerald**

Faculty, Dental Assistant. Certified dental assistant. At Linn-Benton since 1972.

**Morgan, Micheal E**

Faculty, Mathematics. BS, Oregon College of Education; MS, PhD, Oregon State University. At Linn-Benton since 1972.

**Neumann, Joyce**

Faculty, Associate Degree Nursing. BSN, MS, DePaul University. At Linn-Benton since 1980.

**Neville, Gene**

Manager, Food Services. BS, University of Nevada. At Linn-Benton since 1981.

**Nisson, Blaine D**

Coordinator, Student Activities. BBA, MEd, Idaho State University. At Linn-Benton since 1981.

**Norman, Gladys**

Faculty, Data Processing/Business Management. Certificate in Data Processing. At Linn-Benton since 1980.

**Osterlund, Blair**

Counseling Psychologist. BS, University of Washington; MS, University of Oregon; PhD, University of Missouri. At Linn-Benton since 1969.

**Patrick, Michael**

Director, Community Education. BA, California State Polytechnic. At Linn-Benton since 1971.

**Paulson, Gregory F**

Faculty, Agriculture (Horticulture). BS, Colorado State University. At Linn-Benton since 1976.

**Paulson, Jacqueline**

Faculty, Associate Degree Nursing. RN, BS, BA, MA, University of Washington. At Linn-Benton since 1972.

**Perkins, Raymond David**

Faculty, Physical Science. BA, MEd, Central Washington University; MS, PhD, Oregon State University. At Linn-Benton since 1970.

**Peterson, James (J T)**

Faculty, Business Management. BS, University of Idaho. At Linn-Benton since 1977.

**Phillips, Jerald**

Faculty, Criminal Justice. BS, MPA, Portland State University. At Linn-Benton since 1981.

**Pond, Keith**

Faculty, Automotive Technology. Air Force Mechanics School; Master Technicians Certificates, Ford Motor Company; MTC Board; Ford and General Motors Training School Certificates. At Linn-Benton since 1967.

**Rasmussen, Steve R**

Faculty, Physical Science. BS, University of Utah; MS, Oregon State University. At Linn-Benton since 1971.

**Rau, Elgin**

Faculty, Welding. AA, Olympic College; BA, Central Washington State College; MEd-Voc Ed, Colorado State University. At Linn-Benton since 1978.

**Reed, Dale**

Director, Purchasing and Campus Services. BS, Chico State College; MS, Air Force Institute of Technology; EdD, Oregon State University. At Linn-Benton since 1976.

**Reed, Wallace**

Faculty, Mathematics. BS, MA, Oregon State University. At Linn-Benton since 1972.

**Reeder, Carl**

Faculty, Small Engine Repair. BS, Oregon State University; MEd, Western Washington State University. At Linn-Benton since 1978.

**Richardson, Lann**

Faculty, Civil Engineering Technology. AS, Linn-Benton Community College. At Linn-Benton since 1977.

**Rogers, Judith A**

Faculty, Fine Arts. BA, MFA, University of California, Santa Barbara. At Linn-Benton since 1977.

**Rohde, Mark**

Faculty, Drafting. BS, Oregon State University. At Linn-Benton since 1980.

**Rosenson, Martin**

Faculty, Anthropology and Archaeology. AA, Monterey Peninsula College; BA, MA, California State University at Hayward. At Linn-Benton since 1977.

**Ross, Ann Marie**

Guidance Counselor. BA, MS, California State University. At Linn-Benton since 1974.

**Ross, Robert**

Faculty, Biology. BS, MS, University of Oregon. At Linn-Benton since 1968.

**Rosberg, Stephen A**

Faculty, Performing Arts/Speech-Drama. BA, University of Minnesota; MS, Kansas State Teachers College. At Linn-Benton since 1974.

**Ruckman, Stanley N**

Director, Learning Resource Center. BEd, University of Oregon; MA, University of Denver. At Linn-Benton since 1972.

**Ruppert, Gary**

Faculty, Performing Arts/Music. BA, California State University, Sacramento; MM, University of Oregon. At Linn-Benton since 1975.

**Schuette, Gretchen**

Faculty, Tech/Occupational Writing. BA, Smith College; MS, Central Michigan University; PhD, Oregon State University. At Linn-Benton since 1981.

**Schuetz, Larry**

Faculty, Business Management. BS, Southern Oregon State College; MS, Willamette University. At Linn-Benton since 1980.

**Scott, Peter C**

Director, Science and Technology Division. BS, Oregon State University; PhD, Purdue University. At Linn-Benton since 1968.

**Seeman, Marvin E**

Director, Industrial/Apprenticeship Division. BS, Sul Ross University; MS, Northern Arizona University; EdD, Oregon State University. At Linn-Benton since 1977.

**Sharman, Ronald**

Faculty, Water/Wastewater. AS, Linn-Benton Community College; BS, Oregon State University. At Linn-Benton since 1979.

**Siebler, William A**

Faculty, Mathematics; Scheduling manager. BA, Western Washington State University; MS, San Francisco State University. At Linn-Benton since 1968.

**Skwark, Dorothy**

Faculty, Secretarial Skills. BS, University of South Dakota; MBA, University of Denver; EdD, University of Kentucky. At Linn-Benton since 1967.

**Snyder, Paul K**

Media Specialist. BS, Portland State University; MS, Western Oregon State College. At Linn-Benton since 1974.

**Spilde, Mary**

Director, Albany Center, Community Education. BS, LLB (Law), University of Edinburgh, Scotland; MEd, Oregon State University. At Linn-Benton since 1980.

**Stewart, Elwyn D**

Faculty, Welding. Experience as industrial welder and fabricator; Industrial Welder Apprentice 4-Year Certificate; Upgrading at Eugene Vocational School and LBCC; State of Oregon Pipe Certification. At Linn-Benton since 1969.

**Sult, Larry**

Faculty, History, Philosophy and Religion. BA, University of California, Los Angeles; MA, San Diego State University. At Linn-Benton since 1981.

**Talbott, Robert D**

Director, Counseling and Student Services. BS, Humboldt State University; MS, University of Washington. At Linn-Benton since 1968.

**Tobey, Gene**

Faculty, Fine Arts. AA, College of Eastern Utah; BFA, Utah State University; MFA, Utah State University. At Linn-Benton since 1973.

**Trimpe, Lynn**

Faculty, Mathematics. BS, MST, University of Missouri. At Linn-Benton since 1979.

**Tolbert, James A**

Faculty, Graphic Arts. BS, MA, California Polytechnic State University. At Linn-Benton since 1976.

**Trautman, Dale**

Faculty, Electricity/Electronics. BS, EdM, Oregon State University. At Linn-Benton since 1978.

**Trautwein, W Sue**

Faculty, Secretarial Sciences. BS, Oregon State University; MS, University of Oregon. At Linn-Benton since 1978.

COLLEGE PERSONNEL

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**Truman, Marcia**

Coordinator, Lincoln City Center, Community Education. BA, Bowling Green University. Related business experience. At Linn-Benton since 1979.

**Ulrich, Robert**

Faculty, Mathematics. BS, MAT, PhD, University of Washington. At Linn-Benton since 1978.

**Vee, Regina**

Faculty, Psychology and Sociology. BA, Northern Illinois University. At Linn-Benton since 1973.

**Waibel, Mona**

Coordinator, Sweet Home Center, Community Education. Related business experience. At Linn-Benton since 1973.

**Wallace, Virginia**

Faculty, Associate Degree Nursing. ADN, Santa Rosa Jr. College; BSN, Sonoma State University. At Linn-Benton since 1980.

**Weber, Roberta**

Faculty, Community Education; Coordinator, Parent Education. BA, Seattle University; MS, University of Wisconsin, Madison. At Linn-Benton since 1977.

**White, Jane**

Faculty, Language Arts. BA, MA, Michigan State University. At Linn-Benton since 1978.

**Widmer, Jason**

Faculty, Ceramics, Community Education. BA, Oregon State University. At Linn-Benton since 1974.

**Williams, Barbarajene**

Faculty, Language Arts. BS, University of Wisconsin, Platteville; MA, Arizona State University. At Linn-Benton since 1969.

**Wilson, Evon**

Faculty, Associate Degree Nursing. BSN, MSN, University of Oregon School of Nursing. At Linn-Benton since 1979.

**Winkenwerder, Kathy**

Manager, Publications and Graphic Services. BS, Western Oregon State College. At Linn-Benton since 1976.

**Wojahn, Sally**

Coordinator, Financial Aid. BS, MEd, Oregon State University. At Linn-Benton since 1981.

**Wood, Dennis**

Faculty, Welding. AA, Chabot College; Journeyman welder; AWS certified welding OC-1 Inspector. At Linn-Benton since 1976.

**Wooley, John**

Faculty, Water/Wastewater Technology. BS, MS, Oregon State University. At Linn-Benton since 1972.

**Yu, Kitson**

Faculty, Data Processing/Business Management. BS, MS, Troy State University. At Linn-Benton since 1981.

**Zimmer, Sandra S**

Faculty, Fine Arts. BA, Kearney State College; MA, University of Northern Colorado. At Linn-Benton since 1972.

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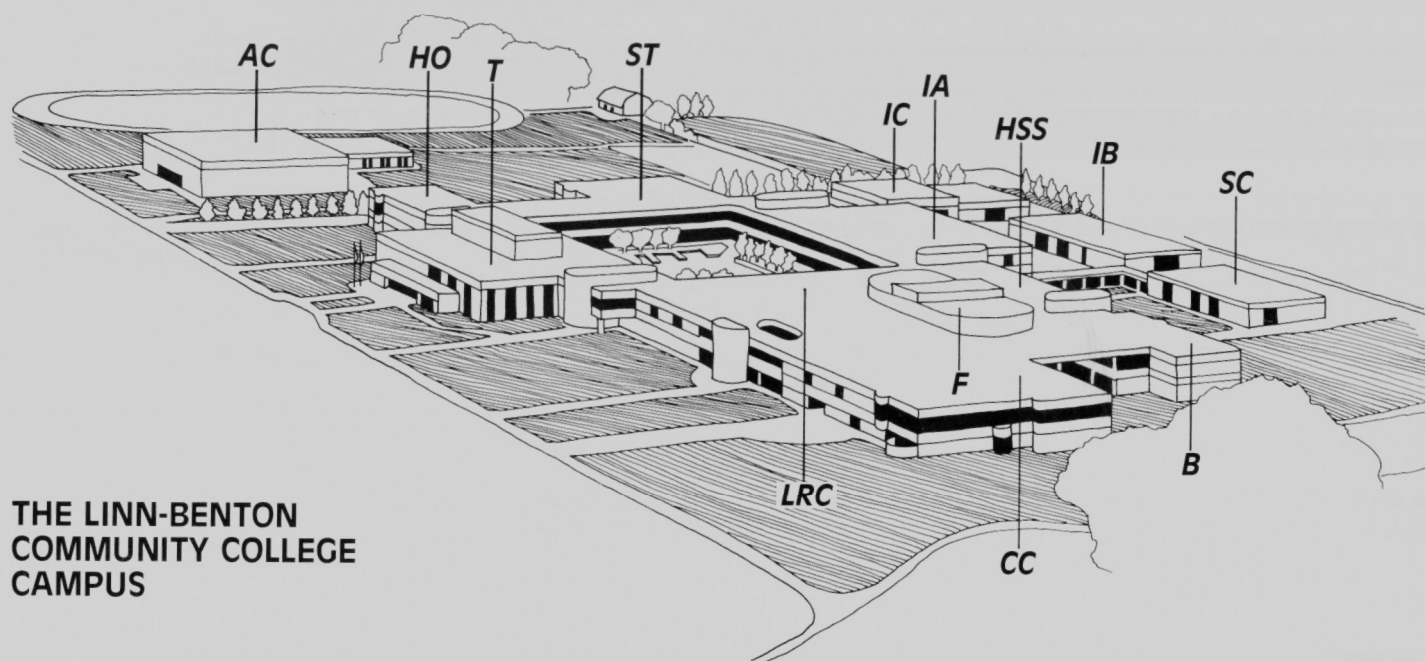
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## THE LINN-BENTON COMMUNITY COLLEGE CAMPUS

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### MAP LEGEND

#### Takena Hall (T)

Situated at the front of the campus, Takena Hall is a multi-purpose building housing student services, including admissions, registration, counseling and career information, financial aid and placement, and the expansive Theatre seating 524. The Camas Room, a snackbar featuring lunch items, is also located in Takena Hall.

#### Health Occupations (HO)

Nursing and dental assisting courses are taught in the Health Occupations Building, which houses a complex of laboratories for student instruction.

#### Activity Center (AC)

Serving both the instructional and recreational needs of students and the community, the Activity Center houses the gymnasium, and assorted health and PE instructional facilities.

#### Science & Technology (ST)

As an instructional facility for both vocational and college transfer courses, the ST Building houses biology, chemistry and physics laboratories and classrooms, and drafting and engineering technology labs. The agriculture and animal technology instructional facilities are also located in the ST Building.

#### Industrial A (IA)

The largest of the industrial instructional complex, the IA Building houses the electronics, water/wastewater, welding, automotive technology and auto body programs. The child care facility which serves parent education classes is located on the second floor.

#### Industrial B (IB)

The machine tool technology and carpentry programs and their lab facilities are housed in the IB Building.

#### Industrial C (IC)

The heavy equipment mechanics/diesel, refrigeration, heating and air conditioning, and small engine repair programs are located

in the IC Building. Extensive laboratory facilities and classrooms are available.

#### Business (B)

Transfer and vocational business courses are taught in the B Building. Instructional labs serving the needs of clerical students occupy much of the second floor.

#### Humanities & Social Science (HSS)

An art display area is located in the HSS Building, which also houses studios for art and music instruction. Classrooms for other humanities and social science courses are also located in the HSS Building.

#### Service Center (SC)

Maintenance and custodial services are provided through the Service Center, including maintenance of campus vehicles and supply distribution.

#### Forum (F)

Four large lecture rooms located in the Forum Building are used for classes, meetings and community events. The graphic arts program is taught in Forum Building classrooms equipped with photography and design equipment. The Loft Theatre, which presents programs "in the round" several times each year, is located on the second floor.

#### Learning Resource Center (LRC)

The Library, serving both students and the community, is located on the first floor of the LRC. Media Services, which supports instruction with audio-visual equipment, is also located on the first floor. The Developmental Center, which includes the math, reading and testing labs, is located on the second floor.

#### College Center (CC)

The cafeteria and student-run Santiam Room restaurant are located on the second floor of the CC Building. The student organizations office, the student newspaper office, a recreational area and student lounge make the CC Building a center of activity. The first floor of the CC Building houses administrative offices, including the business affairs offices. The bookstore is also located on the first floor of the CC Building.

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