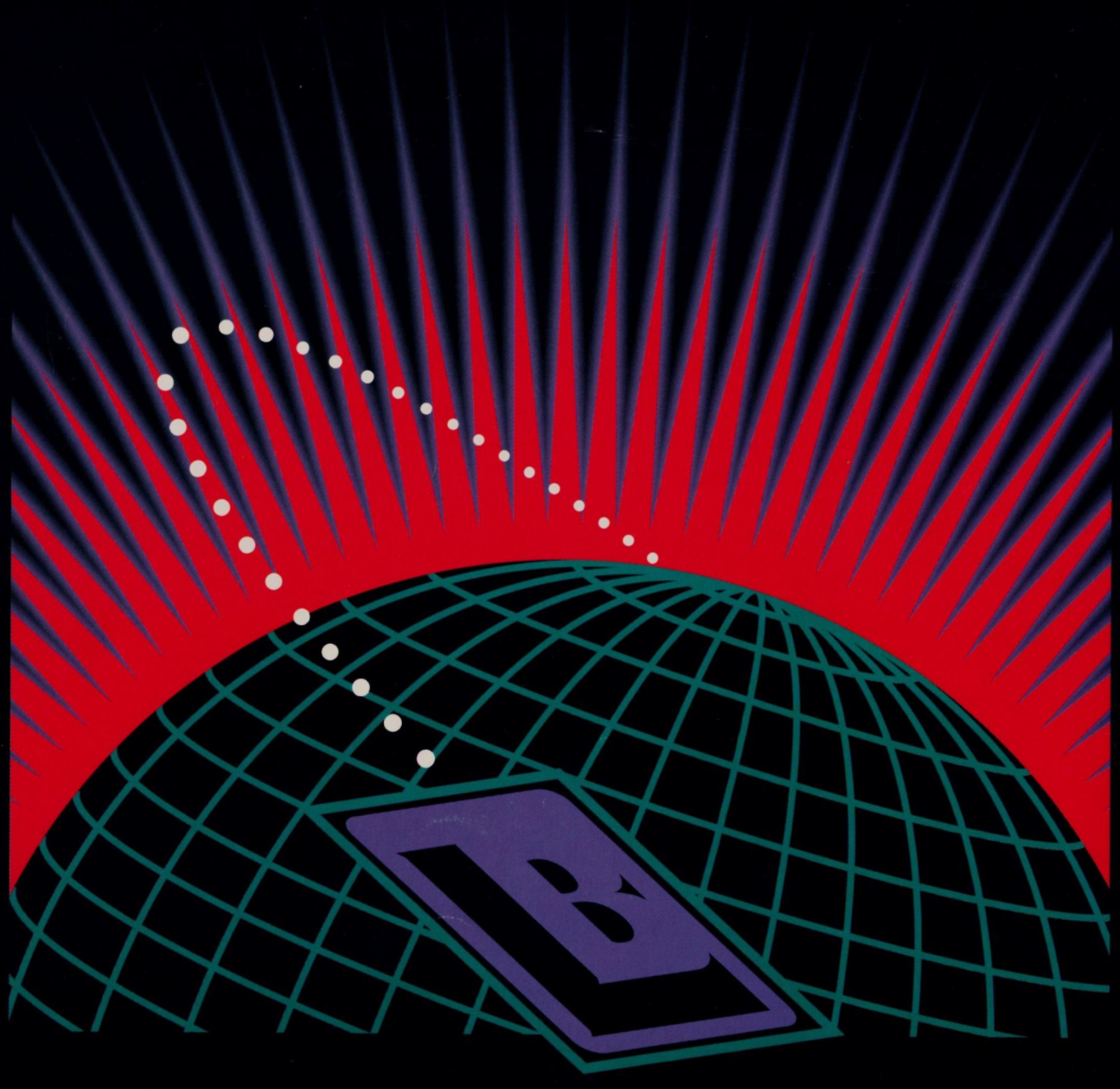
LINN-BENTON COMMUNITY COLLEGE GENERAL CATALOG 1996-1997



A WORLD OF OPPORTUNITIES

LINN-BENTON COMMUNITY COLLEGE
1996-97 ACADEMIC CALENDAR*

	Summer 1996	Fall 1996	Winter 1997	Spring 1997	Summer 1997
Registration Begins	See Quarterly Schedule of Classes				
Classes Begin	June 24	Sept. 23	Jan. 6	March 31	June 23
Last Day to Drop without "W"	July 5	Oct. 6	Jan. 17	April 11	July 7
Last Day to Withdraw and Qualify for a Refund (Full-term classes)	July 5	Oct. 6	Jan. 17	April 11	July 7
Last Day to Request P/NP (Full-term classes)	August 2	Nov. 8	Feb. 21	May 16	July 25
Last Day to Officially Withdraw (Full-term classes)	August 2	Nov. 8	Feb. 21	May 16	July 25
Last Day to Add Open-Entry/ Late-Starting Classes	August 9	Nov. 22	March 7	May 30	August 1
Final Exams	August 12-14	Dec. 9-11	March 17-19	June 9-11	August 11-13
Graduation				June 12	
Last Day of Term	August 16	Dec.13	March 21	June 13	August 15
Holidays/In-Service: No Classes Held	See Quarterly Schedule of Classes				

* Deadlines for full-term courses are indicated here. See the quarterly Schedule of Classes for other deadlines.

Photos by: Dennis Wolverton and LBCC staff

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THE COLLEGE

LBCC Overview

Linn-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 is open to any district resident beyond high school age.

Recognizing the diverse needs of its students, the college offers general education courses, professional technical 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 for the vocationally disadvantaged and the disabled.

The college's Extended Learning centers offer 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.

In addition to the Extended Learning classes, the Training and Business Development Center serves the needs of the district's business and industrial community. The Family Resources Department provides special services, including classes, workshops and consultations, to help strengthen families.

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.

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. A study prepared by the University of Oregon's Bureau of Educational Research in 1964, 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. In the fall of 1967, 2,800 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. More than 24,650 people take one or more classes each year, or a full-time equivalent of about 4,825 full-time students, making LBCC the fifth largest of Oregon's 16 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 Hall is the "front door" to LBCC and centralizes most student services.

No new buildings were added at the college until the 1987 Legislature approved $8.5 million in construction funds for Oregon community colleges. Among the projects approved was a new center for LBCC's Family Resources program. The new building opened the fall of 1988 and was formally dedicated in February 1989.

The Workforce Education Building opened in 1992 and is the site for three training and workforce programs, which are operated through collaborative efforts of the college and local and state agencies.

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 Camas Room in Takena Hall.

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

All main campus facilities are designed with the needs of people with disabilities in mind, including special parking areas and access to buildings and classrooms. Remodeling or upgrading of the off-campus centers to meet the needs of people with disabilities is currently underway. These projects are made possible by district voters who approved a special capital bond in 1994.

The Extended Learning centers, along with other facilities throughout the district, are used to make educational opportunities easily accessible to all men and women in the area.

Philosophy

Linn-Benton is a two-year community college, publicly funded and locally governed. It was established to provide fully accessible educational opportunities to members of the community based on the following beliefs:

1. Individuals have different potentials for growth and self-fulfillment.
2. Learning provides the means for men and women to develop their abilities, to expand their knowledge and skills, and to approach their potential as 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. Enrollment 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 assessment and advising, students will be able to select appropriate courses of study.
5. Appropriate high standards of performance should be maintained within each course of study.
6. The 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, national and global needs, as well as reflect sound educational standards.
7. Tuition and fees should be maintained at a reasonable level.
8. Local direction and control of the college should be maintained through the elected board of education, based on college policies that are consistent with local, state and federal laws and policies.

Mission

The mission of Linn-Benton Community College is to provide accessible, quality, life-long learning opportunities to serve the present and future needs of the community. The college works in cooperation with public school systems and other institutions of higher education. The college is community based and is committed to student success through responsive and flexible educational programs designed to meet individual student needs.

The mission will be accomplished by developing, implementing and updating the following comprehensive education programs and services.

1. The college shall emphasize its commitment to a high-quality teaching and learning environment which fosters creativity, critical thinking skills, leadership skills and student success.
2. The college shall provide students with the opportunity to develop competencies to function as life-long learners given the challenge of a changing world society.
3. The college shall respond to the needs of business and industry by providing professional technical programs for training, retraining and upgrading the skills of those seeking entry-level employment or career advancement.
4. The college shall provide lower-division transfer courses for students transferring to four-year colleges and universities, completing associate degree requirements or for broadening their educational base.
5. The college shall offer developmental and remedial programs to prepare students to enter professional technical or transfer programs of their choice.
6. The college shall provide the planning, services and facilities needed to provide a positive learning environment and to enhance student life.
7. The college shall provide opportunities for residents of the district to appreciate and participate in cultural, recreational, civic and international activities which enhance the quality of life.
8. The college and its staff shall support and participate in community service activities.

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.

Students who want to review information about LBCC's accreditation status may contact the President's Office, CC-101, 917-4200. Students also may write the Northwest Association of Schools and Colleges, 3700-B University Way NE, Seattle, WA 98105, for information about the college's accreditation status.

Non-Discrimination Policy

Linn-Benton Community College maintains a policy of non-discrimination and equal opportunity in employment and admissions, without regard to race, color, sex, marital and/or parental status, religion, national origin, age, mental or physical disability, Vietnam era or disabled veteran status, expunged juvenile record, family relationship (except where one employee would be in a supervisory position over another employee), opposition to safety and health hazards, application for workers compensation benefits, or any other status protected under applicable federal, state or local law, unless it is a bona fide occupational requirement reasonably necessary to the operation of the institution, as allowed by law. Questions or concerns related to affirmative action, non-discrimination, equal opportunity or the college discrimination complaints and hearing procedures should be directed to the Human Resources Office; Linn-Benton Community College; 6500 SW Pacific Blvd.; Albany, OR 9732l-3779.
Telephone: (541)917-4806.

Student Rights, Complaints, 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 students to file complaints and outlines the due process procedure. In addition, rules for student conduct are included in the policy. Individuals who want a copy should contact the Dean of Student Services, Takena Hall 107, (541)917-4806.

Student Right to Know

In compliance with the Student Right-To-Know and Campus Security Act (Public Law 101-542), retention and graduation rates for full-time new students that began attendance at LBCC Fall Term 1992 and Fall Term 1993 are available at the First Stop Center in Takena Hall or the Institutional Research Office in the College Center.

Pledge to Quality Education

LBCC will refund the tuition of any LBCC graduate for any transfer course passed at LBCC with a grade of "C" or better if the earned credit does not transfer to an Oregon State System of Higher Education college or university. This guarantee is good within two years of graduation from LBCC, subject to the maximum credit hour limitation of the receiving institution. Transfer courses are those courses in the Linn-Benton Community College catalog that are identified and approved as transfer courses by the Academic Affairs Office at LBCC.

Any graduate of an Associate of Applied Science* degree program who is judged by his or her employer to lack communication, computation, interpersonal or technical skills normally expected of a job-entry employee will be provided further skill training up to 15 quarter credit hours by LBCC without charge.

*Special Conditions do apply. See LBCC's Graduate Guarantee on page 132 of this catalog for details or contact the Assistant to the President for Academic Affairs, Linn-Benton Community College, 6500 SW Pacific Blvd., Albany, OR 97321-3755. (541) 917-4201.

GENERAL INFORMATION

Academic Calendar

The college operates on a term (also called a 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 an eight-week period from mid-June until mid-August.

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; the student rights, complaints, freedom and responsibilities policy; and other official publications of the college.

Child Care

Family Resource Center

On-campus child care for LBCC families is provided through the Family Resources Department. The Family Resource Center, one of two nationally accredited programs in Linn and Benton counties, has the capacity to serve 75 children. Children must be at least two and one-half years of age and not yet eligible for kindergarten. Priority is given to student families on a first-come, first-served basis. Families must place children's names on a waiting list. Families enroll for one term at a time, and they must commit to using the center for at least one term at the time of enrollment. For additional information, contact Family Connections, (541)917-4899, or the Family Resource Center, (541)917-4898.

Family Connections (Formerly Child Care Resource and Referral)

Family Connections, located in room 101 of the Workforce Education Building, offers help and information to parents seeking child care, parent education classes, recreational activities and other forms of family support. Sponsored by the Associated Students of LBCC, the service is offered to all LBCC credit students. For more information, call (541)917-4899.

Credit Hours

Generally, a class that 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 enrollment equals 12 credit hours.

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 Programs Office in College Center 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 disabled people.

Although parking permits are not required to park on campus, they are recommended. The permits help the Security and Safety Services Office locate car owners in case of car problems or an emergency. Permits are free and available in the Security and Safety Services Office, College Center 123.

Parking and traffic rules also are available in the Security and Safety Services Office in CC 123. Special permits for disabled people must be obtained from an Oregon Department of Motor Vehicle Office. Cars improperly parked are subject to fine. Unauthorized overnight parking is prohibited. Vehicles parked for an extended period of time may be considered a security risk and are subject to towing at the owner's expense.

Student Health Insurance

LBCC makes available a comprehensive hospitalization and accident insurance policy for students who desire such coverage. The insurance program is available at group rates and includes provision for coverage of the student's dependents. For more information, contact the Student Services Office, Takena Hall 115, or call (541)917-4812.

ENTERING COLLEGE

Choosing a Career or Program

An important beginning step 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 Career and Counseling Center staff is available to assist prospective students of the college in making decisions about community college studies. Those wanting to enroll at LBCC often make consultation with a counselor a first step. The Career and Counseling Center is located on the first floor of Takena Hall.

Admissions/First Stop Center

Diane Watson,
Director of Admissions and Records
(541)917-4811
Takena Hall 115

The Admissions office includes the First Stop Center. The First Stop Center represents the integration, coordination and cooperation of the Takena Hall student services offices. The First Stop staff welcomes student and community members by providing direct answers to questions or by referring students directly to the appropriate service offices. A major goal of the Center is to reduce student frustration in dealing with institutional processes and to increase the number of students who are aware of the many services from which they might benefit.

Enrollment Standards

Students 18 years of age or older are eligible to enroll at Linn-Benton Community College. Students under 18 years of age who have graduated from an accredited or standard high school, or who hold a GED, also are eligible for enrollment. There are special enrollment agreements in cooperation with various school districts and an enrollment request process for students not meeting the above guidelines. In addition, students must successfully pass the safety and health standards of any instructional program which utilizes moving equipment, machinery and/or hazardous materials/chemicals in the course of their instructional processes.

Note: Enrollment standards have been modified and are effective Fall Term 1996. For additional information, please contact the Admissions Office, (541) 917-4811.

Admission

To be admitted to the college, a student must complete an application for admission and pay the application fee. Students under the age of 18 must provide proof of graduation from an accredited or standard high school or proof of a GED. Prior to registering, admitted students are required to take the placement examination or petition to waive the exam based on appropriate college courses. In addition, admitted students must attend an orientation/advising session prior to registration. These students may register full time or part time and receive a priority registration.

Some instructional programs have special admissions standards and may be subject to strict application deadlines and procedures. For all programs, the college reserves the right to give higher priority to the enrollment of district residents.

Enrollment-Articulated Agreements

Linn-Benton Community College provides assistance to people who want to complete their high school education. The college cooperates with local high school districts in supporting school improvement efforts by providing educational opportunities for the youth of Linn and Benton counties. Such persons may enroll in college courses and programs according to the terms and conditions of articulation agreements that exist between the college, various school districts and other agencies. An Alternative Learning Opportunity Referral Form may be required every academic term of enrollment.

Open Enrollment

Students enrolling less than full time (0-11 credits) register for desired classes at the appropriate time. Part-time students are required to take the appropriate placement tests for some classes. Prior to receiving a certificate or degree, students must be admitted to the College.

Enrollment of Younger Students

Students who are under the age of 18 years who are not enrolled as part of an articulated agreement or have not graduated from high school or have a GED certificate, will be required to request permission through the Request for Enrollment form available in the Admissions Office for all credit classes except courses designed for students under 18. It is the student's responsibility to submit completed forms and to receive permission to register. Failure to do so may result in disenrollment from classes. Requests must be filed and approved for every academic term enrolled. In order to assure a timely response, Requests for Enrollment must be filed at least seven working days in advance of the beginning of classes for the term of desired enrollment. Requests for Enrollment are available from the Admissions and Records Office and from each Extended Learning Center. Although other questions may be asked, the Request for Enrollment will, at a minimum, require the following information:

1. Legal name of prospective student
2. Birthdate of prospective student
3. Classes desired
4. Reasons why enrollment is requested
5. Evidence of the prospective student's ability to successfully complete the course work. Usually this will require the satisfactory results of an appropriate assessment instrument as determined by the Director of Admissions and/or Testing Coordinator.
6. Current school status, if any (name of school, grade)
7. Permission to exchange information with the appropriate school or local ESD related to the student's requested course work.

A standing committee appointed by the President will promptly review all requests in a timely manner to determine if enrollment is appropriate. Oregon law imposes on school districts the primary responsibility for the education of students 17 years of age and younger. Therefore, the committee will carefully review each Request for Enrollment and only grant those that clearly provide: a) evidence of sufficient maturity to successfully participate in the planned course load and b) evidence that another, more age appropriate, instructional resource is not available. Students will not be permitted to attend an LBCC class if in the judgement of the college such participation would likely create a health or safety risk for any person or be in violation of Oregon statutes or regulations. The decisions of the committee on Requests for Enrollment shall be final.

Although the college does not generally require that students under 18 provide Requests for Enrollment for non-credit classes, it does request that the student receive instructor permission. The college reserves the right to impose the above standards as deemed appropriate by the course subject matter, safety factors or other significant concerns. Students who do not receive instructor permission may complete the Request for Enrollment process to be reconsidered for eligibility for a specific course. It is the student's responsibility to receive permission to enroll (instructor permission or permission from a Request for Enrollment). Failure to receive permission may result in disenrollment. Further, students under the age of 18 who want to enter GED classes must provide evidence of release from compulsory attendance or home schooling.

Program Completion

Students admitted to the college may register for classes on a space-available basis, providing that prerequisites have been met. The time needed to complete a program may vary according to the student's preparation and the availability of classes.

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 to receive a student visa. The deadline for foreign student applications is one month prior to the beginning of the term in which the student plans to attend. Foreign students needing to increase their writing/speaking skills, as determined by a Placement Test, may be required to take academic English to speakers of other languages classes. Questions about specific requirements may be addressed to the Director of Admissions and Records, Linn-Benton Community College, 6500 SW Pacific Blvd., Albany, OR 97321-3774.

Special Admission Programs

Although Linn-Benton Community College maintains an "open door" policy on admissions, special admission standards may be required for specific instructional programs. These standards are set to effectively and responsibly administer the college's resources and to ensure that each student has a reasonable chance of succeeding in a program. The special admission requirements are based on the minimum standards necessary to meet the demands of the particular 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. Admission to all other college programs shall be on a first-come, first-served basis.

Skill assessment for admission to these programs is usually measured by the Placement Test or by completing a prerequisite course with a grade "C" or higher. Placement Test scores are valid for five years for entry into special admissions programs. Students who do not meet the minimum admission standards for programs that require a course prerequisite or competency may petition for admission if they have been denied admission based on the minimum standards. Petitions will not be accepted based on any other criteria used in the selection process.

Students may file a petition if they believe they have extenuating circumstances that may not have been considered during the routine screening of applications by the Admissions Office. An Admissions Petition form must be completed, and students may attach documents supporting their request. An Admissions Review Committee of three staff members from the Student Services Division will review all petitions and make recommendations to the Director of Admissions and Records.

Programs in Nursing and Dental Assistant, as well as other technical programs, usually have waiting lists. Students interested in one of these programs should complete the application process outlined. Selection priority for special admission programs will be given to qualified applicants who are residents of the Linn-Benton Community College district. Students who reside outside the LBCC district will be admitted only after all qualified in-district residents have been admitted. *Please note: The Linn-Benton Community College district does* ***not*** *include all of Linn and Benton counties.*

If you have any questions about your residency status, you live near a county border or would like additional information about any selective admission program, contact the Admissions Office.

Dental Assistant:

The Dental Assistant program is offered once each year, beginning with the fall term and ending the following summer term. Dental Assistant applicants must: (1) have application and transcripts on file by a specified date (contact the Admissions Office for date); (2) supply to the Admissions Office proof of high school graduation or GED; (3) and demonstrate an ability to enroll in RD 103 Effective College Reading or successfully complete RD 1.176 Reading Improvement II and demonstrate competency to enroll in MTH 60 Introduction to Algebra or successfully complete MTH 20 Basic Mathematics prior to entering the program; (4) attend a career exploration session; (5) if accepted, the following must be completed and supplied before the first day of class: complete physical exam, a negative tuberculin skin test or chest x-ray, proof of immunization against measles, start immunization series against Hepatitis B (a series of three injections).

The application dates and deadlines are subject to change. **Please contact the Admissions Office for the current bulletin.**

Please Note: Occupational health hazards include the use of latex gloves and mask to be worn. Applicants with skin or breathing disorders should meet with the Dental Assistant advisor prior to applying for admission. In addition, dental assisting can intensify Carpal Tunnel Syndrome. Therefore, applicants with this condition also should meet with the Dental Assistant advisor prior to applying for admission.

Electronics Engineering Technology:

Students wanting to enroll in the Electronics Engineering Technology program must take the Placement Test and demonstrate ability to enroll in MTH 111T College Algebra: Technical and WR 115 Introduction to Writing or complete the prerequisite courses with a grade of "C" or better.

Interest in the Electronics Engineering Technology program must be demonstrated by filling out an application form on which students declare, by the appropriate code, Electronics Engineering Technology as their major. Applications may be submitted beginning in January with a deadline in June. Selection and approval will begin in June and continue until the program is full. The application dates and deadlines are subject to change. **Please contact the Admissions Office for the current bulletin.** Notification of admission to the program will be made in late summer.

Emergency Medical Technician Program:

Applicants for the one-year program beginning fall term must: (1) have application (and transcripts if needed) on file by a specified date (contact the Admissions Office for date), (2) complete the Placement Test, (3) provide proof of minimum reading skills or complete RD 103 Effective Reading with a grade of "C" or better, (4) provide proof of age (Oregon Administrative Rules require that students be 18 years of age by the first day of classes, and (5) if accepted, supply proof of the following by the first day of classes: a negative tuberculin skin test or chest x-ray with negative results, current CPR Card Level C, appropriate immunizations, including Hepatitis B, and a current driver's license.

The EMT program admission procedure is reviewed annually and, therefore, subject to change. **Please contact the Admissions Office for the current bulletin.**

Nursing:

Applicants for the two-year program beginning fall term must: (1) have application (and transcripts if needed) on file by a specified date (contact the Admissions Office for date); (2) supply proof of high school graduation or GED; (3) complete the National League for Nursing Preadmission Examination (dates for administration of this exam are available through the Student Assessment Center--test scores are valid for seven years); [*Students needing NLN accommodation because of a disability must contact Disabled Student Services, (541)917-4683, by November 15, 1996.*] (4) have completed one year of high school chemistry with a grade of "C" or better or completed CH 112 Chemistry for Health Occupations with a grade of "C" or better within the last five years; (5) complete the Placement Test; (6) if accepted, complete MTH 65 Elementary Algebra by the first day of classes; (7) if accepted, supply proof of the following by the first day of classes: a complete physical exam, a negative

tuberculin skin test or chest X-ray, current CPR Card Level C and appropriate immunizations, including Hepatitis B.

The admission procedure is reviewed annually for the ADN program and therefore subject to change. **Please contact the Admissions Office for the current bulletin.**

Water/Wastewater Technology:
Students applying for the one- or two-year Water/Wastewater program must demonstrate the ability to enroll in MTH 65 Elementary Algebra and WR 115 Introduction to Writing. This ability may be shown by an appropriate Placement Test score or by completing the prerequisite courses with a "C" or better grade shown on a college transcript.

Interest in the Water/Wastewater program must be demonstrated by filling out an application form in the Admissions Office declaring Water/Wastewater as a major. Applications may be submitted beginning in January, with a deadline in May. Selection and approval will begin in May and continue until the program is full. The application dates and deadlines are subject to change. **Please contact the Admissions Office for the current bulletin.**

Classification of Residency

Oregon Revised Statue 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 Oregon 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 and who has demonstrated the intent of making Oregon the state of permanent residency. A list of acceptable documents that demonstrate a student's intent to reside in Oregon on a permanent basis is available from the Admissions Office. 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.

To qualify as a resident 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 the state of Oregon:

1. A veteran who has established a permanent residence inside 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 state; i.e., Defense Department and foreign embassy.
3. A student whose non-resident parent or legal guardian moves to the 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 Oregon 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 in Oregon 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 Oregon.

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 should be directed to the Director of Admissions and Records.

Registration

Glenda Tepper, Registrar
(541)917-4812
Takena Hall 115

Registration for Credit Classes

1. Complete all admission requirements
2. Preregistration advisor conferences are recommended for:
   a. all new students registered for 12 or more credit hours;
   b. students sponsored by certain agencies;
   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 should register during the continuing student registration period to ensure a space in classes; spaces remaining after continuing student registration will be made available to both new and continuing students.
4. Registration materials are available in the Registration Office lobby. When all forms are completed, they are to be presented at the registration windows.
5. Full tuition payment is required on the day of registration. The Financial Aid Office may be contacted for assistance in tuition payment. Tuition is paid at the Business Affairs Office on the first floor of the College Center. Students whose tuition is to be paid by a special program or agency must confirm the credit with the cashier the same day as registering.
6. Students who are unable to stand in line due to physical limitations may obtain a "Handicapped Student Line Reservation Slip" from the Registrar's secretary.

A student number is used for positive identification of records. An identification number may be requested from the Registration Office for students wanting to use a number other than their Social Security number.

Registration for Extended Learning Classes

Registration materials for Extended Learning classes, both credit and non-credit, are available in class during the first and second class meetings. Students may preregister at the campus Registration Office or the off-campus Extended Learning centers.

Waiting Lists

Students may ask at the Registration counter or Extended Learning Center to be put on a computer Wait List for classes that are full. *Students will be charged tuition for a Wait List registration.* Through the first week of class, students are rolled from the Wait List to registered as space becomes available. No signatures or special forms are required. Students also can be added to the Wait List through the first week of class if the class is full and space is still available on the Wait List.

Students must contact the instructor at the time of the first class meeting to find out whether or not they have been given "registered" status or whether they should continue attending while waiting to see if space becomes available.

While students remain on the Wait List through the second week of class, they are not automatically rolled into classes. During the second week, instructor signature is required before a student can be registered. An instructor can move a Wait List student to registered status or add other students to the class by signing a registration form or an add/drop form.

Students who are still on the Wait List as of the last day of the second week will be taken off the Wait List and their tuition will be refunded, if a refund is due. Refunds are made after the Add/Drop period is over.

Schedule Changes

A student may add a full-term course during the first week or, with the instructor's written permission, during the second week. Registration deadlines for shorter classes are printed in the quarterly Schedule of Classes.

A student may officially withdraw from a full-term class up to the end of the seventh week. Withdrawal deadlines for shorter classes are printed in the quarterly Schedule of Classes.

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 request audit status at the time of registration or later during the add period for that class. Charges for auditing are the same as for regular credit enrollment.

The final grade assigned a student with audit status shall be based solely on classroom attendance and may be entered as an "AU" or a "Y" (no basis to issue grade; no credit earned) at the discretion of the instructor. The instructor has the right to require 100 percent attendance when audit status is requested.

Tuition and Fees

Tuition Schedule

At the time this catalog was published, the tuition and fee charges for credit and non-credit classes had not been determined for the 1996-97 school year. *The tuition and fees shown below were in effect for the 1995-96 school year.* ***Please consult the latest LBCC Schedule of Classes to determine current tuition and fees.***

Credit Classes	District	Out-of-State	Foreign
Per credit	$ 34	$121	$ 136
(15-20 credits)	$510	$1,815	$2,040

Note. *Tuition and fees are subject to change by the LBCC Board of Education.*

Non-Credit & Extended Learning Classes

Contact Hours	Reimbursable	Non-Reimbursable
1 - 6	$ 11.40	$ 12.40
7 - 12	18.40	19.40
13 - 18	27.40	30.40
19 - 24	34.80	40.40
25 - 40	45.40	51.80
41 - 48	69.40	80.40
49 - 60	92.40	97.40

Note: This schedule is subject to change; an additional supply and lab fee may be charged.

Special Fees

Application for Admission $20
Course Add ..... No charge
Course Drop ..... No charge
Credit by Examination ..... 30% of tuition per credit
Photo ID card $5
Placement Test ..... $2 per test
Official copy of LBCC transcript $5
(Additional copies ordered at the same time: $3)
Unofficial copy of LBCC transcript $1
Physical education activity fees (some courses) ..... variable

Student Activity and Program Fee:
Each student is assessed a $1.60 per credit charge, to a maximum of $24, as a student activity and program fee. The fee is included in the $34 per credit tuition and fee charge listed above. 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 recreational and social activities. More information about the activities supported by the fee is available in the Student Programs Office, College Center Building, room 213.

Note. *These fees are subject to change.*

Student ID Card

A student ID card is required in some areas on campus, including the Library, Learning Center, Business Affairs Office, Assessment Center and Computer Lab. The card is used for verification and identification of students receiving financial aid and charging books and supplies in the Bookstore. The card also provides verification to merchants in the local community that you are a student, which may qualify you to receive merchandise or service discounts.

There is a one-time charge of $5 for the card, and it will be re-validated free each term you register. There will be a charge for reissuing lost cards.

Any LBCC student is eligible for a picture ID card; however, they will be issued only on the main campus.

Refunds

To receive a tuition refund, students must submit a schedule change form to the Registration Office within the first two weeks of a full-term class. Students may petition for refunds after the deadline if "serious and compelling" circumstances exist. Refund deadlines for shorter classes are printed in the quarterly Schedule of Classes. Refunds will be mailed after the second week of classes.

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

Academic Regulations

Prerequisites

Many of the courses offered by the college require that students complete other courses prior to enrollment. Prerequisites are determined with student success in mind. Make sure that you consult the Course Description section of the current year catalog for prerequisites before you register. If you are uncertain about whether you have met a specific prerequisite for a class, consult with your advisor or the instructor of that class. A student may be withdrawn from a course if the prerequisite has not been met.

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.

Linn-Benton Community College accepts college-level credits earned in academic certificate and degree programs from colleges and universities accredited by regional accrediting associations and with an "AG" symbol for credit acceptance as indicated in *Transfer Credit Practices of Designated Educational Institutions* published by the American Association of Collegiate Registrars and Admission Officers. Transfer course work from foreign institutions will be evaluated in accordance with approved college procedure.

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 four-year 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 professional 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 a counselor's signature.

Credit by Examination

Students who believe they have mastered the material presented in courses listed on LBCC's Course Challenge List may apply for Credit by Examination. To apply, students must be currently enrolled in a credit class or have completed 12 credits at LBCC.

Application for Credit by Examination must be completed in the Student Assessment Center, second floor of Takena Hall, by the end of the second week of a term and the examination must be completed by the end of the seventh week of the same term.

A non-refundable 30 percent of tuition per challenged course per credit hour processing fee must be paid before the examination is given. An additional testing fee also may be required.

For more information about LBCC's Credit by Examination program, stop by the Student Assessment Center in Takena Hall or call (541)917-4781.

College Level Examination Program

LBCC is an approved open center for administration of the College Level Examination Program (CLEP). In addition, LBCC accepts most CLEP scores for college credit, which may be posted to transcripts under "advanced standing." CLEP examinations are administered through the Student Assessment Center. For a list of CLEP tests accepted at LBCC, contact the Student Assessment Center in Takena Hall or call (541)917-4781.

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) on examinations administered by the Board may, upon admission to LBCC, be granted comparable credit towards a degree for some of the examinations. All examinations are subject to review and approval by the appropriate college division.

Students must request that official Advanced Placement scores be forwarded to the Admissions Office. For a list of Advanced Placement at LBCC, contact the Student Assessment Center in Takena Hall or call (541)917-4781.

Repeating a Class

In general, a class that a student has already completed for credit at LBCC cannot be repeated for credit. There are some exceptions, however. These exceptions are noted under the individual course descriptions in this catalog.

LBCC students will not receive credit for courses clearly identified as being prerequisites to LBCC classes already completed by the student with a grade of "C" or better. Staff may disenroll students who register for credit in these courses. Any exceptions must be authorized in writing to the Registrar by the appropriate faculty member and dean or designee.

If a student earns a higher grade upon repeating a class, a request may be made at the Registration Office to recalculate the grade point average using the higher grade. The lower grade will be preceded by an "R" on the transcript and removed from credit and point totals.

Course Number Change

In the event a course number has been changed from a professional technical number to a transfer level number, the transfer level number will appear on the permanent record only for those who took the class after the change was approved.

Grading System

A: Excellent work; 4 quality points per credit.

B: Above average work; 3 quality points per credit.

C: Average work; 2 quality points per credit.

D: Below average work; 1 quality point per credit.

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

IN: Incomplete work.

W: Withdrawal*; no credit earned (not computed in GPA).

Y: No basis to issue letter grade; no credit earned (not computed in GPA).

NP: No pass; no credit earned (not computed in GPA).

WP: Work in Progress; no credit earned (not computed in GPA)

AU: Audit; no credit earned (not computed in GPA).

Standards of Progress for Graduation

To qualify for graduation, students are required to meet all graduation requirements and to complete 70 percent of all courses attempted. "F," "NP" and "Y" are non-completion grades.

Pass/No-Pass Option

Courses listed in the schedule with an "OPT" designation indicate that students have the option of taking the course for a letter grade or on a pass/no-pass (P/NP) basis. It is the student's responsibility to check the class schedule to determine whether or not a class has the pass/no-pass option. Requests submitted in A-F classes have no effect on the grade issued by the instructor. 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 may be processed through the Registrar's Office or through the instructor.

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 to transfer to a four-year institution should check that institution's requirements regarding "P" grades.

Academic Probation

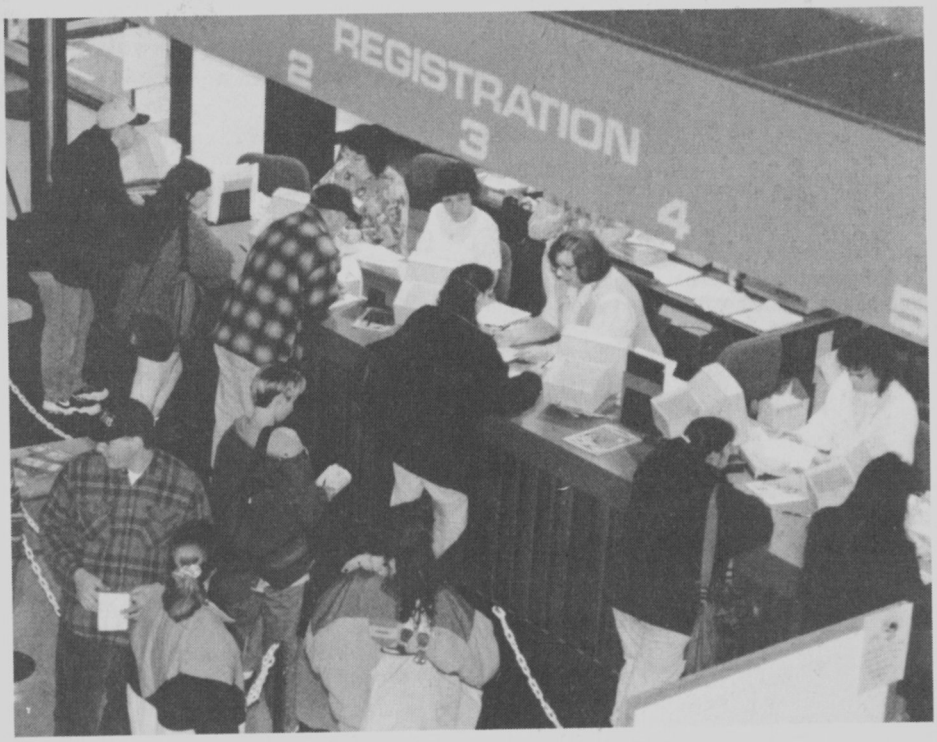
Students registered for 12 or more credits after the second week of the term are subject to academic probation regulations.

Full-time students are placed on academic probation if the accumulative grade point average drops below 2.00.

Students are expected to complete those courses for which they have registered. A full-time student also may be placed on academic probation upon non-completion of 50 percent of the credits registered for after the second week of the term.

A student must maintain a grade point average of at least 2.00 in all specific major requirements in order to continue in a 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.

A student who has been on academic probation for three consecutive terms is subject to suspension. Students on suspension will be limited to enrolling in seven or fewer credits. Students may petition to be reinstated as a full-time student. This process is initiated by



completing a Suspension Appeal Petition available in the Admissions Office.

Honor Roll

Students who obtain a grade point average of 3.50 or better with no incompletes and have completed a 12-credit load or more of graded work (not including P/NP) are placed on the Honor Roll list for that quarter.

Records Information

Linn-Benton Community College follows the Federal Health Education and Welfare Guidelines for the Family Educational Rights and Privacy Act of 1974 as amended (Pell-Buckley amendment) and the Oregon Administrative Rules regarding Privacy Rights and Information Reporting in Community Colleges in regard to educational records.

Federal legislation gives students the right to inspect and review their educational records as defined in LBCC Board Policy # 7071. If a student believes the educational records relating to the student contain information that is inaccurate, misleading or in violation of the student's rights of privacy or other rights, he or she may ask the college to amend the record. If the college decides not to amend the record as requested, it shall inform the student of its decision and of his or her right to a hearing. Further, a student may file a complaint with the U.S. Department of Education by contacting the Family Policy and Regulations Office, U.S. Department of Education, Washington, DC 20202.

In accordance with the Family Educational 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; dates of attendance; school or division of enrollment; and degrees and awards received. Students who do not want to have any of the above information released by the college must complete and file a directory deletion form with the Registrar's Office. Students must notify the college by the time of registration to ensure that directory information will not be released. Information will not be released except to the extent the Oregon Administrative Rules allow disclosure without consent, for example, in cases of a federal audit.

OAR 581-41-290 authorizes Linn-Benton Community College to ask you to provide your Social Security number. The number will be used by the college for reporting, research and recordkeeping. Your number also will be provided by the college to the Oregon Community College Unified Reporting System (OCCURS), which is a group made up of all community colleges in Oregon, the state office of Community College Services and the Oregon Community College Association. OCCURS gathers information about students and programs to meet state and federal reporting requirements. It also helps colleges to plan, research and develop programs. The information helps the colleges support the progress of students and their success in the workplace and in other education programs. OCCURS and the college also may match your Social Security number with records from the following systems:

- State and private colleges, universities and vocational schools to find out how many community college students go on with their education and to find out whether community college courses are a good basis for further education.
- The Shared Information System, which gathers information to assist state and local agencies in planning education and training services to help Oregon citizens get the best jobs available.
- The Office of Professional Technical Education Management Information system to provide reports to the state and to the federal government. The information is used to learn about education, training and job market trends for planning, research and program improvement.

Some funding for community colleges is based on this information.

Your number will be used only for the purposes listed here. State and federal law protect the privacy of your records.

Students may obtain a copy of the LBCC Records Policy through the Registrar's Office.

Transcripts and Records

LBCC official student transcripts may be ordered at the transcript window at a cost of $5 each. Additional official copies are $3 each when ordered at the same time. **(These fees are subject to change.)** Unofficial copies are available for $1 each. Processing of transcript orders takes up to one week. 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 official records belonging to a student who has failed to repay an emergency loan, installment tuition payment or other debt or obligation shall not 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 classes should officially withdraw from school. Students who withdraw within the refund period may expect a tuition refund (see "Refunds" and "Withdrawal Deadlines" in the quarterly schedule of classes).

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

Incomplete Rule: Work must be completed by the end of the following term. Summer term is an exception; students completing work for a spring term class have until the end of fall term. If a grade is not submitted by the instructor, the "IN" is changed to a "Y." "IN" grades are not normally awarded in variable credit classes.

Grade Point Average (GPA) is calculated by dividing total quality points by total GPA hours. (Grades not included in GPA: IN, W, Y, P, NP, WP, AU and repeated grades preceded by R.) Grade reports and transcripts show both current GPA (one-term) and cumulative GPA (all classes taken at LBCC).

FINANCIAL AID AND VETERANS

Financial Aid and Veterans

Lance Popoff, Director of Financial Aid
(541)917-4850
Takena Hall 119

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 veterans' educational benefits also are provided through the Financial Aid Office.

Eligibility Requirements

You may be eligible to receive financial aid if you:

- are enrolled at least half-time, which is six credit hours, for the Federal Stafford , PLUS and Perkins Loan programs.
- fully admitted, degree-seeking students enrolling for less than half-time status may be eligible to receive Pell Grants.
- have been admitted to the college as a regular student (one who is enrolled to obtain a degree or certificate) in an eligible program that is at least one year in length.
- have registered with the Selective Service, if required to do so.
- have a high school diploma or GED.
- are not attending an elementary or secondary school.
- are a United States citizen or an eligible non-citizen.
- are not in default of any federal loan program nor owe a refund on any federal grant program.

Program Eligibility

- Eligible programs need to be at least one year in length and lead to a degree or certificate.
- Two-year programs that are acceptable for full credit toward a baccalaureate degree also are eligible, even if they do not offer degrees.
- Eligible one-year programs must provide training to prepare students for "recognized occupations" as defined in the Dictionary of Occupational Titles.

Application Procedures

LBCC uses the Free Application for Federal Student Aid (FAFSA) to determine the amount a family and student can contribute to the cost of a college education. The use of the federally approved aid application assures every applicant fair and consistent treatment. The FAFSA is used to apply for federal and state grants, work programs and loans. No processing fee is charged for filing the FAFSA. It takes three to four weeks to process the FAFSA. LBCC then receives the data electronically so that the Financial Aid Office staff can begin determining the applicant's financial aid eligibility. This process takes two to six weeks depending on the individual's application and the time of year.

Application forms are available from the LBCC Financial Aid Office, high school counselors or agency personnel. The applicant completes and mails the application form to the FAFSA Central Processor, which forwards information to the Pell Grant Office and LBCC. Pell Grant Student Aid Reports (SAR) are sent to the student only. When information is received from the Central Processor, the LBCC Financial Aid staff may request additional information from the applicant, such as proof of independence, information regarding aid received at other institutions or tax forms.

In addition, students must complete the LBCC Supplemental Information sheet **and obtain Financial Aid Transcripts (FATS) from all previously attended post-secondary schools.**

Application for aid may be made throughout the year; however, because 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.

Prospective aid applicants must be fully admitted to LBCC as regular students (even if attending less than full time) ***before*** their aid applications will be processed and they are notified of aid offers. Please contact the LBCC Admissions Office for applications and information regarding the admissions process.

Warning!!

If you receive federal and/or state aid based on inaccurate information, you will have to pay it back; you also may have to pay fines and fees.

If you purposely give false or misleading information on any documents used to determine your aid eligibility, you may be subject to a fine of $10,000, receive a prison term or both.

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
$1,530
* Books & Supplies
$900
Living Expenses
$2,946

SINGLE (away from parents' home)

* Tuition & Fees	$1,530
* Books & Supplies	$900
Living Expenses	$6,426

* Tuition estimates are provided here so total costs can be compared. Tuition and fees for the 1996-97 school year had not been established at the time this catalog was published. Current tuition rates may be found in the quarterly schedule of classes. Additional tuition charges are assessed for non-resident and foreign students.

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

Tuition Installment Plan

Any student enrolling for four (4) or more credit hours and who does not have any outstanding charges owed the college is eligible to participate in the Tuition Installment Plan. A down payment equal to three credit hours (currently $102) plus a $7 processing fee must be paid when registering. The balance of the tuition must be paid in one payment mid-way through the term. A late fee of $10 per term will be assessed if payment is not made according to the terms of the agreement. Applications for the Tuition Installment Plan are available at the Business Affairs Office and the Albany Center.

Tuition Refunds for Financial Aid Recipients

The college has two tuition refund schedules for students who *completely withdraw* from school. The policy used to calculate the tuition refund is based on recorded dates of last attendance during the term and whether the student is new to LBCC or is a returning student.

The college utilizes the tuition refund policy that yields the highest refund amount based on the student's recorded last date of attendance. Please note that students must submit *written notification* of complete withdrawal via the drop/add form to the Registration and Financial Aid offices to qualify for tuition refunds. Tuition refunds are returned to federal financial aid programs and not to students. Tuition refunds are first attributed to loan programs to reduce the student's indebtedness and next to grant programs from which the student received aid.

The following table shows the percentage of tuition refund students will receive, depending upon whether they are a new student or a returning student and depending upon when they completely withdraw:

Complete Withdrawal by end of:	*Tuition Refund New Students**	*Returning Students*
2nd week of classes	100%	100%
3rd week of classes	70%	50%
4th week of classes	60%	25%
5th week of classes	50%	25%
6th week of classes	50%	25%
7th week of classes	40%	0%

At the beginning of the eighth week, the tuition refund for new and returning students is 0 percent.

* New students only during their first term of attendance at LBCC.

Standard academic year terms are 11 to 12 weeks in length. Appropriate adjustments to the refund schedules are made for terms of shorter duration.

Student-owed Repayments

Students receiving cash payments from financial aid programs (not including the Federal Student Work Program or the Federal Stafford Loan Program) who completely withdraw from classes may be required to repay a portion of the aid received according to the following schedule:

Recorded Date of Last Attendance	*Repayment*
No satisfactorily completed grades	100%
End of 2nd week of classes	100%
3rd & 4th week of classes	1st 1/3 of living expenses exempted
6th & 7th week of classes	2/3 of living expenses exempted

No repayment of financial aid is required for recorded attendance beyond the seventh week of the term.

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

Academic Standards and Eligibility

Students receiving financial aid must fulfill the standards of satisfactory academic progress outlined in the financial aid brochure and the award letter.

Additionally, any student not in good standing with the institution, i.e. academic or disciplinary suspension, will not be eligible for further aid or certification until such time as the student has been returned to good standing.

Veterans' Affairs

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, 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.

Standards of satisfactory progress for students receiving veterans' benefits:
Students receiving Veterans' Administration (VA) benefits are responsible for demonstrating satisfactory progress toward a degree or certificate in a VA-approved program of study. *The VA will only pay for classes that advance students toward their established program goal.*

School admission and evaluation of prior credit:
Veterans must become fully admitted students which requires:

1. Formal application for admission to the college.
2. Completion of a Placement Test (unless waived by adequate transfer credit).
3. Having official transcripts of all college credit earned at other schools sent to the LBCC Admissions Office.
4. Requesting an official credit evaluation of all prior or transfer credit.
5. Attendance at a scheduled LBCC new student orientation.

Grades:
Satisfactory grades are "A," "B," "C," "D" and "P." All non-punitive grades ("Y," "W," "NP" and "IN") that reduce the student's total credits to less than the original certification amount are reported to the VA. Any benefits that have already been paid for courses in which non-punitive grades are received must be repaid to the VA.

Note: The VA may deduct the overpayments from future benefits when due. Any course in which an "F" grade was received may be retaken with benefits only if that specific course is required for graduation. The VA allows one year for "IN" grades to be completed. Failure to complete an "IN" within one year may result in an automatic reduction of benefits. However, college policy requires incompletes to be made up within one term. (See Incomplete rule under Grading System in the Academic Regulations section.)

Variable Credit Classes:
You may be certified for all the credits of a variable credit class; however, failure to complete all the credits for which you are certified results in an overpayment of benefits.

Grade Point Average:
A cumulative GPA of 2.00 is the minimum acceptable GPA necessary to qualify for any degree, diploma or training certificate from Linn-Benton Community College.

Unsatisfactory Progress:
Students will be notified of unsatisfactory progress at the end of any term that they fail to meet minimum standards of progress. A probation letter will be sent to students whose cumulative GPA falls below 2.00. A termination of benefits letter will be sent to students who fail to bring their cumulative GPA above 2.00 for a second consecutive term. In addition, 70 percent of all classes attempted must be completed in order to qualify for graduation. Therefore, any student whose total course work consists of more than 30 percent "Y," "F" and "NP" grades also will receive a probation or termination letter in the same manner that is prescribed for a deficient GPA. *Failure to complete any of the courses attempted in one term may result in immediate termination of benefits. (e.g. Attempted 12 credits, completed none).*

Reinstatement of VA Benefits:
To re-establish VA benefits following unsatisfactory progress, the student may:

1. Continue without benefits until the unsatisfactory progress has been corrected. Benefits will then be reinstated to include the unpaid period of attendance.
2. Or, submit the following to the LBCC Veterans' Office:
   a. A letter of counseling from an LBCC guidance counselor addressing the reasons for unsatisfactory progress and an assessment of the student's potential to correct academic problems.
   b. A statement explaining reasons for the unsatisfactory progress and how any reoccurrence will be avoided.

Changes in course scheduling:
Students are responsible for notifying the LBCC Veterans' Office of any change in courses attempted or credit load (adds, drops, cancelled or withdrawal from classes). Failure to do so immediately may result in unnecessary overpayments that must be repaid or deducted from future benefits.

FINANCIAL AID PROGRAMS AND SOURCES	ELIGIBILITY REQUIREMENTS	AMOUNTS AVAILABLE	SPECIAL INFORMATION
GRANTS			
FEDERAL PELL GRANTS	• You must not have a bachelor's degree. • You are enrolled for 6 or more credits per term. • Fully admitted, degree-seeking students enrolling for less than halftime status (fewer than 6 credits) may be eligible.	• Amounts are based on financial need. • Awards usually range from $400 to $2,340.	• The Department of Education will send you a Student Aid Report (SAR) indicating your eligibility.
FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS (SEOG)	• You must not have a bachelor's degree. • You must prove an exceptional financial need.	• Grants vary from $300 to $1200 per academic year, depending on the need of the applicant.	• SEOG is linked with Pell Grant eligibility.
STATE NEED GRANTS	• You must be a resident of the state of Oregon. • You also must apply for a Pell Grant. • You must be enrolled as a full-time student and not have earned a baccalaureate degree.	• Amounts are based on available funds.	• Oregon State Need Grants are transferrable to other Oregon institutions and renewable for a maximum of 12 quarters. • Amounts are awarded by Oregon State Scholarship Commission.
WORK STUDY			
FEDERAL WORK-STUDY PROGRAM	• Undergraduate students and students who have bachelor's degrees are eligible to participate.	• Students are paid $5.29 an hour or higher for work performed. Higher wages are paid to returning student workers and for jobs requiring certain 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.
STUDENT LOANS			
Several different student loans are available. However, if borrowed, they all require repayment. Think before you borrow and borrow only what is needed for educational expenses–convenience now may result in financial hardship later. Failure to repay student loans will result in a damaged credit rating and make credit difficult to obtain in the future.			
FEDERAL PERKINS LOANS (FORMERLY NDSL)	• Eligibility is based upon need, other resources and availability of funds. • Students who have bachelor degrees are eligible to participate in this program.	• Typically, the college awards a maximum of $750 per term of attendance. • The aggregate maximum for an undergraduate student is $15,000 (this includes Perkins Loans from previously attended schools).	• Application is made through the FAFSA. • The Perkins Loan is a federally supported loan program provided by the college to needy students. • Loan repayment and interest charges of 5 percent begin nine months after the borrower ceases half-time enrollment. • Additional information is available at the Financial Aid Office.

	ELIGIBILITY REQUIREMENTS	AMOUNTS AVAILABLE	SPECIAL INFORMATION
STUDENT LOANS			
FEDERAL STAFFORD STUDENT LOANS	• Eligibility is determined by the FAFSA.	• Loans of up to $2,625 per year are available to first-year students through local banks. • Students in the second year of their programs (45+ credits) may borrow up to $3,500 per academic year. • The aggregate maximum amount for Federal Subsidized Stafford Loans for undergraduates is $23,000.	• Students must first apply for Pell Grants by completing the FAFSA. • A separate application is required for this program. • Prospective loan borrowers are strongly encouraged to apply for grants administered by the state aid agencies in their state of legal residence. • Non-Oregon residents may pick up the addresses of their state grant programs from LBCC's Financial Aid Office. • At the time of application, a 3 percent origination fee and 1 percent insurance premium fee are charged. • The interest rate on a Federal Stafford Loan is variable, annually, and is tied to the 91-day Treasury bill. Effective for new loans made between July 1, 1995, and June 30, 1996, the interest rate is at the ceiling of 8.25 percent. • Loan repayment and interest charges begin six months after the borrower ceases half-time enrollment.
FEDERAL UNSUBSIDIZED STAFFORD STUDENT LOANS	• Students not eligible for subsidized Federal Stafford Loans are eligible for unsubsidized loans, regardless of need. • In addition, independent students or dependent students whose parents are unable to borrow a Federal PLUS loan, may borrow additional Federal Unsubsidized Stafford Loan.	• Up to $4,000 yearly. • Students may borrow up to the same limits as their Federal Stafford Loan limits, less any subsidized loan recieved.	• Loan conditions are similar to the subsidized Federal Stafford Loan except that the borrower is responsible for the interest on the loan while attending school.
FEDERAL PLUS LOANS	• These loans are available to parents of dependent undergraduate students regardless of need. • Limited to parent borrowers who have "no adverse credit history."	• Parents may borrow up to the difference between the student's estimated cost of attendance and any financial assistance annually for each dependent student. • There is no longer an aggregate maximum under this prograrn. *(Federal Plus Loans continued on the top of the next page)*	• Students must complete and process the FAFSA aid application before eligibility for the Plus Loan can be determined. • Federal PLUS loans may be used to substitute for the family contribution.

	ELIGIBILITY REQUIREMENTS	AMOUNTS AVAILABLE	SPECIAL INFORMATION
STUDENT LOANS			
FEDERAL PLUS LOANS *(continued from previous page)*		• The amount of Federal PLUS is limited by the amount of other aid the student will receive because the loan amount cannot exceed the difference between the cost of attendance and estimated financial assistance.	• Federal PLUS loan checks are copayable to the parent and the school and must be disbursed in at least two installments. • Interest is variable and is determined annually by a formula linked to 52-week Treasury bill rates. However, the interest rate may not exceed 9 percent. For the period beginning July 1, 1995, through June 30,1996, the interest rate is 8.98 percent. The rate for the 1996-1997 year will be determined in June of 1996. • There is no federal interest subsidy on PLUS Loans. However the lender may charge the borrower an up-front fee of up to 3 percent to offset the federal government's cost of the program. • Repayment of principle and interest begins 60 days after disbursement; if the parent borrower qualifies for a deferment, repayment of principle only is deferred. Interest must be paid unless it is capitalized by the lender. • Applications are available at the Financial Aid Office.
ELDON SCHAFER STUDENT LOAN FUND	• Provides loans to students with short-term needs. • Students must be enrolled for 6 or more credit hours to be eligible.	• Students may borrow up to $100 beginning the third day of the term through the ninth week of the term.	• No loans will be made during final exam week or between terms. Only one loan per student per term is permitted. • A $5 loan fee is charged. • Loans must be repaid within 45 days or by the first day of the last month of the term (whichever is first). • Applications are available at the Financial Aid Office.
FINANCIAL AID POLICY			
FINANCIAL AID PAYMENTS	• Financial Aid Payments are made each term at the Business Affairs Office on the first floor of the College Center (CC-130). The following conditions must be met before financial assistance can be disbursed:	1. You must be regularly admitted (both full- and part-time students). 2. You must be enrolled in an educational program, of at least one year in length, that leads to a degree or certificate. 3. You must sign and return to the Financial Aid Office an 'Offer of Financial Aid' letter. 4. You must obtain an instructor's signature verifying class attendance (forms are available at the Financial Aid Office). 5. You must enroll for six (6) or more credit hours. 6. You must be maintaining satisfactory academic progress.	*Financial aid is disbursed to students after the refund period each term. Typically, this means aid monies are available during the third week of each term. LBCC Picture ID is required to claim aid checks.* Note. If aid was based on full-time attendance and you elect to register for fewer credit hours, your financial aid must be adjusted to reflect the reduction in course load based on institutional financial aid awarding policies. Generally, this will result in a reduction of and a delay in the aid you are eligible to recieve.
FEDERAL STAFFORD LOAN RECIPIENTS	Federal regulations require that subsequent loan disbursements be returned to the lender if at any time you enroll for and complete less than six (6) credit hours during the period of the loan as indicated on your Stafford Loan application. Your loan application will be voided, and you must start the loan application process over again. *First-time Stafford Loan borrowers at LBCC must wait until 30 days after the start of classes to receive their initial loan checks.*		

	ELIGIBILITY REQUIREMENTS	AMOUNTS AVAILABLE	SPECIAL INFORMATION
LBCC AWARDS			
LBCC SCHOLARS AWARDS (Board Scholarship)	• Awarded to high school seniors in Linn and Benton counties. • You must have an overall GPA of 3.00. • Special consideration given to individuals who have shown an outstanding ability in a subject area that they will pursue in college.	• A minimum of 15 full-tuition scholarships to LBCC are awarded annually. • In addition to full academic-year scholarships, some one-term awards also may be granted.	• Additional information is available from local high school counselors or the LBCC Financial Aid Office.
LIBBY VOCATIONAL SCHOLARSHIPS (LBCC Foundation)	• Applicants must have resided in Willamette Valley for at least one year and be pursuing an education in a professional technical field. • You must demonstrate a need for financial assistance. • You must enroll at least half-time (6 credit hours) in one of LBCC's professional technical programs.	• Scholarships are awarded for up to $200 per term and may be renewed for up to six terms.	• Additional information about eligible professional technical programs and renewability criteria is available from the Financial Aid Office.
TALENT GRANTS	• You must demonstrate an outstanding ability in Athletics, Drama, Journalism, Agriculture or Business.	• Full or partial tuition awards are made available to high school seniors and other prospective students.	• Interested students should contact the appropriate LBCC division office.
PROGRAM GRANTS	• Awarded to new full-time students. • One must have at least a 2.00 GPA from the last school attended, two letters of reference, and attend LBCC full-time the term for which the award is granted. • Students who are undecided or intend to pursue an Associate of General Studies degree cannot be considered.	• One-term, full and partial tuition grants are available.	• Interested students should contact LBCC division offices for more information and an application. • Students may not recieve Board or Talent awards in addition to Program Grants.
Austin and Catherine Evanson Memorial (LBCC Foundation)	• Awarded to a Nursing student.	• $300	• More information available from the Financial Aid Office.
Ed Stewart Scholarship (LBCC Foundation)	• Awarded to a Welding student.	• Amount varies	• More information available from the Financial Aid Office.
Marilyn Lieberman Scholarship (LBCC Foundation)	• Assists students in Data Processing programs.	• Amounts vary	• More information available from the Financial Aid Office.
Michael F. Klopping Scholarships (LBCC Foundation)	• Three second-year EMT students are awarded each year.	• Amounts vary	• More information available from the Financial Aid Office.
Water/Wastewater Scholarship (LBCC Foundation)	• Awarded to a second-year student in Water/Wastewater.	• One term tuition	• More information available from the Financial Aid Office.
Cascade Corporation Scholarship (LBCC Foundation)	• Awarded to a second- year Welding or Manufacturing Technology student with a first-year GPA of 3.00.	• Amount varies	• More information available from the Financial Aid Office.

	ELIGIBILITY REQUIREMENTS	AMOUNTS AVAILABLE	SPECIAL INFORMATION
LBCC AWARDS			
Farrier School/ Agriculture/ Horticulture Scholarship (LBCC Foundation)	• Funds awarded to encourage entry into the farrier trade or to increase skill levels. Awards also may be made to agriculture, horticulture or animal science majors.	• Amounts vary	• More information available from the Financial Aid Office.
Office Technology Scholarships (LBCC Foundation)	• Awarded to full-time students enrolled in a certificate or degree program offered by the Business Technology Department.	• Amounts vary	• More information available from the Financial Aid Office.
Zonta Scholarships (LBCC Foundation)	• Awards based on the following criteria: 1) Prior life experience. 2) Demonstrated interest or willingness to work with children. 3) Demonstrated interest or work in areas that especially impact women.	• Amounts vary	• More information available from the Financial Aid Office.
Corvallis Clinic Foundation, Inc., James A. Riley, M.D. Health Occupations Scholarship Fund (LBCC Foundation)	• Awarded to four full-time students enrolled in Health Occupations programs. Minimum GPA of 3.25 required.	• $500	• More information available from the Financial Aid Office.
TBD Center Short-Term Grants/Loans (LBCC Foundation)	• Funds to assist students in short-term training programs.	• Funds may pay tuition and/or books.	• More information available from the Financial Aid Office.
Turning Point Transitions Grant (LBCC Foundation)	• Assists single parents, displaced homemakers, dislocated workers and their spouses, who are graduates of the Turning Point class.	• Funds awarded for childcare, workshop or testing fees, or textbooks.	• More information available from the Financial Aid Office.
Gerry Conner Award for Excellence in the Study of Economics (LBCC Foundation)	• Awarded to recognize a student demonstrating excellence in the field of economics.	• Amount varies	• More information available from the Financial Aid Office.
Fritz Kleinschmidt Endowment (LBCC Foundation)	• Awarded to a second-year student in the Associate Degree Civil Engineering Technology program.	• One year's tuition	• More information available from the Financial Aid Office.
Susan Liljeberg Endowment (LBCC Foundation)	• Awarded to a second-year Nursing student.	• Tuition, books and uniforms	• More information available from the Financial Aid Office.
David Jordan Memorial Endowment (LBCC Foundation)	• Awarded to students in the mechanical, metals, agriculture or related fields of study, with preference given to graduates of West or South Albany high schools.	• Amount varies	• More information available from the Financial Aid Office.
Lois Marchbanks Memorial Endowment (LBCC Foundation)	• Awarded to a second-year Nursing student.	• Amount varies	• More information available from the Financial Aid Office.

	ELIGIBILITY REQUIREMENTS	AMOUNTS AVAILABLE	SPECIAL INFORMATION
LBCC AWARDS			
Culinary Arts Endowment (LBCC Foundation)	• Awarded to Culinary Arts students.	• Amount varies	• More information available from the Financial Aid Office.
Rasmussen Endowment (LBCC Foundation)	• Awarded to an outstanding student enrolled for two terms in either of the college transfer physics sequences.	• One term full tuition	• More information available from the Financial Aid Office.
Gerry Conner Scholarship Endowment (LBCC Foundation)	• Award made to a Business Administration major, who is over 25 years old and has a GPA of 3.25 and a minimum of 30 credits towards a Business degree.	• One term tuition; renewable up to 3 terms.	• More information available from the Financial Aid Office.
Parent Education Scholarhips (LBCC Foundation)	• Awarded to Parent Education students	• 50 percent tuition reduction	• More information available from Family Resources Department
Child Care Provider Training (LBCC Foundation)	• Awarded to practicing child care providers	• Amount varies	• More information available from the Family Resources Department
OTHER SOURCES			
Tuition Reduction for the Unemployed	• District residents, who attend part-time and are unemployed, are eligible to apply.	• 50 percent tuition reduction for up to six credits of enrollment.	• Application available at Registration Office and Extended Learning centers
Golden Age Program	• Oregon residents 62 years of age or older are eligible.	• 50 percent tuition reduction.	• Inquire at time of registration for classes at main campus or Extended Learning centers.
GED Tuition Waiver	• Students who complete 60 consecutive hours of GED prep classes at LBCC and who successfully complete their GED will be offered this waiver.	• Waiver of the tuition for the term immediately following successful completion of attendance and GED requirements.	• Form available from GED instructors.
Career Information System (CIS) AID SORT	• Computer program identifies thousands of national, state and local sources of scholarships, loans and other awards.	• Varies	• Call the Career Center, (541)917-4780, for an appointment at the computer to use AID SORT.

SERVICES FOR STUDENTS

Academic Advising
(541)917-4780
T 103

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 or 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 an advisor periodically for academic advising.

The Career and Counseling Center may be contacted for more information.

Adult Basic Skills Development
(541)917-4683
LRC 200

A variety of classes and programs are available to adults who want to earn a high school diploma; improve basic skills in communication, reading, computing, critical thinking; or complete personal goals. Instruction is available morning, afternoons and evenings on the campus in Albany and days and evenings at the Benton, Lebanon, and Sweet Home Extended Learning centers.

Students under age 18 must present a signed release from compulsory attendance (ORS 339.30) or referral, which may be obtained from a local school district.

The college also will endeavor to match students with volunteer tutors if students are unable to attend classes or need extra help outside of class. This is a free, confidential, usually one-on-one arrangement in a location convenient to both student and tutor.

Tuition is free for ABE/GED classes. New students must attend an ABE/GED orientation before enrolling. Enrollment is open through the ninth week of each term.

Adult Basic Skills
The ABE program offers free classes in reading, communication, computing and critical thinking skills as well as basic computer instruction at some sites. Instruction is varied to meet individual learning styles and to provide a positive learning environment.

English to Speakers of Other Languages (ESOL)
ESOL is for adults whose native language is not English. Students are taught integrated skills in reading, writing, speaking and listening. Free classes are offered for beginning, intermediate and advanced levels. Volunteer tutors may be available for some individualized instruction. A credit class is offered for college-level ESOL students.

General Education Development (GED) Adult High School Diploma (AHSD)
See "Diplomas" in the "Programs of Study" section of this catalog.

Assessment Center
(541)917-4781
T 227

A variety of tests are offered for currently enrolled students and members of the community, including:

1. the General Education Development (GED) test for the certificate of high school equivalency;
2. the Computerized Placement Test (CPT) to properly place students in classes;
3. the College Level Exam Program (CLEP) test for college credit by examination;
4. course challenges that enable students to earn college credit by examination without completing regular credit course work; and
5. individualized testing for on-campus courses or programs.

Bookstore
(541)917-4950

CC 111

The Bookstore sells texts and supplies for LBCC main campus courses. Art and school supplies, general interest books, soft goods and gift items also are available. Textbooks for classes offered at the off-campus Extended Learning centers are available at the centers only, not at the LBCC Bookstore on the main campus.

The campus Bookstore is open from 8 a.m. to 4:30 p.m. Monday through Thursday and 8 a.m. to 4 p.m. on Friday. Evening hours are scheduled the first week of each term for the convenience of evening students. The off-campus Extended Learning centers are open 8 a.m. to 9:30 p.m. Monday through Thursday. The Benton and Lebanon centers are open 8 a.m. to 4:30 p.m. on Friday. Books for sale at these locations, however, are for classes offered through the center.

Some classroom supplies are available at the snack bar in Takena Hall. Used texts may be sold back during designated hours.

Career and Counseling Center
(541)917-4780
T 103

The Career and Counseling Center provides information to district residents who want to make a career decision. Interest testing and career classes are available on a fee basis, while the career decision-making program "CIS" is available free to the public.

Child Care
(541)917-4898

Family Resource Center
On-campus child care for LBCC families is provided through the Family Resources Department. The Family Resource Center, one of two nationally accredited programs in Linn and Benton counties, has the capacity to serve 75 children. Children must be at least two and one-half years of age and not yet eligible for kindergarten. Priority is given to student families on a first-come, first-served basis. Families must place children's names on a waiting list. Families enroll for one term at a time, and they must commit to using the center for at least one term at the time of enrollment. For additional information, contact Family Connections, (541)917-4899, or the Family Resource Center, (541)917-4898.

Family Connections (Formerly Child Care Resource and Referral)
Family Connections, located in Workforce Education Building 101, offers help and information to parents seeking child care, parent education classes, recreational activities and other forms of family support. Sponsored by the Associated Students of LBCC, the service is offered to all LBCC credit students. For more information, call (541)917-4899.

Computer Lab
Day/Night Number: (541)917-4470
Forum 204

The LBCC Forum Computer Lab is open to currently registered LBCC students. The lab is open a variety of hours seven days a week to meet student needs. Friendly service is provided by trained staff whose primary concern is to help students master the skills needed to complete course assignments easily and quickly on IBM-compatible computers. Software programs available include everything from simple word processing and spreadsheets to graphics, page layout and programming languages. Software reference books and self-paced tutorials are available to guide students in learning new programs. To serve community members not enrolled in classes at LBCC, non-credit computer lab hours can be purchased through open registration. A current ID card is required for entrance to the lab.

Computer labs also are available at the Benton, Lebanon and Sweet Home Extended Learning centers. See the "Community Outreach" section in this catalog or call: Benton Center: (541)757-8944; Lebanon Center: (541)451-1014; Sweet Home Center: (541)367-6901.

Counseling Center
(541)917-4780
T 103

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 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 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 Extended Learning centers. Call the center for an appointment.

Disabled Student Services

(541)917-4683
TTY/TTD (541)917-4703
LRC 200

Students with disabilities will find buildings and classrooms at LBCC accessible. Transportation to and from the Albany campus is available through the local bus system from Albany and Corvallis. Buses running from the Albany area are accessible.

Designated parking spaces are available for people with disabilities. The college requires Oregon Department of Motor Vehicles disabled parking permits for their use. Storage lockers are available for people with disabilities. They are assigned through the Student Programs Office.

Students who are unable to stand in the registration line due to a physical disability may obtain a "Disabled Student Line Reservation Slip" from the Registrar's secretary.

Students and community members who are deaf or hearing impaired can receive information about LBCC classes or make appointments with LBCC staff by calling the Disabled Student Services TTY/TDD number (541)917-4703 or the Registration/ Admissions TTY/TDD number, (541)917-4825.

The Disabled Student Services staff are advocates for students with disabilities and assist them with their needs and concerns. The staff provide a number of services that are specific to individual student needs and may include one or more of the following:

- Advising and scheduling of classes
- Interpreting
- Notetaking
- Taped texts
- Test accommodations
- Tutoring
- Learning strategies instruction
- Adaptive equipment
- Living Skills classes
- Other accommodations specific to a student's needs and disability

Students must provide documentation of disability to receive these free services.

Distance Education

Students no longer need be denied access to education because of time, location or personal circumstances. An ever-increasing variety of technologies enables educational opportunities to be brought directly into the home or to distant communities. Distance education is a means of taking college-credit courses primarily in your home or at a location other than the main campus.

LBCC has been offering distance education classes since 1979, utilizing cable, broadcast and videotape technologies. Satellites currently are used to send and receive courses and teleconferences at the Albany LBCC campus. In the near future, courses will be available on computer to the home and by live television to the college's outreach centers.

Evening Services

(541)917-4840
T 105

The Evening Services Office is available to assist students and staff with emergency needs during evening hours. Staff, students and family members who must communicate with one another regarding urgent needs may seek assistance from the secretary in the Evening Services Office.

First Aid Station

(541)917-4440
(926-6855 after hours)
CC 123

The Security and Safety Services Office maintains first aid supplies to care for basic, minor injuries. For life-threatening emergencies call 9+911 and then notify the Security and Safety Services Office (on campus, ext. 4440).

Food Service

(541)917-4385
CC 214B

Cafeteria: The cafeteria is located on the second floor of the College Center. Service is available from 7:30 a.m. to 2 p.m. Monday through Friday.

Santiam Restaurant: The Santiam Restaurant is student operated and is located in CC 201. Daily menus are prepared and served by Culinary Arts students Monday through Thursday during the school year. Lunch is served from 11 a.m. to 12:30 p.m. Coffee and pastries are served from 9:30 a.m. to 11 a.m.

Snackbar: A snackbar is located on the first floor of Takena Hall, serving a selection of soups, sandwiches, fruits, espresso and other beverages. Service is available from 7:30 a.m. to 9 p.m. Monday through Thursday and 7:30 a.m. to 3:30 p.m. on Friday.

In addition, the Food Service operation caters within the LBCC facility for special activities sponsored by the college or community. The Food Services Office, (541)917-4385, may be contacted for more information.

Learning Center

(541)917-4684
LRC 212

The Learning Center is an open study area where equipment, resources and assistance are available for students. Students may use the Learning Center during any of the approximately 55 hours a week the center is open. The atmosphere is relaxed and friendly.

Learning Center areas and functions include:
Mathematics Assistance: Students enrolled in any LBCC mathematics class can study and receive assistance in the Learning Center. At least one mathematics instructional assistant staffs the Learning Center during open hours. Students can get help with homework problems, have questions answered, have concepts clarified or study for a test. A classroom dedicated to mathematics is located adjacent to the Learning Center. The room is equipped with computers and other instructional equipment to accommodate a variety of learning styles.

Writing Assistance: Students enrolled in writing classes, particularly WR 115: Introduction to Writing and WR 121: English Composition, as well as students in other classes that have a writing assignment, can visit the Writing Desk where an instructional assistant critiques their writing. The Writing Desk assistants help students interpret their writing assignments, help them write what they want to say and generally guide students to a better completed paper. No appointment is needed.

Computer Assisted Instruction: The 30 computers in the Learning Center are networked and run software for writing, reading and study skills, plus additional software of general interest, such as a Learning Styles Inventory. These computers are connected to the Internet. A computer technician is on duty from 8 a.m. to 4:30 p.m. weekdays.

Developmental English Assistance: Students who are enrolled in The Write Course can use the services of the center to complete assignments and to take tests. Instructional assistants explain concepts and direct students to additional resources. In addition, students in this course may use the numerous computer software programs that are accessible on the center's computers.

Reading Assistance: Students enrolled in reading improvement classes will find a wide variety of supplemental materials in the Learning Center. Computer software programs include materials covering roots, prefixes, comprehension, vocabulary and textbook reading. Dictionaries and other reference books are available for use within the center.

Testing: The Learning Center provides testing for some math classes, developmental classes and for other subject area classes at the request of the instructor. This service is particularly helpful when students need to make up an exam or take a retest.

Mini-courses: Students may discover after a quarter begins that they need help with a specific learning skill, such as reading a textbook, taking lecture notes or studying for tests. These students may enroll in one or more mini-courses, which are self-paced modules that vary in credit from .25 to 1.00. The time required to complete a mini-course

varies depending upon the student, but students benefit by immediately applying what they learn to their other classes. A list of mini-courses is available in the Learning Center. Of course, students also may register for a mini-course at the beginning of the term.

Study Skills Enhancement: The center includes an expanding library of materials that support the two study-skills classes. Materials include videotapes, audiotapes, computer software, video-disks and many written reference works.

Tutoring: When students decide they need additional one-to-one assistance in a particular course, they may sign up for a tutor appointment. Three hours of ***free*** tutoring per week is available for most LBCC classes. Tutors are generally other students who have taken classes here and who have been successful. They are approved by faculty members and attend a 10-hour tutor training class. Students who want to be tutored can sign up at the center between 8 a.m. and 5 p.m. weekdays. Most tutoring appointments occur during the day; however, some tutors have evening appointment times.

Library

(541)917-4638 - Circulation and Evening
(541)917-4645 - Reference
(541)917-4649 - Department Chair
(541)917-4672 - Media Services

The LBCC Library contains about 50,000 volumes, which are accessible via an on-line catalog, and subscribes to approximately 250 periodicals and newspapers. It provides a basic reference collection; general indexes, including CD ROM periodical and newspaper indexes; and periodicals in the liberal arts, technical and vocational fields.

In addition, the library has access to a variety of on-line data bases and maintains a sizable collection of non-print instructional and informational materials, such as audio tapes, video tapes, filmstrips and slide sets, plus the equipment for using these materials. Typewriters for student use also are located in the library. Students may receive instruction in how to use the library and the media equipment from library staff members on a drop-in basis or by regularly scheduled weekly library tours.

Library materials not available in the LBCC Library often may be obtained through interlibrary loans via OCLC, a national library network. Also, LBCC students may borrow books from the Oregon State University Library.

Lost and Found

(541)917-4440
CC-123

The lost & found department is maintained by the Security and Safety Services Office. Lost items may be reported and found items turned into the department 7:30 a.m. - 5:15 p.m. Monday through Friday.

Printing Services

(541)917-4673
IB-110

Printing Services offers a wide range of print-related services and supplies to LBCC staff and students. The Print Shop can provide printing (resumes, business cards, brochures, etc.), color copies, custom typesetting and image scanning. Our system can utilize your Macintosh or IBM-compatible disk. Supplies available include: cut paper, computer paper, labels, and printer and typewriter cartridges and ribbons. Hours are Monday through Friday 8 a.m. to 4:30 p.m.

Room Reservations/Hospitality Services

(541)917-4385
CC 214

Reservations for the use of college meeting facilities and their special services are to be made through the Office of Hospitality Services between the hours of 8 a.m. and 4:30 p.m. The office also provides general information on campus events that have been scheduled on the Albany campus.

Security and Safety Services

(541)917-4440
(926-6855 after hours)
CC 123

The Security and Safety Services Office is open 7:30 a.m. - 5:15 p.m. Monday through Friday. Available services include FAX machine, first aid, lost and found, parking management, public safety communication systems and college-issued keys. Security is available 24 hours a day by calling 926-6855. For life-threatening emergencies, dial 9 + 911 and then notify the Security and Safety Services Office, ext. 4440.

Student Employment Center/Cooperative Work Experience Services

(541)917-4780
T 101

The Student Employment Center, a part of the Career Center, assists current students, graduates and alumni of the college in obtaining part-time, full-time, temporary and permanent employment. Job sources include local employment listings, current Oregon Civil Service openings, federal job information and a variety of listings solicited from other states. A Job Hotline, (541) 917-4798, also lists the local job openings advertised through the center. Labor market information available includes projected demand (employment and openings), salary data and employment outlook analysis of a wide variety of occupations in the state of Oregon. The center also has national labor trend information available.

The center maintains a library of local employer information to assist students in researching company data. An annual employer fair is held to help acquaint all students with the employment needs of local industries. Students also can receive help in resume and cover letter preparation, application form preparation, interviewing techniques and job search strategies.

Students 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.

Student Programs

(541)917-4457
CC 213

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

Clubs and organizations offer co-curricular and extra-curricular affiliation in such areas as welding, engineering, horticulture, nursing, drama, animal technology, culinary arts, business management, soccer and religious organizations. For more information about present clubs and organizations, or establishing new clubs, the Student Programs Office may be contacted.

The Student Programs Office maintains the Fireside Lounge and the recreational facility on the second floor of the College Center Building.

Associated Students of LBCC (ASLBCC): The Student Council provides opportunities for students to serve on college committees and earn credit for participating in leadership activities that enhance student life. The college also offers student leadership classes, which provide an opportunity for students to learn about specific leadership topics. The ASLBCC Council of Representatives is a student organization that 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, one at-large representative and two non-divisional executive positions. Any student enrolled in at least six credits and who has successfully completed 12 credits at LBCC is eligible to hold a representative position; one Student Services and Extended Learning position is open to students enrolled in non-credit courses in the division. Interested students may contact the Student Programs Office, CC 213, (541)917-4457.

Student Programming Board: The Student Programming Board plans and coordinates activities and events for students. The group of eight students serves three terms and is appointed through an application process. Interested students may contact the Student Programs Office, CC 213, (541) 917-4457.

Intercollegiate Athletics:
Linn-Benton Community College has developed a comprehensive program of intercollegiate athletics in affiliation with the Northwest Athletic Association of Community Colleges. Programs projected for the coming school year include 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.

For more information, contact the Health and Human Performance Department, (541) 917-4235, AC 102.

International Education:
The Student Programs Office supports LBCC staff and students with information about work and study abroad, encourages and supports a global perspective in the curriculum, promotes intercultural communication and understanding through programs and events, and serves as a clearing house for information about international programs.

LBCC is a member of the National Association for Foreign Student Affairs (NAFSA) and the Northwest International Education Association (NIEA).

Intramural and Recreational Sports:
An intramural and recreational sports program is offered to all students jointly through the Physical Education Department and Student Programs. Interested students may contact the Student Programs Office, CC 213.

Music:
The college offers several opportunities for student participation in vocal and instrumental music, including Chamber Choir, Concert Choir, Community Chorale, and some performance groups in conjunction with the Music Department at Oregon State University. Interested students may contact the Performing Arts Department or the Liberal Arts and Human Performance Division, AHSS 101, for more information.

Publications:
The students of LBCC are responsible for publishing the college newspaper, *The Commuter*, which has won many awards for excellence. The paper is published weekly during most of the school year. Students interested in participating may contact the Fine and Applied Arts Department or the Liberal Arts and Human Performance Division, AHSS 101.

Each spring, students also publish *The Eloquent Umbrella*, a literary journal for poetry, fiction, essays and graphic arts that features works from students, staff and the community. Submissions are due by the end of the second week of winter term. *The Eloquent Umbrella* is available for sale in the LBCC Bookstore and is sponsored by the ASLBCC and the English Department. If you would like more information, please contact the English Department, (541)917-4556, or contact the Liberal Arts and Human Performance Division, AHSS 101.

Theatre:
LBCC's Performing Arts Department provides several opportunities each year for students and community members to participate in theatre productions. Those interested in theatre may contact the Performing Arts Department or the Liberal Arts and Human Performance Division, AHSS 101, for more information.

Supplemental Instruction (SI)
(541)917-4699
LRC 212

Supplemental Instruction (SI) is available in subject areas such as chemistry, psychology, and anatomy and physiology. Data indicate that regular attendance at these out-of-class study sessions helps students earn better grades than they would on their own. Sessions are led by students who have successfully completed the course. The session leaders attend classes, take notes and meet with students weekly to help them earn higher grades. Check with your instructor or in the Learning Center to find out which courses currently have SI.

Telecourses
(541)917-4672
LRC 104A

Telecourses are genuine college courses. They enable students to earn college credit at home and are an alternative to attending classes on the LBCC campus. While much of the course content is televised, the majority of information is contained in text and workbook materials specially designed for the telecourses. Classes usually are televised over Oregon Public Broadcasting (channel 7) and on TCI Public Access Cable in Albany and Corvallis (channels 60, 61, 98 or 99). Programs are usually viewed once or twice during the week and total one hour in length. For students who own a VHS video recorder (VCR), the complete telecourse is available at no charge on two VHS tapes from the LBCC Library. Enrolled students may check out the tapes for the entire term.

Registration procedures and tuition are the same as for regular LBCC courses. An additional $15 lab fee covers the per-student lease costs charged by the telecourse producer. Attending the first class meeting, indicated in the class schedule, is important because it serves as the student orientation session. On-campus attendance is required three to four times during the term for review and testing.

Women's Center
(541)917-4466
IA 225

The female student population at Linn-Benton Community College is a diverse group. Their goals vary. Some are earning G.E.D.'s, some are getting professional-technical training, while others are planning to transfer to a four-year college or university.

One thing all of these women have in common is an open invitation to visit and use the services of the LBCC Women's Center. The center offers:

Scholarship information:
The center provides listings of current private scholarships available to women of all ages in many career fields.

Peer Support:
This service is available through informal activities and daily lunchtime conversations.

Information and Referral Services:
A comprehensive campus and community referral service to assist the student in finding answers, or at least finding the right place to ask questions, is available.

Library:
A continuously expanding collection of books, periodicals and resource files are checked out to students and non-students free of charge.

Programs:
The center offers special seminars, such as lunchtime discussions, on a variety of issues throughout the academic year. A lounge and coffee bar is available for study and informal gatherings. The center provides a comfortable retreat from busy schedules.

PROGRAMS OF STUDY

All credit offerings of the college, either lower-division transfer or professional technical non-transfer, are taught as college-level classes.

Courses with letter prefixes and numbers of 100 or higher (for example, WR 121, BI 103, MTH 111) 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. *Transferable courses do not have a decimal point in the numbers.*

Letter prefix courses that have numbers below 100 or numbers that include decimal points (for example, MTH 50, BA 2.530) generally will not transfer to a four-year college or university. In the case of professional technical courses, however, there are some exceptions to this rule. Students should see an advisor concerning the transferability of professional-technical courses.

Courses with the AT prefix are professional technical courses that may not be accepted by four-year institutions. Please see a program advisor if you have questions.

Degrees, Certificates and Diplomas

LBCC offers Associate of Applied Science, Associate of Arts (Oregon transfer degree), Associate of General Studies and Associate of Science (with a major emphasis in a subject area) degrees, professional technical certificates and diplomas for high school completion.

Degree Titles

The college offers an Associate of Arts degree without a designated major that will transfer in total to any Oregon State System of Higher Education institution as meeting their lower division general education requirements. A notation on the transcript will indicate that this degree meets the "Oregon Transfer" requirements (beginning with the 1990-91 school year).

The college offers an Associate of Science degree program with a major emphasis area. This is a lower division transfer program that transfers on a course-by-course basis to any four-year college or university and is designed primarily to assist students who intend to transfer to Oregon State University.

Degrees primarily intended to lead students directly to employment in a specific career are titled Associate of Applied Science. An additional designation to denote a special field of study, such as nursing, automotive technology and legal secretary, is included.

Degrees titled Associate of General Studies or Associate of General Studies/Technology Option, also may be awarded. These degrees provide for the integration of both transfer and professional technical course work.

Associate of Applied Science Degrees

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

Accounting Technology
Administrative Assistant
Administrative Medical Assistant
Agriculture
Animal Technology
Animal Technology/Horse Management
Automotive Technology
Business
Business Computer Systems
Child and Family Studies
Computer User Support
Crafts and Trades (Apprenticeship Program)
Criminal Justice
Culinary Arts and Hospitality Services
  Chef Training
  Restaurant and Catering Management
Engineering Graphics Technology
Electronic Imaging/Prepress Technology
Electronics Engineering Technology
Graphic Arts
Heavy Equipment Mechanics/Diesel
Horticulture
Legal Secretary
Machine Tool Technology
Metallurgy and Materials Technology
Nursing
Refrigeration, Heating and Air Conditioning
Supervisory Management
Water/Wastewater Technology

Associate of Arts Degree (Oregon Transfer)

Students transferring from Linn-Benton with an Associate of Arts degree to an undergraduate program at an institution of the Oregon State System of Higher Education will have earned credit or demonstrated proficiency in the requirements listed for an Associate of Arts degree in the "General Education Requirements" section of this catalog. State System Colleges and Universities will accept this degree as meeting institutional lower division general education requirements, but not necessarily school, department or major requirements with regard to courses or grade point average (GPA).

Students may work with an advisor to concentrate their studies in the following areas:

General Transfer
Business Administration
Child and Family Studies
Criminal Justice
Economics
Education
Liberal Studies

Associate of General Studies

This degree is awarded to students who complete a two-year curriculum, which may include transfer and/or non-transfer credit course work. General Studies degrees may be non-specific or include a technology option.

Associate of Science Degree (with a major emphasis in a specific subject area)

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

Agricultural Education
Agriculture Business Management
Animal Science
Art
Automotive Technology (Special Agreement)
Biological Sciences
Business Administration
Child and Family Studies
Computer Science
Economics
Education
  Elementary
  Secondary
Engineering (Pre-)
Heavy Equipment/Diesel
  Technology (Special Agreement)
Home Economics
Human Performance
Human Services
Journalism/Mass Communications
Liberal Studies
  English
  Music
  Social Science
  Speech Communications
  Theatre
Mathematics
Public Health and Health Education

After Four Program

Five degree opportunities currently are offered through LBCC's After Four Program. The general transfer (undeclared major) Associate of Arts (Oregon transfer) degree provides the "two-year" lower division credits that enable students to transfer with junior standing to a four-year college or university. The Associate of Science with a major emphasis in Business Administration is for the student who plans to transfer to a four-year institution to complete a bachelor's degree in business administration. The Associate of Science with a major emphasis in Liberal Studies is intended especially to facilitate transfer to Oregon State University's College of Liberal Arts. The Associate of General Studies is awarded to those students who complete a non-specified degree curriculum that includes transfer and/or non-transfer credit course work. The General Studies degree may be non-specific or include a technical option.

An Associate of Applied Science degree in Supervisory Management is for individuals who are currently supervising or preparing to supervise personnel.

Certificates in Accounting Clerk and Basic and Advanced Supervisory Management also can be earned through evening courses.

Certificates

The college awards certificates to students who complete specific requirements within a professional technical major, on recommendation of instructional staff within that field.

One-year certificates are offered in:
Accounting Clerk
Advanced Supervisory Management
Agriculture
Child and Family Studies
Collision Repair Technology
Dental Assistant
Educational Assistant
Emergency Medical Technician
Heating
Horticulture
Medical Office Specialist
Medical Transcriptionist
Nondestructive Testing
Office Specialist
Water/Wastewater Plant Operations
Welding

Two-year certificates are offered in:
Automotive Technology
Heavy Equipment Mechanics/Diesel
Machine Tool Technology
Refrigeration/Heating/Air Conditioning

General Certificates are offered in:
Basic Supervisory Management
Farrier Science
Nursing Assistant

Diplomas

LBCC offers several programs for students to obtain a high school diploma or high school equivalent.

1. *Adult High School Diploma* (AHSD): LBCC is authorized by the state of Oregon to issue a competency-based adult high school diploma to adults (age 18 or older) who meet high school graduation requirements established by the college. High school credits may be obtained by an assessment of life experience.

Information about the Adult High School Diploma program is available through the Student Development Office, the Counseling Center or Extended Learning centers. Admission applications are available from the Admissions Office.

2. *General Education Development* (GED): GED preparatory classes are offered for adults who want to improve their general knowledge and skills in the five GED testing subject areas: writing, reading, math, science and social studies. Individualized study groups and group work are provided.

No tuition is charged for GED studies, but students may purchase some texts and study materials. New students must attend a GED orientation before enrolling. Enrollment is open through the ninth week of each term.

Students who already have a GED or high school diploma are still eligible to attend classes to upgrade skills.

Regional Programs

The LBCC Board of Education has designated the following as Regional Programs, thereby reducing tuition for out-of-state students to in-state tuition for the first term of their enrollment. For subsequent terms, these students must establish and meet LBCC's residency requirements to qualify for in-state tuition rate. Residency requirements are outlined in the Admissions section of this catalog.

Regional programs include:

Agriculture
Animal Technology
Animal Technology: Horse Management
Farrier School
Horticulture
Metallurgy
Refrigeration, Heating and Air Conditioning
Water/Wastewater Technology

Special Training Programs

Cooperative Work Experience

Richard Horton
CWE Coordinator
(541)917-4787
T 101

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/WE1.280 Cooperative Work Experience is a course that 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 the transition from school to work under the guidance of a coordinator.

WE 202/WE1.201 CWE Seminar is required for all students enrolled in Cooperative Work Experience and provides the opportunity to share work-related experiences with the CWE coordinator and fellow CWE students.

Students interested in building Cooperative Work Experience into a program at LBCC should discuss it with their 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

Through cooperation with Oregon State University, Linn-Benton Community College provides an opportunity for both men and women to participate in a Reserve Officers Training Corps program while attending LBCC.

The ROTC selects and prepares young men and women, through a program of instruction coordinated with the student's normal academic curriculum, to serve as officers in the regular and reserve components of the Army, Navy, Air Force and Marine Corps. Each unit strives to develop in students a capacity for leadership; to develop them morally, mentally and physically; and to provide them with the basic working knowledge required of a young officer.

Aerospace Studies (Air Force ROTC):
Air Force ROTC allows students to compete for commissions as officers in the United States Air Force. Opportunities exist for well-qualified students from all fields. Scholarship opportunities are especially bright for students with scientific-, engineering- and mathematics-related majors. The Air Force is particularly interested in students who are interested in aviation careers as pilots or navigators. Two- and four-year programs are available.

Army ROTC:
This program offers each eligible man and woman the opportunity to compete for a commission as an officer in the United States Army while earning a college degree. Both basic and advanced programs with multiple entry points can be tailored to a student's needs. Those interested in aviation careers have the opportunity to become officer pilots in fixed or rotary wing aircraft. Merit scholarship opportunities exist for students in any approved academic discipline, particularly in engineering, science, business and social science.

Students interested in enrolling in one of these programs while attending Linn-Benton Community College should contact Rich Horton in the Career Center, T 101, (541)917-4787.

Transfer Opportunities

Advanced Degree Programs on LBCC Campus

LBCC Contact: Barbara Rice
Director of Extended Learning and Evening Services (541)917-4845

Linfield College:
Linfield College offers off-campus degree programs on the LBCC campus. Evening courses are offered that lead to a Bachelor of Arts or a Bachelor of Science degree in Accounting, Arts and Humanities, Business Information Systems, International Business, Management, and Social and Behavioral Sciences. Up to 108 LBCC credits may be transferred to Linfield College. You also may be able to receive up to 31 credits toward your degree through the Prior Learning Portfolio Program. Contact the Linfield academic advisor at (541)917-4846, for additional information.

Portland State University:
PSU offers its statewide MBA (Master of Business Administration) program on the LBCC campus. The program consists of 72 quarter credits of graduate work. Students enroll in two courses per term over a three-year period. Contact Portland State University at 1-800-547-8887, ext. 4822, for more information.

Oregon State University:
The OSU Office of Continuing Higher Education (OCHE) offers an Individualized Directed Learning program that enables you to enroll in regular Oregon State University undergraduate courses on a guided, independent-study basis. Traditional study through evening courses also is available. Contact OCHE at (541)737-2676 or 1-800-235-6559 for further information.

GRADUATION REQUIREMENTS

General Graduation Requirements

Students must be fully admitted (matriculated) in order to receive degrees and certificates from Linn-Benton Community College.

Requirements for degrees, certificates and diplomas are subject to approval of the board of education, as well as the Oregon State Department of Education, Office of Community College Services.

Students who want to complete more than one major or degree must complete twenty-four (24) additional credits at LBCC for each program above the original requirements. Students completing requirements must apply for graduation at the Admissions Office in Takena Hall by the end of the second week of the term in which the student intends to receive a degree or certificate.

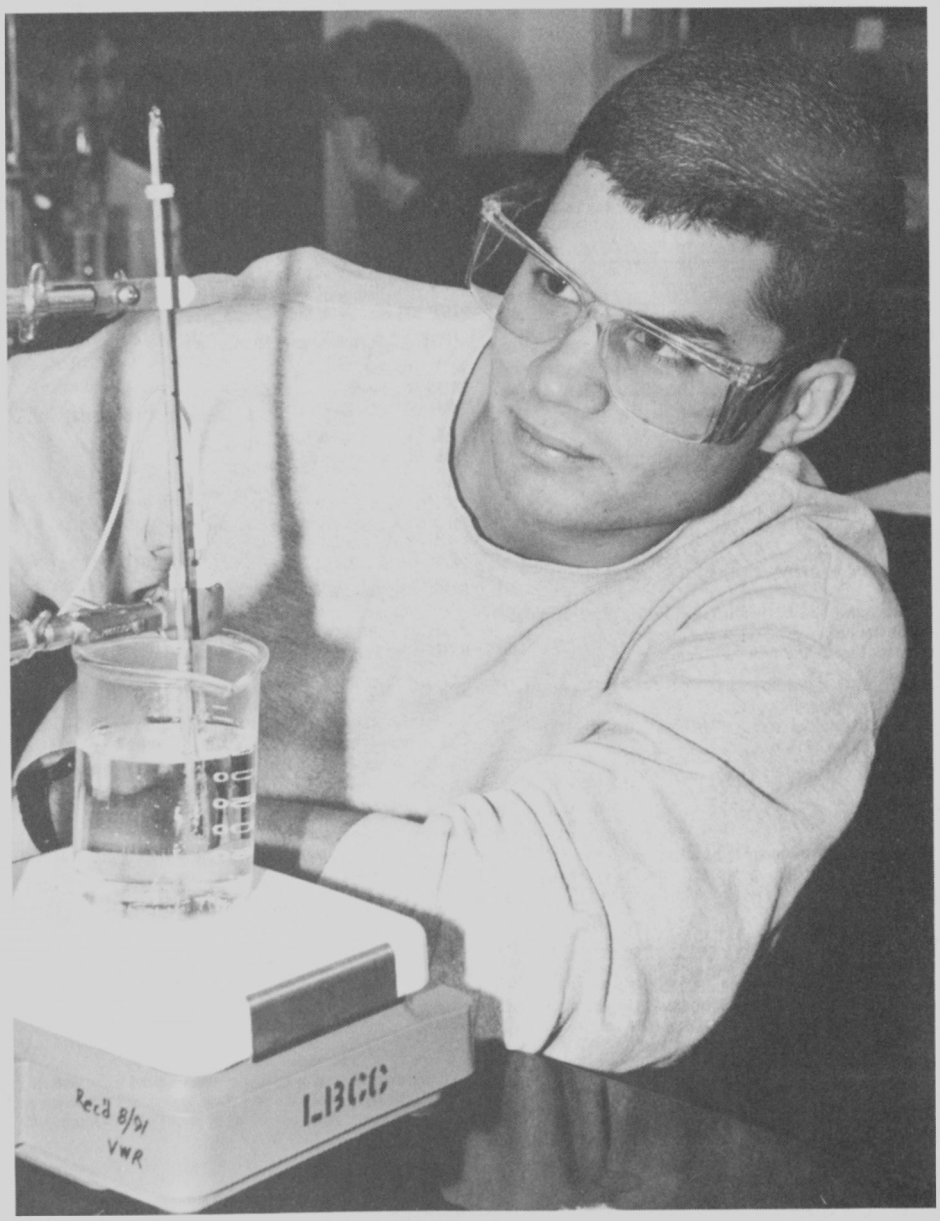
Symbols in the course description section of this catalog indicate which classes will apply toward the General Education Requirements for the Associate of General Studies degree. Courses taken to satisfy the Humanities/Art, Social Science and Math/Science General Education Requirements must be a minimum of three credit hours.

Students who enroll in variable credit courses must complete all course credits if the course is to be used to meet General Education Requirements.

Students must earn at least 24 credits at Linn-Benton Community College with a minimum of 15 credits of program requirements as endorsed by the department in which the degree is to be awarded. The department chair and appropriate administrator may waive the 15-credit program requirement in some circumstances. Students must apply and graduate within one calendar year from the date the requirements are completed. Twenty-four (24) of the last thirty-five (35) credits must be taken at Linn-Benton Community College.

Limitation Policy

Students may choose, within a five-year limit, to graduate under the requirements that existed when they started their program. Students always may elect to graduate under the graduation requirements of the current catalog.



Requirements for the Associate of Applied Science Degree

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

1. Complete the general education requirements and the required major curriculum as outlined.
2. Complete a minimum of 90 credits (some programs may have requirements that exceed this amount).
3. Complete a minimum of 24 credits at Linn-Benton Community College.
4. Maintain a minimum accumulative grade point average of 2.00 or better.
5. Where options exist in the general education area, see a department advisor for assistance.

General Education Requirements 19

Courses numbered with 0. (zero decimal point) will not apply toward this degree

Composition ..... (3)

WR 121 English Composition 3

(Students must have passed WR 115 with a grade of "C" or better or attained appropriate placement test score on the Placement Test or the Computerized Placement Test to enroll in WR 121.)

Speech (select one) ..... (3)

SP 1.103 Occupational Speech 3
SP 111 Fundamentals of Speech 3
SP 112 Introduction to Persuasion 3
SP 218 Interpersonal Communication 3

Math ..... (4)

MTH 61 Survey of Math Fundamentals 3

and one of the following:

MTH 62 Occupational Trigonometry 1
MTH 63 Industrial Shop Math 1
MTH 64 Business Applications of Math Fundamentals 1
OA 2.557 Advanced Business Math Applications 1

or higher level Math courses

(Students must have attained an appropriate placement test score on the Placement Test or the Computerized Placement Test to enroll in the above Math courses.)

Health and PE (select three credits) ..... (3)

HE 112 Emergency First Aid 1
HE 125 Occupational Safety 3
HE 250 Personal Health 3
HE 252 First Aid 3
HE 261 CPR 1
PE 185 Activity Courses 1
PE 231 Lifetime Wellness 3

(Only one activity course may be taken twice to meet general education requirements, and no more than two activity courses per term will count toward general education requirements.)

Perspectives* 6

The following courses have been approved by the Curricular Issues Committee to meet the Science, Technology and Society general education requirement for the Associate of Applied Science degree.

Science, Technology and Society ..... (3)

GS 151 Energy in Society
GS 152 Science, Technology & Society
HST 150 Science and Culture in the Western Tradition
HSTS 151 History of Science
RH 3.527 Alternative Energy Sources
ST 1.106 Science and Culture/Western Tradition
ST 1.107 Technology, Science and Our Society

Culture Diversity and Global Awareness ..... (3)

The following courses have been approved by the Curricular Issues Committee to meet the Cultural Diversity and Global Awareness general education requirement for the Associate of Applied Science degree.

ANTH 102 Intro to Archaelogical Prehistory
ANTH 103 Intro to Cultural Anthropology
ANTH 107 Anthropology Today
ANTH 232 Native North Americans

ART 102 Understanding Art
ART 204, 205, 206 Survey of Art History

BA 203 International Business
BA 285 Business Relations in a Global Economy

EC 115 Outline of Economics
EC 202A Intro to Macroeconomics
EC 203 Principles of Economics
EC 220 Contemporary U.S. Economic Issues

ENG 104 Intro to Literature: Fiction
ENG 105 Intro to Literature: Drama
ENG 107, 108, 109 Literature of the Western World
ENG 204, 205, 206 Survey of English Literature
ENG 207 Literature of the Non-Western World: Asia
ENG 208 Literature of the Non-Western World: Africa
ENG 209 Literature of the Non-Western World: Latin America
ENG 211 Literature in Athletics
ENG 221 Intro to Children's Literature
ENG 275 Bible as Literature

GEOG 190 Environmental Studies
GEOG 202 World Regional Geography: Latin America/ Caribbean
GEOG 203 World Regional Geography: Asia
GEOG 204 World Regional Geography: Africa/Middle East

HST 101, 102, 103 History of Western Civilization
HST 157 History of the Middle East and Africa
HST 158 History of Latin America
HST 159 History of Asia
HST 203 History of the United States

HUM 100 Introduction to Humanities

MUS 105 Intro to Rock Music
MUS 161 Music Appreciation
MUS 205 Intro to Jazz

PHL 201 Intro to Philosophy
PHL 202 Elementary Ethics

PS 104 Problems in American Politics
PS 205 International Relations
PS 206 Comparative European Governments
PS 207 Intro to Political Science
PS 220 U.S. Foreign Policy

R 102 Religions of Western World
R 103 Religions of Eastern World
R 211 The Old Testament: Historical Background
R 212 The New Testament: Historical Background

SPN 201, 202, 203 Second-Year Spanish I, II, III

Computer Competency for degree:

The Computer Competency may be met by taking an approved course that includes computer use by the student or by passing a competency test.

* Additional classes may have been added since this catalog was published. Please check counseling or division offices for current list.

Requirements for the Associate of Arts (Oregon Transfer) Degree

The Associate of Arts (Oregon Transfer) or AAOT degree is an agreement between the Oregon State System of Higher Education and Oregon's community colleges to provide transfer of community college course work to a state four-year institution (Oregon State University, University of Oregon, Eastern Oregon State College, Portland State University, Southern Oregon State College, Western Oregon State College and Oregon Institute of Technology). Completing this degree can lead to junior standing upon transfer but does not guarantee automatic admission by the college or university. The AAOT degree is recognized by the colleges and universities as meeting institutional lower-division general education requirements but not necessarily school, department or major requirements with regard to courses or GPA. Students are encouraged to contact and advisor at the school they plan to attend.

General Education

(The required math, writing and speech courses must be passed with a grade of "C" or higher.)

Writing ..... (9)

WR 121 English Composition
Select two courses:
WR 122 English Composition
WR 123 English Composition
WR 123C English Composition: Computer
WR 227 Technical Report Writing

Speech ..... (3)

Select one course:
SP 111 Fundamentals of Speech
SP 112 Intro to Persuasion
SP 218 Interpersonal Communication

College Level Math ..... (4)

MTH 105 Intro to Contemporary Mathematics or a higher numbered Math course.

Health/Wellness/Physical Education ..... (3)

HE 250 Personal Health
PE 180 Activity Classes
PE 185 Activity Classes
PE 190 Activity Classes
PE 231 Lifetime Wellness

(Only one activity course may be taken twice to meet general education requirements, and no more than two activity courses per term will count toward general education requirements.)

Computer Competency for degree:

The Computer Competency may be met by taking an approved course that includes computer use by the student or by passing a competency test.

Distribution Requirements*

Arts and Letters/Social Science ..... (24)

Arts and Letters 12

Select a minimum of 12 credits from at least two disciplines. Must include a cluster; additional courses may be selected from the Clusters list or the Approved Individual Courses list.

Clusters

In each cluster, the courses may be taken in any order.

ART 204, 205, 206 Survey of Art History

ENG 104,105,106 Intro to Literature
ENG 107, 108, 109 Literature of the Western World
ENG 201, 202, 203 Shakespeare
ENG 204, 205, 206 Survey of English Literature
ENG 207, 208, 209 Literature of the Non-Western World
ENG 253, 254, 255 Survey of American Literature

MUS 105 Intro to Rock Music
MUS 161 Music Appreciation
MUS 205 Intro to Jazz

SPN 201, 202, 203 Second-Year Spanish

(Continued on next page)

Approved Individual Courses
ART 102 Understanding Art

ENG 121 Mystery Fiction
ENG 211 Literature in Athletics
ENG 260 Intro to Women Writers
ENG 261 Intro to Science Fiction
ENG 275 Bible as Literature

HUM 100 Intro to Humanities

MUS 101 Music Fundamentals

TA 111 Intro to Theatre

WR 240 Personal Journal Writing
WR 241, 242 Intro to Imaginative Writing

Social Science 15
Select a minimum of 15 credits from at least two disciplines. Must include a cluster; additional courses may be selected from the Clusters list or the Approved Individual Courses list.

Clusters
In each cluster, excluding the Economics courses, the courses may be taken in any order.
ANTH 101 Intro to Physical Anthropology
ANTH 102 Intro to Archaelogical Prehisotry
ANTH 103 Intro to Cultural Anthropology

EC 201, 202, 203 Principles of Economics I, II, III
EC 201A, 202A Intro to Micro- and Macro-economics

GEOG 202, 203, 204 World Regional Geography

HST 101, 102, 103 History of Western Civilization
HST 157, 158, 159 History of Middle East and Africa; Latin America; Asia
HST 201, 202, 203 History of the United States

PS 201, 202, 203 American Government
PS 205 International Relations
PS 206 Comparative European Government
PS 207 Intro to Political Science

PSY 200 Psychology as a Natural Science
PSY 205 Psychology as a Social Science
PSY 235, 236, 237 Human Development

SOC 204, 205, 206 General Sociology

Approved Individual Courses
ANTH 103 Intro to Cultural Anthropology
ANTH 232 Native North Americans

CJ 100 Survey of the Criminal Justice System
CJ 101 Intro to Criminology
CJ 110 Intro to Law Enforcement
CJ 120 Intro to Judicial Process
CJ 130 Intro to Corrections
CJ 201 Juvenile Delinquency
CJ 202 Violence and Aggression
CJ 220 Intro to Substantive Law
CJ 226 Constitutional Law

EC 115 Outline of Economics
EC 215 Economic Development in the U.S.
EC 220 Contemporary U.S. Economic Issues

GEOG 190 Environmental Studies

PHL 201 Intro to Philosophy
PHL 202 Elementary Ethics
PHL 215 History of Western Philosophy

PS 220 U.S. Foreign Policy
PS 252 Constitutional Law

PSY 101 Psychology and Human Relations
PSY 215 Intro to Developmental Psychology
PSY 216 Social Psychology
PSY 231 Human Sexuality

R 101 Intro to Religious Studies
R 102 Religions of Western World
R 103 Religions of Eastern World
R 211 The Old Testament
R 212 The New Testament

Science/Mathematics/ Computer Science ..... (15)
Select a minimum of 15 credits, including at least 12 credits in biological or physical science courses that include laboratories. Choose from at least two disciplines.

BI 101, 102, 103 General Biology
BI 211, 212, 213 General Biology
BI 231, 232, 233 Human Anatomy & Physiology
BI 234 Microbiology
BI 235 Elementary Medical Microbiology
BI 236 Molecular Biology
BI 251 Principles of Wildlife Conservation
BI 252 Wildlife Resources: Birds

CH 121, 122, 123 College Chemistry
CH 221, 222, 223 General Chemistry
CH 241, 242, 243 Organic Chemistry
CH 244 Quantitative Analysis

CS 161 Intro to Computer Science I (C++)
CS 162 Intro to Computer Science II (C++)
CS 261 Data Structures

GEOG 121 Physical Geography

GS 104, 105, 106 Physical Science
GS 107 Astronomy
GS 108 Oceanography

MTH 111 College Algebra
MTH 112 Trigonometry
MTH 116 Calculus Preparation
MTH 150 Intro to Statistics
MTH 211, 212, 213 Fundamentals of Mathematics I, II, III
MTH 231, 232 Elements of Discrete Math
MTH 241, 245 Math for Biological/Management/Social
MTH 251, 252, 253, 254 Calculus
MTH 255 Vector Calculus
MTH 256 Applied Differential Equations
MTH 265 Statistics for Scientists and Engineers

PH 201, 202, 203 General Physics
PH 211, 212, 213 General Physics with Calculus

Additional college transfer courses for a total of 90 credits. ____

90

** Additional courses may have been added since this catalog was published. Please check counseling or division offices for current list.*

Requirements for the Associate of General Studies Degree

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

1. Complete the general education requirements and 55 quarter credits of electives.
2. Complete a minimum of 90 credits.
3. Complete a minimum of 24 credits at Linn-Benton Community College.
4. Maintain a minimum accumulative grade point average of 2.00 or better.

General Education Requirements 35
(Courses numbered 0. (zero decimal) will not apply toward general ed requirements.)

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

(Student must have passed WR 115 with a grade "C" or better or attained appropriate placement test score on the Placement Test or the Computerized Placement Test to enroll in WR 121.)

Speech (select one) ..... (3)
SP 1.103 Occupational Speech 3
SP 111 Fundamentals of Speech 3
SP 112 Intro to Persuasion 3
SP 218 Interpersonal Communication 3

Math ..... (4)
MTH 61 Survey of Math Fundamentals 3

and one of the following:

MTH 62 Occupational Trigonometry 1
MTH 63 Industrial Shop Math 1
MTH 64 Business Applications of Math Fundamentals 1
OA 2.557 Adv. Bus. Math Applications 1

or higher level Math courses

(Student must have attained an appropriate placement test score on the Placement Test or on the Computerized Placement Test to enroll in the above math courses.)

Health and PE (select 4 credits) ..... (4)
HE 112 Emergency First Aid 1
HE 125 Occupational Safety 3
HE 250 Personal Health 3
HE 252 First Aid 3
HE 261 CPR 1
PE 185 Activity Courses 1
PE 231 Lifetime Wellness 3

(Only one activity course may be taken twice to meet general education requirements, and no more than two activity courses per quarter will count toward general education requirements.)

Humanities/Arts, Social Science, Math/ Science * (Select 21 credits from the following areas with a minimum of 3 credits from each of the three groups) .. (21)

The Humanities/Arts group includes fine art, creative writing, foreign languages (200 level courses only), literature, music, philosophy, religion and theatre.

The Social Science group includes criminal justice, history, psychology, sociology, political science, anthropology/ archaeology, economics, geography and women's studies.

The Math/Science group includes mathematics, biology, botany, physical science, physics and zoology.

Computer Competency for degree:
(The Computer Competency may be met by taking an approved course that includes computer use by the student or by passing a competency test.)

*** Note:** To determine if a class may be applied toward fulfilling these requirements for the Associate of General Studies degree look for the proper symbol in the Course Description section in the back of this catalog. Humanities/Arts courses will be marked with the symbol ➤; Social Science classes will be marked with the symbol ■; Math/Science classes will be marked with the symbol ●; and courses fulfilling the Computer Competency requirement will be marked with the symbol ◆.

Requirements for the Associate of General Studies Degree: Technology Option

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

1. Complete the general education requirements and 55 quarter credits of electives.
2. Complete a minimum of 90 credits.
3. Complete a minimum of 24 credits at Linn-Benton Community College.
4. Maintain a minimum accumulative grade point average of 2.00 or better.

General Education Requirements 35
(Courses numbered 0. (zero decimal) will not apply toward general ed requirements.)

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

(Student must have passed WR 115 with a grade "C" or better or attained appropriate placement test score on the Placement Test or the Computerized Placement Test to enroll in WR 121.)

Speech (select one) ..... (3)
SP 1.103 Occupational Speech 3
SP 111 Fundamentals of Speech 3
SP 112 Intro to Persuasion 3
SP 218 Interpersonal Communication 3

(Continued on next page)

Math ..... (4)
MTH 61 Survey of Math Fundamentals 3

and one of the following:

MTH 62 Occupational Trigonometry 1
MTH 63 Industrial Shop Math 1
MTH 64 Business Applications of Math Fundamentals 1
OA 2.557 Adv. Bus. Math Applications 1

or higher level Math courses

(Student must have attained an appropriate placement test score on the Placement Test or on the Computerized Placement Test to enroll in the above math courses.)

Health and PE (select 4 credits) ..... (4)
HE 112 Emergency First Aid 1
HE 125 Occupational Safety 3
HE 250 Personal Health 3
HE 252 First Aid 3
HE 261 CPR 1
PE 185 Activity Courses 1
PE 231 Lifetime Wellness 3

(Only one activity course may be taken twice to meet general education requirements, and no more than two activity courses per quarter will count toward general education requirements.)

Technology ..... (21)
Select 21 credits of professional technical courses that are required in one- and two-year programs.

Computer Competency for degree:
(The Computer Competency may be met by taking an approved course that includes computer use by the student or by passing a competency test.)

Requirements for the Associate of Science Degree

The Associate of Science is an institutional transfer degree organized in relationship to subject areas of major emphasis. Intended especially to facilitate the transfer of LBCC students to Oregon State University, the general education requirements of the Associate of Science degree align with OSU's lower-division baccalaureate core requirements. (OSU requires three credits in Difference, Power and Discrimination that must be taken at OSU.) They also have broad application to the general education requirements of other colleges and universities. Associate of Science degree credits transfer to all four-year institutions on a course-by-course basis. The assignment of LBCC credit to particular requirements of other schools is made by the college or university to which the transfer is being made.

Students pursuing the Associate of Science degree must meet additional program requirements in a specific major-emphasis subject area. See "Programs of Study" for a listing of available major-emphasis programs.

General Education Core Requirements

Skills 16
Writing I ..... 3 credits
WR 121 English Composition

Writing II ..... 3 credits
JN 216 News Reporting and Writing
WR 122, 123 English Composition
WR 123C English Composition: Computer
WR 214 Business Communications
WR 227 Technical Report Writing

Speech ..... 3 credits
SP 111 Fundamentals of Speech
SP 112 Intro to Persuasion
SP 218 Interpersonal Communications

Mathematics ..... 4 credits
MTH 105 Intro to Contemporary Mathematics
MTH 111 College Algebra
MTH 112 Trigonometry
MTH 116 Calculus Preparation
MTH 150 Intro to Statistics
MTH 211, 212, 213 Fundamentals of Math I, II, III
MTH 231, 232 Elements of Discrete Mathematics
MTH 241, 245 Math for Biological, Management and Social Sciences
MTH 251, 252, 253, 254 Calculus
MTH 255 Vector Calculus
MTH 256 Applied Differential Equations
MTH 265 Statistics for Scientists and Engineers

Fitness ..... 3 credits
PE 231 Lifetime Wellness

Computer Competency for degree:
(The Computer Competency may be met by taking an approved course that includes computer use by the student or by passing a competency test.)

***Perspectives 27**

(LBCC and Oregon State University)
In addition to meeting the perspectives requirements of the LBCC Associate of Science degree, the following list of courses will be routinely accepted by OSU in fulfillment of the indicated baccalaureate core perspectives requirement. OSU will continue to provide opportunities to evaluate unusual or unique situations as head advisors work with individual transfer students.

Biological Science 4
BI 101, 102, 103 General Biology
BI 211, 212, 213 General Biology
BI 234 Microbiology
BI 235 Elementary Medical Microbiology
BI 236 Molecular Biotechnology

Physical Science 4
CH 121, 122, 123 College Chemistry
CH 221, 222, 223 General Chemistry
GEOG 121 Physical Geography
GS 104, 105, 106 Physical Science
GS 107 Astronomy
GS 108 Oceanography
PH 201, 202, 203 General Physics
PH 211, 212, 213 General Physics with Calculus

Plus a choice of either a Physical Science or a Biological Science course 4

Cultural Diversity 3
ANTH 232 Native North Americans

ENG 207 Literature of the Non-Western World: Asia
ENG 208 Literature of the Non-Western World: Africa
ENG 209 Literature of the Non-Western World: Latin America

GEOG 202 World Regional Geography: Latin America/Caribbean
GEOG 203 World Regional Geography: Asia
GEOG 204 World Regional Geography: Africa/Middle East

HST 157 History of the Middle East & Africa
HST 158 History of Latin America
HST 159 History of Asia

R 103 Religions of Eastern World

Literature and the Arts 3
ART 102 Understanding Art
ART 204, 205, 206 Survey of Art History

ENG 104 Intro to Literature: Fiction
ENG 105 Intro to Literature: Drama
ENG 106 Intro to Literature: Poetry
ENG 107, 108, 109 Literature of the Western World
ENG 110 Intro to Film Studies
ENG 201, 202, 203 Shakespeare
ENG 204, 205, 206 Survey of English Literature
ENG 207 Literature of the Non-Western World: Asia
ENG 208 Literature of the Non-Western World: Africa
ENG 209 Literature of the Non-Western World: Latin America
ENG 253, 254, 255 Survey of American Literature
ENG 260 Intro to Women Writers
ENG 275 Bible as Literature

HUM 100 Intro to Humanities

MUS 161 Music Appreciation
MUS 205 Intro to Jazz

Social Processes and Institutions 3
ANTH 103 Intro to Cultural Anthropology

EC 201, 202, 203 Principles of Economics
EC 201A Intro to Microeconomics
EC 202A Intro to Macroeconomics

HDFS 201 Individual and Family Development

PS 104 Problems in American Politics
PS 201, 202, 203 American Government
PS 207 Intro to Political Science

SOC 204, 205 General Sociology

Western Culture 3
ART 204, 205, 206 Survey of Art History

EC 215 Economic Development of the U.S.

ENG 105 Intro to Literature: Drama
ENG 107, 108, 109 Literature of the Western World
ENG 110 Intro to Film Studies
ENG 201, 202, 203 Shakespeare
ENG 204, 205, 206 Survey of English Literature
ENG 253, 254, 255 Survey of American Literature

HST 101, 102, 103 History of Western Civilization
HST 150 Science & Culture in the Western Tradition
HST 201, 202, 203 History of the U.S.

PHL 201 Intro to Philosophy
PHL 202 Elementary Ethics

R 102 Religions of the Western World
R 211 The Old Testament: Historical Background
R 212 The New Testament: Historical Background

Plus one additional course in one area above (except Biological Science or Physical Science) 3

Major-Emphasis Requirements and Electives 47
(See specific program information)

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(Continued on next page)

General Education Core Courses (LBCC Only)

Writing II
JN 217 Feature Writing

***Perspective Courses (LBCC Only)**
The following courses are approved to meet LBCC's Associate of Science degree perspectives requirements; *however, Oregon State University may not accept* these courses in fulfillment of OSU's baccalaureate core perspectives requirements.

Cultural Diversity
ANTH 101 Intro to Physical Anthropology
ANTH 102 Intro to Archaelogical Anthropology

BA 203 International Business

ENG 110 Intro to Film Studies

Literature and the Arts
ENG 121 Mystery Fiction
ENG 211 Literature in Athletics
ENG 221 Intro to Children's Literature
ENG 261 Intro to Science Fiction

MUS 101 Music Fundamentals

SP 229 Oral Interpretation of Literature

TA 111 Intro to Theatre

Physical Science
CH 111 Introductory Chemistry

Social Processes and Institutions
ANTH 320 Time Travelers

CJ 101 Intro to Criminology
CJ 201 Juvenile Delinquency
CJ 202 Violence and Aggression

EC 115 Outline of Economics

PS 205 International Relations
PS 206 Comparative European Governments
PS 220 U.S. Foreign Policy
PS 252 Constitutional Law

PSY 101 Psychology and Human Relations
PSY 200 Psychology as a Natural Science
PSY 205 Psychology as a Social Science
PSY 215 Intro to Developmental Psychology
PSY 216 Social Psychology
PSY 235, 236, 237 Human Development: Child/Adult/Aging

SOC 206 General Sociology
SOC 222 Marriage Relationships

SP 219 Small-Group Communication

Western Culture
ENG 221 Intro to Children's Literature
ENG 275 Bible as Literature

HSTS 151 History of Science

HUM 100 Intro to Humanities

MUS 105 Intro to Rock Music
MUS 205 Intro to Jazz

*Additional courses may have been approved since the catalog was published. Please check counseling or division offices for current list.

Requirements for the Certificate

Generally, students must have an accumulative grade point average of at least 2.00 to qualify for the one-year certificate. General certificates require a specified number of credit hours. Refer to the "professional technical programs" section in this catalog for specific requirements.

Requirements for the Diploma

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

BUSINESS, TRAINING AND HEALTH OCCUPATIONS DIVISION

Dean: John Berg

The Business, Training and Health Occupations Division has as its central purpose the following:

- Providing contemporary professional training that prepares students for the world of work
- Preparing students for transfer to a four-year school
- Developing the existing work force through training and continuing education
- Strengthening families through delivery of education and services
- Supporting the unemployed and underemployed in developing skills that will lead to self-sufficiency.

To fulfill this mission, the division offers a broad range of academic subjects and programs in transfer, professional and continuing education programs.

Associate degrees are offered in business, accounting, computer programming, supervision and a variety of office-related areas (including administrative, legal and medical) for those seeking employment. The division also provides associate degrees in Business Administration, Computer Science, and Child and Family Studies.

In addition, several one-year certificate programs are available, including office specialist, medical transcriptionist, medical office specialist, accounting clerk and educational assistant.

The division provides career preparation for health occupations. Programs in health-related fields include nursing (RN), nursing assistant and dental assistant. Classes also are available in emergency medical technician and related health areas. Preparation includes both classroom and clinical experience.

The Training and Business Development Center serves the business and industrial community throughout the district by preparing employees for work in new and existing industries, increasing the productivity of a firm's current employees and assisting local small businesses. The center provides training for small business owners.

The Family Resources Department serves parents, transfer students, child care providers and local employers throughout the district by working to improve the quality of life of children and their families. Each program helps to strengthen families through delivery of educational services to specific populations.

The Life and Employment Development Department develops programs to assist disadvantaged individuals and families in obtaining education, supportive services and workforce development skills that lead to economic self-sufficiency.

Professional Technical Programs

Accounting Clerk
Accounting Technology
Administrative Assistant
Administrative Medical Assistant
Business
Business Computer Systems
Child and Family Studies
Computer User Support
Dental Assistant
Educational Assistant
Emergency Medical Technician
Legal Secretary
Medical Office Specialist
Medical Transcriptionist
Nursing
Nursing Assistant
Office Specialist
Supervisory Management

Transfer Programs

Business Administration
Child and Family Studies
Computer Science
Economics
Education
Home Economics

Community Outreach

See the "Community Outreach" section of this catalog for information about services and programs available through the Family Resources Department, Life and Employment Development Department, and Training and Business Development Center.

The Family Resources Department serves parents, transfer students, professional technical students, child care providers and local employers throughout the district. A one-year certificate, Associate of Arts-Oregon Transfer, Associate of Science and Associate of Applied Science degrees are offered in Child and Family Studies. A one-year certificate program, Educational Assistant, also is available. Community-based programs focus on parent education, work and family, and child care provider training. Each program is designed to strengthen families by helping students learn to improve the quality of life of children and families.

Human Resources Learning Community

Full-time students enrolled in the associate degree programs in Child and Family Studies participate in the Human Resources Learning Community (see the HRLC section of this catalog). Part-time students participate in a workplace or cohort learning community. Students preparing to transfer to a four- or five-year teacher preparation program may complete the certificate programs in Educational Assistant and Child and Family Studies as part of their two-year degree.

COLLEGE SERVICES DIVISION

Dean: Brian Brown

Associate Dean: Robert Miller

The College Services Division was established to better serve the staff and student populations of the college by providing a safe and pleasant environment in which to work and learn. The division supports team leadership and promotes service and excellence in fulfilling the duties of each department. The following departments are included in this division:

- **Printing Services:**
This department is responsible for the printing of college-related materials, maintaining and supplying copy machines for departments, and providing convenience printing services for staff and students. (Also see "Services for Students.")

- **Bookstore:**
This department sells books and supplies for LBCC courses. Other general office supplies also are available for purchase. (Also see "Services for Students.")

- **Hospitality and Food Services**
This department includes the Cafeteria, Santiam Restaurant, Camas Room, Room Reservations and the Culinary Arts Program. (Also see "Services for Students.")

- **Facilities:**
This department includes the following areas:

Maintenance: maintains the structural appearance and safety of all campus buildings.

Grounds: maintains all campus grounds and plantings providing a safe and pleasing environment for students and staff.

Mail Services: provides campus mail delivery and shipping and receiving for the college.

Custodial: maintains a clean and safe environment for staff and students, including special event coverage.

- **Human Resources/Payroll:**
This department provides the college with established recruiting and hiring procedures for staff positions, oversees federal and state personnel compliance issues that pertain to the college, and provides payroll and benefit functions for staff and work study students.

- **Safety and Security Services:**
This department provides safety and emergency services for staff and students. Other services include the college switchboard, FAX machine, first aid station, lost and found, key management, courtesy escort service and parking management.

- **College Services Office:**
The Dean of the College Services Division is located in this office, providing leadership and coordination for the division. Worker's Compensation, hazardous materials and OSHA compliance issues also are handled through this office.

EXTENDED LEARNING AND INFORMATION SERVICES DIVISION

Dean: Ann Smart

The Extended Learning and Information Services Division's vision is: To be the leading community resource connecting people to information and quality learning opportunities.

The mission of the division is:

- Extending learning opportunities to a variety of students in evening and off-campus programs
- Supporting the teaching and learning process with information, media and technology resources
- Extending the boundaries of computing and communication services to support students and staff
- Integrating technology into the learning environment
- Inspiring life-long learning for the adults in Linn and Benton counties
- Creating community partnerships and connecting the community with the college
- Offering a balanced summer school, distance education and After 4 schedule of classes that assists students in reaching degree objectives

The division values customer service, teamwork, flexibility and adaptability, satisfaction, communication and fun. The staff provides the support needed by students to complete their learning objectives.

The division provides classes and services to students throughout Linn and Benton counties through off-campus centers in Corvallis, Lebanon and Sweet Home and in classes held in local communities. It is responsible for:

- evening services and degrees
- telecourses and distance education
- summer school
- study travel
- library and media
- institutional computing and communication services
- Retired and Senior Volunteer Program

Additionally, the division provides linkages for students to higher-level evening degree opportunities offered by Linfield College, Portland State University and Oregon State University and supports all programs received by satellite broadcast.

Community Outreach

See the "Community Outreach" section of this catalog for information about services and programs available through the Extended Learning centers.

LIBERAL ARTS AND HUMAN PERFORMANCE DIVISION

Dean: Edwin Watson

The Liberal Arts and Human Performance 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 students about their 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 that teaches students their relationship to other humans. The third is to fit the student for an economic role in society through teaching 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 often referred to 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 application of rules, they create the values.

The Liberal Arts and Human Performance Division offers course work that fulfills institutional general education requirements in composition, speech, arts and letters, social sciences and physical education and health/wellness. This division supports the Associate of Arts Oregon Transfer degree with an emphasis in Liberal Studies and offers programs leading to the Associate of Science (transfer) degree in the following major emphasis areas: journalism and mass communications, liberal studies, fine arts, pre-education, and health and human performance. The Associate of Applied Science (professional technical) degree is available in graphic arts, electronic imaging and prepress technology, and criminal justice.

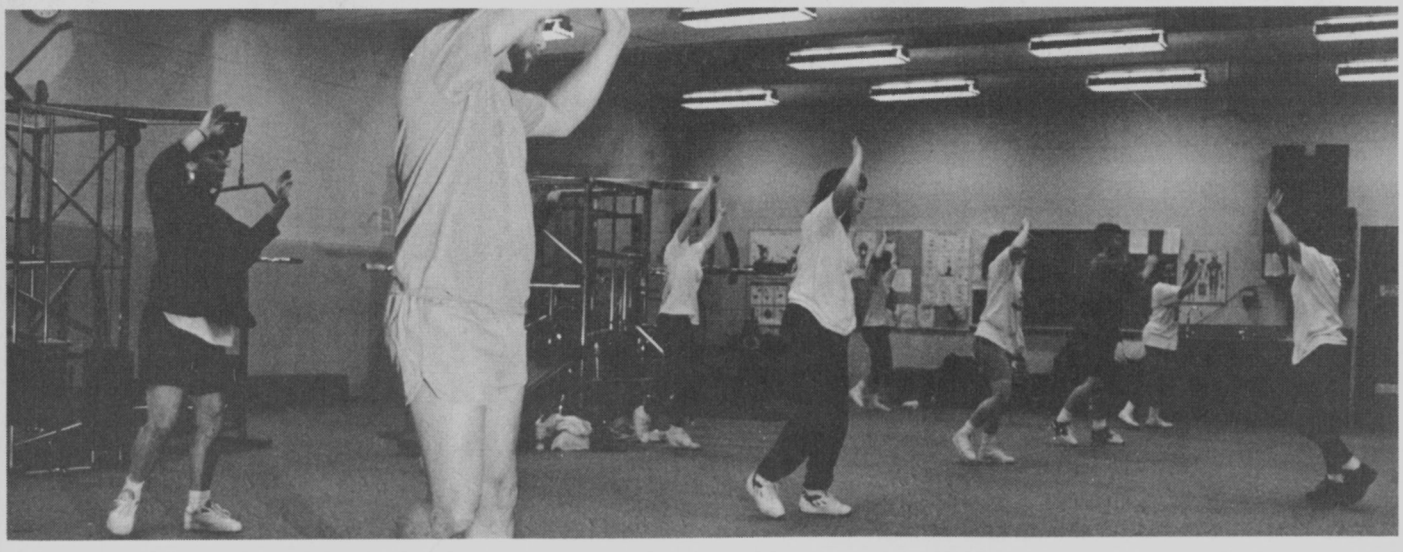
Students interested in careers in criminal justice, education and human services study in common courses the core knowledge of the human resources field together. Participating in a learning community of their peers, students complete general education requirements in speech, writing, math, the social sciences and humanities. The integrated curriculum gives students an opportunity to develop college-level skills in the context of their career interests. Learning experiences in the classroom are combined with field work to help students gain the perspective necessary to become competent professionals.

Professional Technical Programs

Child and Family Studies
Criminal Justice (also see Transfer Programs)
Educational Assistant
Electronic Imaging/Prepress Technology
Graphic Arts

Transfer Programs

Education
Fine Art
Health and Human Performance
Journalism and Mass Communication
Liberal Studies (also see)
- Criminal Justice
- English/Foreign Languages
- Fine Art
- Music
- Social Sciences
  - Anthropology
  - Geography
  - History
  - Philosophy/Religion
  - Political Science
  - Psychology
  - Sociology
- Speech Communications
- Theatre



SCIENCE AND INDUSTRY DIVISION

Dean: Peter C. Scott
Associate Dean: Michael Patrick

The Science & Industry Division offers curriculums for students preparing for initial employment, upgrading and skill improvement, or for transferring to a four-year college or university. Science-related associate degree programs are offered in agriculture, animal technology, electronics engineering technology, horticulture and metallurgy. Industry-related associate degree and/or certificate programs are offered in automotive technology, collision repair, engineering graphics technology, farrier science, heavy equipment mechanics/diesel, machine tool technology, nondestructive testing, refrigeration/heating/air conditioning and welding.

Transfer degrees are offered in agriculture, animal science, biology, physical science, engineering, mathematics and heavy equipment mechanics/diesel.

Evening classes and special workshops for employed personnel are scheduled throughout the year.

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

Associate of Applied Science or Associate of Science degrees may be earned upon completion of specified curriculums within the division.

Professional Technical Programs

Agriculture
Animal Technology
Animal Technology-Horse Management Option
Apprenticeship Program
Automotive Technology
Collision Repair
Crafts and Trades
Electronics Engineering Technology
Engineering Graphics Technology
Farrier Science
Heavy Equipment Mechanics/Diesel
Horticulture
Machine Tool Technology
Metallurgy and Materials Technology
Nondestructive Testing
Refrigeration, Heating and Air Conditioning
Water/Wastewater Technology
Welding

Transfer Programs

Agriculture Business Management
Agricultural Education
Animal Science
Automotive Technology (Special Agreement)
Biological Sciences
Engineering Transfer
Heavy Equipment Mechanics/Diesel (Special Agreement)
Mathematics

STUDENT SERVICES DIVISION

Dean: Vacant

The primary focus of the Student Services Division is student development and success. The division takes as its mission the upholding of the rights and dignity of each person. It endeavors to empower people to discover and reach their unique potential and to assist with the successful transition to college. In addition, the division promotes the positive values of diversity and community involvement as a foundation for lifelong learning. The division emphasizes service, teamwork, humor, integrity, excellence and community focus.

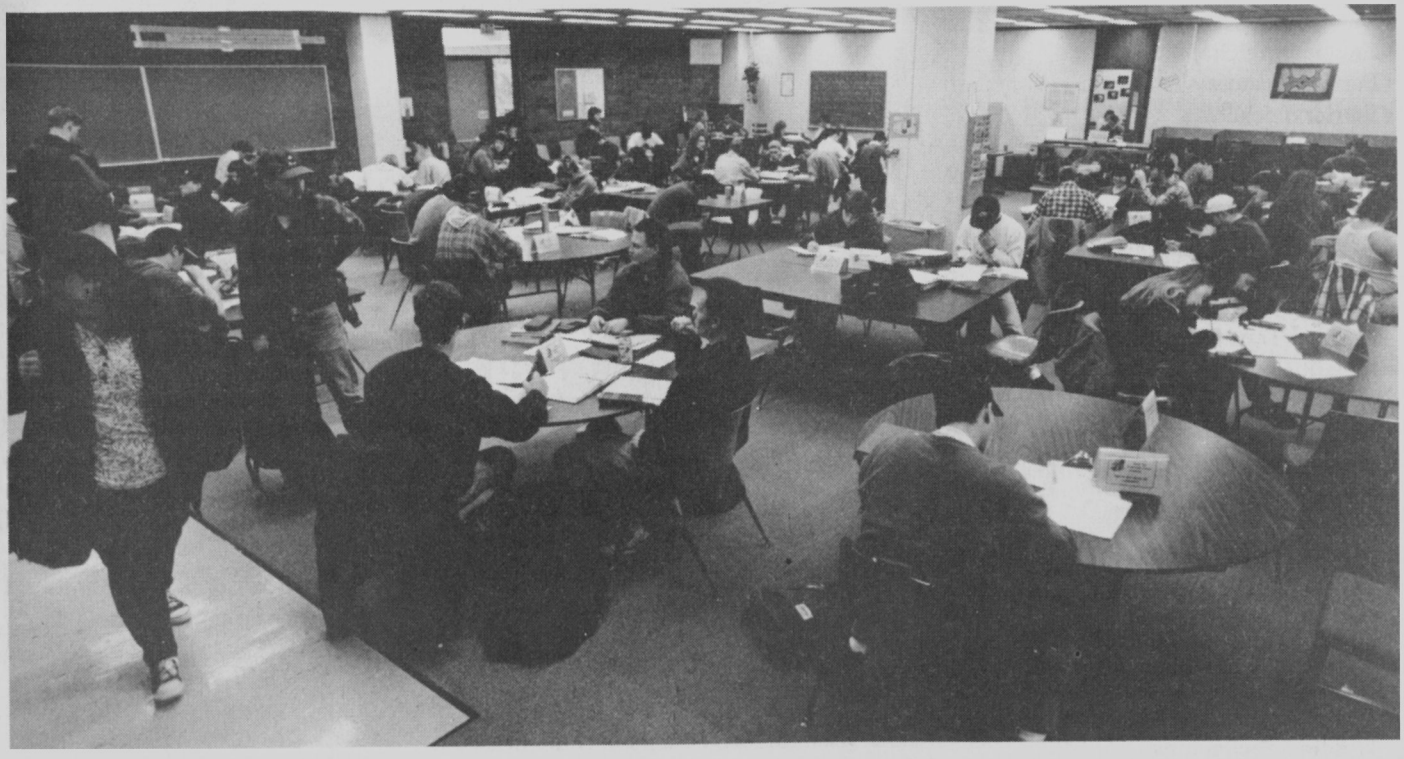
In carrying out this mission, the division provides the following services and classes:

Access to the College: The Admissions Office provides assistance to students in the application process for general admission, special admission programs and international students. The Registration Office serves students in the areas of registration, schedule changes, address and demographic updates, grade processing and transcript requests. The Student Financial Aid and Veterans Office assists students in determining educational costs, applying for state and federal financial aid, and in budgeting financial resources. This office also provides scholarship information. The Career and Counseling Center helps students discover career possibilities that fit their skills and interests. Counselors provide personal, career and crisis counseling as well as drop-in advising. At the Assessment Center, fully admitted students are evaluated for placement in reading, writing and math classes. Cooperative Work Experience helps students locate work experience sites to enhance their educational programs. The Student Employment Office helps students and former students find employment and develop job search skills.

Educational Opportunities: The Adult Basic Skills Development program provides academic assistance to students completing high school diplomas, GED certificates or improving basic skills in reading, writing and math. The Learning Center is an open study area that offers peer tutoring, assistance with math and writing problems, and learning materials for check-out. Computers also are available for student use. For students who need to improve basic skills, the Developmental Studies Department offers reading, writing, spelling and study skills classes.

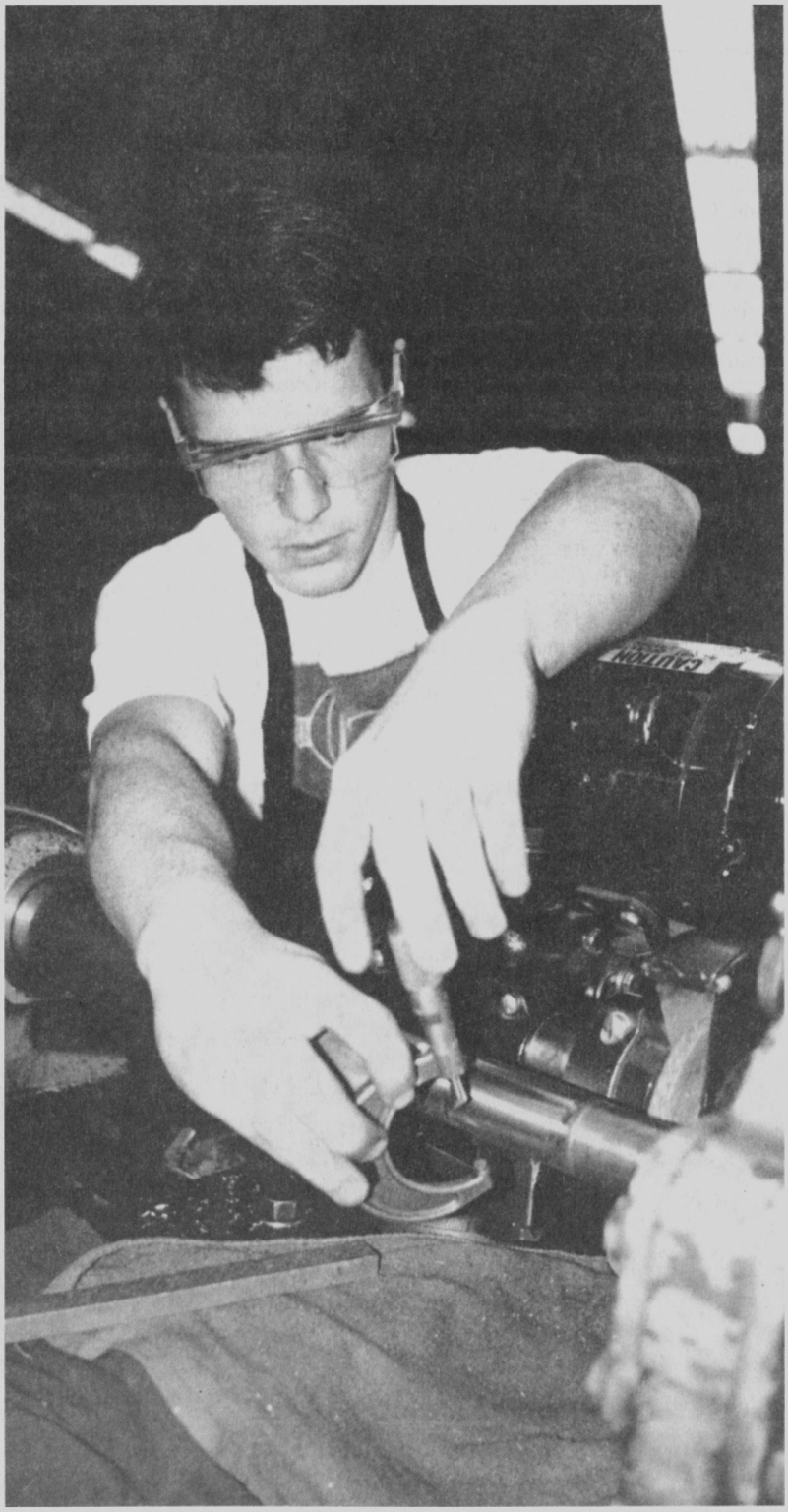
Special Programs: Services, including English to Speakers of Languages (ESOL) classes, are provided for international/ intercultural students. Students interested in developing leadership skills have the opportunity to participate in student government, events planning, clubs and co-curricular activities. The Women's Center supports the special needs of female students. The division also provides services for students with disabilities, including adaptive instruction, testing and interpreting through the Disabled Student Services Office.

Student Advocacy: The Dean of Student Services provides assistance for students in the determination of their rights and responsibilities and in interpreting policies that affect them.



PROFESSIONAL TECHNICAL PROGRAMS

- Accounting Clerk
- Accounting Technology
- Administrative Assistant
- Administrative Medical Assistant
- Agriculture
- Animal Technology
- Animal Technology: Horse Management Option
- Apprenticeship Program
- Automotive Technology
- Business
- Business Computer Systems
- Business Technology
- Chef Training
- Child and Family Studies
- Collision Repair Technology
- Computer Programming
- Computer User Support
- Crafts and Trade
- Criminal Justice
- Culinary Arts
- Data Processing
- Dental Assistant
- Educational Assistant
- Electronic Imaging/Prepress Technology
- Electronics Engineering Technology
- Emergency Medical Technician
- Engineering Graphics Technology
- Family Resources
- Farrier Science
- Graphic Arts
- Heavy Equipment Mechanics/Diesel
- Horticulture
- Legal Secretary
- Machine Tool Technology
- Medical Office Specialist
- Medical Transcriptionist
- Metallurgy and Materials Technology
- Nondestructive Testing
- Nursing
- Nursing Assistant
- Office Specialist
- Office Technology
- Parent Education/Child Care Provider Training
- Refrigeration, Heating and Air Conditioning
- Restaurant and Catering Management
- Supervisory Management
- Water/Wastewater Plant Operations
- Water/Wastewater Technology
- Welding Technology



ACCOUNTING TECHNOLOGY

Program Advisors:
Maynard Chambers, Al Walczak

Faculty:
Gerry Conner, Myrna Gusdorf, Ed Knudson, Wendy Krislen, Larry Schuetz, Andy VanderPlaat

Two programs are available for students interested in accounting but not desiring a four-year degree: the Accounting Clerk Certificate (one year) and the Accounting Technology degree (two years). Both prepare the student for entry-level positions in bookkeeping and accounting; however, the degree students from the two-year program should be able to enter at a higher level and most likely will advance further. Overall employment opportunities in accounting and bookkeeping are good to excellent most of the time.

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

The Accounting Technology curriculums lead to an Associate of Applied Science degree in Accounting Technology or to a one-year certificate in Accounting Clerk.

Associate of Applied Science in Accounting Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 75-76

Fall - First Year
BA 2.530 Practical Accounting I 4
BA 101 Intro to Business 4
BA 131 Business Productivity Software 2
≠MTH 65 Elementary Algebra ..... (4)
OA 121A Keyboarding I 2

Winter
BA 2.531 Practical Accounting II 4
BA 110O Windows 2
BA 110S Spreadsheets 2
OA 2.515 Business Math with Calculators 2
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3
≠WR 121 English Composition ..... (3)

Spring
BA 2.532 Practical Accounting III 4
BA 2.684 Computerized Accounting 3
BA 210S Advanced Spreadsheets 2
≠BA 285 Business Relations/Global Economy(3)
≠SP 111 Fundamentals of Speech ..... (3)

Fall - Second Year
BA 2.127 Governmental Accounting 3
BA 2.595 Professional Accounting I 3
BA 206 Principles of Management 3
BA 223 Principles of Marketing 3
≠ Science, Technology & Society ..... (3)

Winter
BA 2.132 Total Quality Management 3
BA 2.534 Cost Accounting 3
BA 2.596 Professional Accounting II 3
Elective 3

❒ Law Option ..... 3 - 4
(Select one)
BA 2.518 Commercial Law 3
BA 230 Business Law 4

Spring
BA 2.597 Professional Accounting III 3
BA 207 Labor Management Relations 3
BA 222 Financial Management 3
EC 115 Outline of Economics 4
≠Health or PE ..... (3)
OA2.616 Job Success Skills 1

94-95

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

One-Year Certificate in Accounting Clerk

Major Requirements 47

Fall
BA 2.530 Practical Accounting I 4
BA 101 Intro to Business 4
BA 131 Business Productivity Software 2
MTH 65 Elementary Algebra 4
OA 121A Keyboarding I 2

Winter
BA 2.531 Practical Accounting II 4
BA 110O Windows 2
BA 110S Spreadsheets 2
OA 2.515 Business Math with Calculators 2
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3
WR 121 English Composition 3

Spring
BA 2.532 Practical Accounting III 4
BA 2.535 Payroll Accounting 1
BA 2.684 Computerized Accounting 3
BA 285 Business Relations/Global Economy ... 3
OA2.616 Job Success Skills 1
SP 111 Fundamentals of Speech 3

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ADMINISTRATIVE ASSISTANT

Program Advisor:
Mary Ann Lammers

This two-year professional technical program prepares students for administrative office assistant, secretarial and general office careers. Students in the Administrative Assistant program develop a high level of computer skills, particularly word processing. The program also emphasizes developing good English and communication skills.

Duties of the Administrative Assistant may include making travel and meeting arrangements, filing, typing, composing letters, greeting visitors and assisting the manager. Graduates may progress rapidly from entry-level jobs to more responsible positions. An individual with good skills will find it easy to relocate and easy to leave and re-enter the job market.

Skills classes are taught in self-paced office laboratory classrooms. New technology is introduced both through concepts courses and through hands-on experience with modern equipment.

The Administrative Assistant program is designed to be completed in two years. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the college Placement Test: WR 115 Intro to Writing and MTH 60 Intro to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, we recommend that it be taken the summer term prior to enrolling in the regular degree program. Pre-training might include some or all of the following courses: *OA 121A Keyboarding I* (2 credits), *RD 1.175 or RD 1.176 Reading Improvement I or II* (3 credits), *EN 1.133 The Write Course* (4 credits), *MTH 20 Basic Mathematics* (4 credits).

Associate of Applied Science in Administrative Assistant

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 75

Fall - First Year
BA 110O Windows 2
OA 2.500 Business Orientation 1
OA 2.588 Editing Skills for Info. Processing ... 3
OA 123A Typing Skill Building 2
OA 123B Advanced Typing Skill Building 2
OA 201A Formatting and WordPerfect 5.1 2
≠ WR 121 English Composition ..... (3)

Winter
BA 110D Data Base 2
OA 2.513 Data Entry Skill Building 2
OA 2.515 Business Math w/Calculators 2
OA 2.551 Office Communications 3
OA 2.652 Filing 1
OA 2.653 Automated Business Systems 3
OA 201 WordPerfect 6.1 for Business 3

Spring
BA 110S Spreadsheets 2
BA 210S Advanced Spreadsheets 2
OA 2.527 Transcribing Machines I 3
OA 2.610 Office Procedures 3
OA 2.616 Job Success Skills 1
OA 202 MS Word 6.0 for Business 3

(Continued on next page)

Fall - Second Year
≠MTH 61 Survey of Math Fundamentals ..... (3)
OA 2.579 Integrated Software Applications 3
OA 2.647 High Performance Office 3
OA 2.683 Computerized Records Management 3
OA 203 Advanced Word Processing 3
≠SP 218 Interpersonal Communication ..... (3)

Winter
BA 2.530 Practical Accounting I 4
≠BA 285 Business Relations/Global Economy(3)
≠OA2.557 Advanced Business Math Applications ..... (1)
OA2.613 On-the-Job Training 4
≠PE 231 Lifetime Wellness ..... (3)

Spring
BA 2.684 Computerized Accounting 3
OA 2.613 On-the-Job Training 4
OA 2.656 Information Processing Practicum ... 3
OA 2.682 Desktop Publishing 3
≠Science, Technology & Society ..... (3)

94

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.
* HE 250, HE 252 and/or Multi-Media First Aid and/or PE activity courses may be substituted for PE 231 Lifetime Wellness.

ADMINISTRATIVE MEDICAL ASSISTANT

Program Advisor:
Sally Stouder

The Administrative Medical Assistant program prepares students to do front office work in doctors' offices, clinics or hospitals. Duties may include scheduling and receiving patients; obtaining patient's data; maintaining medical records, typing and medical transcription; handling telephone calls, correspondence, reports and manuscripts; and assuming responsibility for office management, insurance matters, office accounts, fees and collections. Students work for 240 hours in a medical office during their second year—this provides a bridge between classroom and career.

Skills classes are taught in self-paced laboratory classrooms. New technology is introduced both through concepts courses and through hands-on experience with modern equipment.

The Administrative Medical Assistant program is designed to be completed in two years. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the college Placement Test: WR 115 Intro to Writing and MTH 60 Intro to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, we recommend that it be taken summer term prior to enrolling in the regular degree program. Pre-training might include some or all of the following courses: *OA 121A Keyboarding I (2 credits), RD 1.175 or RD 1.176 Reading Improvement I or II (3 credits), EN 1.133 The Write Course* (4 credits), *MTH 20 Basic Mathematics* (4 credits).

Associate of Applied Science in Administrative Medical Assistant

General Ed. Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 78

Fall - First Year
AH 5.630 Medical Terminology I 3
BA 110O Windows 2
OA 2.500C Business Orientation/Medical 1
OA 2.515M Business Math w/Calculators: Med .. 2
OA 2.588 Editing Skills for Info. Processing 3
OA 123A Typing Skill Building 2
OA 201A Formatting and WordPerfect 5.1 2

Winter
AH 5.414 Drug Classifications and Names 2
AH 5.633 Medical Terminology II 3
OA 2.671 Medical Law and Ethics 2
OA 124 Typing: Speed and Accuracy Dev. 3
OA 201 WordPerfect 6.1 for Business *or* OA 202 MS Word 6.0 for Business 3
≠Science, Technology and Society ..... (3)

Spring
AH 5.634 Medical Terminology III 3
BA 2.530 Practical Accounting I 4
≠HE 252 First Aid ..... (3)
OA 2.527 Transcribing Machines I 3
OA 2.616 Job Success Skills/Medical 1
OA 2.652 Filing 1
OA 2.656M Info. Processing Practicum: Medical Reports 3

Fall - Second Year
AH 5.625 Clinical Office Procedures 4
OA 2.524 Medical Transcription I 3
OA 2.551 Office Communications 3
OA 2.647 High Performance Office 3
OA 2.670 Medical Office Procedures 3

Winter
≠BA 285 Business Relations/Global Economy . (3)
OA 2.525 Medical Transcription II 3
OA 2.565 Coding and Insurance Procedures 3
OA 2.613 On-the-Job Training 4
OA 2.673 Computerized Medical Accounts Receivable 3

Spring
BA 110S Spreadsheets 2
≠MTH 61 Survey of Math Fundamentals ..... (3)
≠OA 2.557 Adv. Business Math Applications . (1)
OA 2.613 On-The-Job Training 4
≠SP 118 Interpersonal Communication ..... (3)
≠WR 121 English Composition ..... (3)

97

≠ Applies toward General Education Requirements. Credits not included in Major Requirements total.

AGRICULTURE

Faculty:
Gregory Paulson

The Agriculture curriculum is based on necessary competencies identified by industry and reviewed by advisory committees. Students learn facts and skills necessary for entry-level technical employment.

Neither the certificate nor the Associate of Applied Science degree programs have official prerequisites. Students take a variety of science-oriented courses, however, and are expected to have basic mathematics skills. To graduate with an AAS degree, each student needs to complete a four-credit algebra course while at LBCC.

All Agriculture program classes are offered during the day. Part-time enrollment is common. Many students start in the middle of the academic year, but two full years are required to complete the AAS degree. Students attending part time will need to attend longer to complete the program. Not every course listed in the Agriculture program must be taken in the order shown in the curriculum, but some courses are offered only every other year. Consequently, students need to take those particular courses in the order they are offered.

Instructional facilities, including a greenhouse, labs, vegetable and ornamental gardens, a land lab and the campus grounds, are used for demonstrations, skill building and evaluation.

The Agriculture curriculums lead to an Associate of Applied Science degree or a One-Year Certificate.

Associate of Applied Science in Agriculture

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree

Major Requirements 65

Fall - First Year
AG 8.125 Soils I 3
AG 8.165 Plant Science 4
AG 111 Computers in Agriculture 3

Winter
AG 8.126 Soils II 3
AG 8.138 Irrigation Systems 3

Spring
CSS 105 Soils and Man 3
CSS 200 Principles of Crop Science 4
CSS 210 Forage Crops 3

Fall - Second Year
AG 8.131 Pest Management 3
ARE 211 Management in Agriculture 4
*Laboratory Science 4
SPN 101 First-Year Spanish I 4

Winter
AG 8.130 Agricultural Chemicals 4
ARE 221 Marketing in Agriculture 3
*Laboratory Science 4

Spring
≠HE 252 First Aid ..... (3)
HE 261 CPR 1
WE 1.201 CWE Seminar 1
WE 1.2801 CWE Agriculture 11

Electives 12
Business, Humanities, Industrial, Spanish or Animal Technology courses

96

* Biological or Physical Science

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

One-Year Certificate in Agriculture

Major Requirements 33

Fall
AG 8.125 Soils I 3
AG 8.131 Pest Management 3
AG 8.165 Plant Science 4
AG 111 Computers in Agriculture 3

Winter
AG 8.126 Soils II 3
AG 8.130 Agricultural Chemicals 4
AG 8.138 Irrigation Systems 3

Spring
CSS 105 Soils and Man 3
CSS 200 Principles of Crop Science 4
CSS 210 Forage Crops 3

Math, writing courses at appropriate level (based on Placement Test scores) 7

40

ANIMAL TECHNOLOGY

Faculty:
Rick Klampe, James Lucas, Bruce Moos

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.

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 Animal Technology program is designed to be completed in two years. This assumes, however, that the entering student has been placed at or above the following levels on the College Placement Test: WR 115 Introduction to Writing and MTH 60 Introduction to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, it may take the student longer than two years to complete the program. 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 Applied Science degree.

Associate of Applied Science in Animal Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree

Major Requirements 56

❒ Production Courses Option 8
(Select two)
ANS 215 Applied Beef Production 4
ANS 216A Applied Sheep Production 4
ANS 216B Applied Swine Production 4
ANS 220 Introductory Horse Science 4

Fall - First Year
AG 8.125 Soils I 3
AG 111 Computers in Agriculture 3
≠MTH 65 Elementary Algebra ..... (4)

Winter
AG 8.126 Soils II 3
ANS 278 Genetic Improvement/Livestock 4

Spring
ANS 207 Careers in Animal Agriculture 1
ANS 231 Livestock Evaluation 3
CSS 210 Forage Crops 3

Fall - Second Year
ARE 211 Management in Agriculture 4
BI 101 General Biology 4

Winter
ANS 210 Feeds and Feed Processing 4
ARE 221 Marketing in Agriculture 3
AT 156 Livestock Diseases I 3
BI 102 General Biology 4

Spring
ANS 211 Applied Animal Nutrition 3
AT 157 Livestock Diseases II 3

Electives 15
Additional courses or approved CWE for a total of no fewer than 90 credits.

90

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

ANIMAL TECHNOLOGY: HORSE MANAGEMENT

Faculty:
Rick Klampe, James Lucas, Bruce Moos

The Animal Technology Department offers a two-year Associate of Applied Science degree in Horse Management. The degree provides students with the knowledge and skills useful in entering occupations in the horse industry or in transferring to four-year institutions to continue study. The program uses the local horse community as a natural instructional laboratory, and the courses are designed to provide a maximum of practical hands-on experience.

The Animal Technology program is designed to be completed in two years. This assumes, however, that the entering student has been placed at or above the following levels on the College Placement Test: WR 115 Introduction to Writing and MTH 60 Introduction to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, it may take the student longer than two years to complete the program.

Associate of Applied Science in Animal Technology: Horse Management Option

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 59

Fall - First Year
AG 111 Computers in Agriculture 3
ANS 121 Intro to Animal Science 4
ANS 220 Introductory Horse Science 4

Winter
ANS 210 Feeds and Feed Processing 4
ANS 278 Genetic Improvement/Livestock 4
≠MTH 65 Elementary Algebra ..... (4)

Spring
ANS 211 Applied Animal Nutrition 3
ANS 221 Equine Industries 3
CSS 210 Forage Crops 3

Fall - Second Year
ANS 222 Young Horse Training 2
ARE 211 Management in Agriculture 4
BI 101 General Biology 4

Winter
ANS 223 Equine Marketing 2
AT 156 Livestock Diseases I 3
AT 163 Schooling the Horse I 3
AT 277 Horse Breeding Management 3
BI 102 General Biology 4

Spring
AT 157 Livestock Diseases II 3
AT 164 Schooling the Horse II 3

Electives 12
Additional courses or approved CWE for a total of no fewer than 90 credits.

90

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

APPRENTICESHIP PROGRAM

Advisor:
Mike Patrick

The Science and Industry 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. Being an indentured apprentice is a condition for entering related training classes.

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 per year.

Classes currently are being offered for the following crafts and trades: inside wireman, machinist, industrial maintenance mechanic, pipefitter, welder, manufacturing plant electrician, instrumentation, industrial millwright and law

(Continued on next page)

Upon completion of the required training program, the apprentice is eligible to take a state-required examination of journeyman standing. The journeyman also has the opportunity to apply for admission to LBCC and to earn an associate degree. The recognized journeyman will be granted 22 credits toward the Industrial Crafts and Trades degree. An additional 71 credits must be earned; of these credits, 19 must be general education courses.

An apprentice selects a minimum of 49 credits of technical and related course work as established by the apprenticeship training committee. Each trade area has a list of required core courses and elective courses that lead the apprentice toward journeyman status and the Associate of Applied Science degree. An apprentice does not have to earn the AAS degree in order to attain journeyman status. However, the degree option is an additional opportunity for the journeyman.

Information on entrance procedures and requirements for apprenticeship-related training is available from the Science and Industry Division office.

Associate of Applied Science in Crafts and Trades

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

***Major Requirements (minimum) 71**

90

* The journeyman card replaces 22 of these major requirement credits.

Contact the Apprenticeship Office, 917-4582, for a copy of the classes that apply to specific crafts or trades.

AUTOMOTIVE TECHNOLOGY

Faculty:

David E. Carter, Mike Henich, Allan Jackson, Carl Reeder, Bryan Schiedler

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 trades as an auto technician, specialty shop operator or in a related position. Starting salaries range from $7 to $14 per hour.

Former LBCC students are employed in many other states, signifying the mobility of the auto technician. The Student Placement Center of the college or department faculty will provide assistance in obtaining a post-college position.

The Auto Tech program supports student participation in Vocational Industrial Clubs of America (VICA) and student competition in United States Skills Olympics (USSO). Through student involvement in fund-raising projects, funds are made available to pay student cost of travel, lodging and entry fees in the annual state VICA skills contest. Any student who earns a first place at the state level qualifies for USSO and also will have expenses paid to participate in the national competition.

In addition to the usual books and supplies, students should expect to purchase a general mechanics tool set, as prescribed by the department.

Mechanical Processes I, II and III are required for all Automotive Technology majors and must be taken concurrently with their major field of study. Course content may be challenged for full or partial credit.

The Automotive Technology curriculums lead to an Associate of Applied Science degree or a two-year certificate.

Associate of Applied Science in Automotive Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 81

Fall - First Term
AU 3.295 Power Train Systems 10
*AU 3.307 Mechanical Processes I 2
WD 4.151 Welding I 2

Winter
AU 3.296 Steering/Suspension/Braking Systems 10
*AU 3.308 Mechanical Processes II 2
≠HE 125 Occupational Safety ..... (3)
*ME 3.447 Metallurgy for Mechanics 2

Spring
AU 3.297 Electrical & Fuel Systems 10
AU 3.301 Service & Repair Practices/CWE 1
*AU 3.309 Mechanical Processes III 2
MA 4.130 Machine Processes 2
≠MTH 61 Survey of Math Fundamentals ..... (3)
≠MTH 63 Industrial Shop Math ..... (1)

Fall-Second Year
*AU 3.298 Automotive Tune-up and Diagnosis 10
AU 3.301 Service & Repair Practices/CWE 1
≠Cultural Diversity & Global Awareness ..... (3)

Winter
*AU 3.299 Automotive Engines 10
AU 3.301 Service & Repair Practices/CWE 1
*AU 3.303 Mobile A/C & Comfort Systems I 3
≠WR 121 English Composition ..... (3)

Spring
*AU 3.300 Automatic Transmissions 10
*AU 3.304 Mobile A/C & Comfort Systems II .. 3
≠Science, Technology & Society ..... (3)
≠*SP 1.103 Occupational Speech ..... (3)

100

* Courses marked with an asterisk offered that term only.
≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

Two-Year Certificate in Automotive Technology

Major Requirements 93

Fall-First Year
AU 3.295 Power Train Systems 10
*AU 3.307 Mechanical Processes I 2
MA 4.130 Machine Processes 2
WD 4.151 Welding I 2

Winter
AU 3.296 Steering/Suspension/Braking Systems ... 10
*AU 3.308 Mechanical Processes II 2
HE 125 Occupational Safety 3
*ME 3.447 Metallurgy for Mechanics 2

Spring
AU 3.297 Electrical and Fuel Systems 10
*AU 3.309 Mechanical Processes III 2
MTH 61 Survey of Math Fundamentals 3
MTH 63 Industrial Shop Math 1

Fall-Second Year
*AU 3.298 Automotive Tune-Up and Diagnosis ... 10
AU 3.301 Service & Repair Practices/CWE 1
WR 115 Intro to Writing 3

Winter
*AU 3.299 Automotive Engines 10
AU 3.301 Service & Repair Practices/CWE 1
*AU 3.303 Mobile A/C & Comfort Systems I 3

Spring
*AU 3.300 Automatic Transmissions 10
*AU 3.304 Mobile A/C & Comfort Systems II .. 3
*SP 1.103 Occupational Speech 3
Computer Competency is required.

93

* Courses marked with an asterisk are offered that term only.

BUSINESS

Program Advisors:

Myrna Gusdorf, Ed Knudson, Wendy Krislen, Andy VanderPlaat

Faculty:

Maynard Chambers, Gerry Conner, Larry Schuetz, Al Walczak

This two-year program meets the needs of people preparing for employment in a variety of business occupations. Successful completion should afford the graduate an entry-level position and lead eventually to middle-management positions. Career opportunities include management positions in retail business, wholesale firms, specialty buying and selling, public utilities, insurance companies, financial institutions, hotel/restaurant/tourism outlets, real estate agencies, transportation firms and manufacturing industries.

During the second year of the program, students can choose electives and complete cooperative work experience credits in the following areas:

- Marketing and Sales • Financial Services
- Management • Personnel/Human Resources
- Hospitality/Tourism Management

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

(Continued on next page)

Associate of Applied Science in Business

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 77

Fall - First Year
BA 101 Intro to Business 4
≠BA 285 Business Relations/Global Economy (3)
≠MTH 65 Elementary Algebra ..... (4)
OA 121A Keyboarding I 2
≠WR 121 English Composition ..... (3)

Winter
BA 2.132 Total Quality Management 3
BA 110O Windows 2
BA 110S Spreadsheets 2
BA 206 Principles of Management 3
BA 215 Survey of Accounting 4
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3

Spring
BA 110D Data Base 2
BA 131 Business Productivity Software 2
BA 223 Principles of Marketing 3
EC 115 Outline of Economics 4
≠HST 150 Science & Culture Western Tradition(3)
≠SP 111 Fundamentals of Speech ..... (3)

Fall - Second Year
BA 2.518 Commercial Law 3
BA 203 International Business 3
BA 280 Cooperative Work Experience 3
WR 214 Business Communications 3
Electives (See program advisor) 3

Winter
BA 280 Cooperative Work Experience 3
HE 125 Occupational Safety 3
≠PE 231 Lifetime Wellness ..... (3)
Electives (See program advisor) 6

Spring
BA 280 Cooperative Work Experience 4
Electives (See program advisor) 12

96

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

BUSINESS COMPUTER SYSTEMS

Program Advisors/Faculty:
Jean Geiger, Peggy Weems, Kitson Yu

The Business Computer Systems program develops graduates able to successfully enter the job market in a variety of business computer-related fields. The student learns to apply training in accounting, business programming languages, various application programs and analysis skills to solving actual business problems. Students successfully completing the full two-year curriculum are granted an Associate of Applied Science degree in Business Computer Systems.

Students in this program spend a considerable amount of their time in the computer center working on terminals that interact with a mainframe and on microcomputers. The lab is well equipped with modern hardware and software. Students have access to a VAX mainframe and networked IBM-compatible personal computers for completing assignments. Some Macintosh computers also are available.

The program should be attractive to a wide range of students, including those who are part time and want only certain courses to upgrade computer-related skills and those who desire career changes. The courses are easily transferrable to four-year degree programs in Management Information Systems or related fields.

Associate of Applied Science in Business Computer Systems

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 74-77

Fall - First Year
BA 101 Intro to Business 4
BA 131 Business Productivity Software 2
CS 133V Beg. Programming-Visual BASIC 4
≠Health or PE ..... (1)
≠ MTH 111 College Algebra 1
(Four math credits apply toward General Ed. Requirements; one credit applies toward major.)
OA 121A Keyboarding I 2

Winter
BA 271 Information Technology in Business 3
CS 161 Intro to Computer Science I (C++) 4
≠ Health or PE ..... (1)
≠WR 121 English Composition ..... (3)
≠Science, Technology and Society ..... (3)

Spring
BA 110H Advanced DOS and Hard Disk Management 2
CS 145 Hardware/Software Selection & Support 3
CS 162 Intro to Computer Science II (C++) 4
≠Cultural Diversity/Global Awareness ..... (3)
WR 227 Tech Report Writing 3

Fall - Second Year
CS 244 Systems Analysis & Design 4
CS 279 Network Management (NOVELL) 3
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3
Electives (see list below) 4

❑ Accounting Option (Select one) 3-4
BA 2.530 Practical Accounting I 4
BA 211 Principles of Accounting I 3

Winter
CS 275 Database Systems: SQL & Oracle 4
Electives (see list below) 4
≠ Speech ..... (3)

❑ Accounting Option (Select one) 3-4
BA 2.531 Practical Accounting II 4
BA 212 Principles of Accounting II 3

Spring
CS 233V Adv. Programming-Visual BASIC 4
WE 1.280T CWE Data Processing 7
≠ Health or PE ..... (1)

❑ Accounting Option (Select one): 3-4
BA 2.532 Practical Accounting III 4
BA 213 Principles of Accounting III 3

93-96

Approved electives include:
BA 275 Business Quantitative Methods 4
CS 261 Data Structures 4
ENGR 201 Electrical Fundamentals 4
ENGR 271 Digital Logic Design 4
MTH 245 Math for Biological/Mgmt/Social Sci.. 4

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

BUSINESS TECHNOLOGY

Faculty:
Gail Dameworth, Jean Geiger, Mary Ann Lammers, Peggy Lind, Mary Lou McPheeters, Joyce Moreira, Carla Mundt, Sally Stouder, Sue Trautwein

See the individual program listings in the Professional Technical Programs section for Administrative Assistant, Administrative Medical Assistant, Legal Secretary, Medical Transcriptionist, Medical Office Specialist or Office Specialist.

CHEF TRAINING

Faculty:
Scott Anselm, Mark Whitehead

The Chef Training Program is an extensive "hands-on" and theory-based program preparing students for a career as a professional chef. In the two-year program, students gain skill in virtually all aspects of food preparation, including pantry, bakery, garde manger, grill, sandwich making, ala carte, quantity food, production, soups, sauces and meat preparation.

Students must be 18 years of age and have a high school diploma or a General Education Development (GED) certificate. Students should possess good basic math and reading skills. They should be able to work under pressure; demonstrate dexterity, physical stamina, concentration and good memory; and be able to work cooperatively with others.

Students should note that this is a complete and comprehensive program based on classical French and European cuisine. All aspects of Culinary Arts are covered including meats, fish and poultry. Handling and tasting these products is an integral part of many of our courses. If you have any medical, religious, moral or other reasons that may prevent this, please make an appointment with the program coordinator prior to registering.

In addition to regular college costs, students spend about $350 to purchase uniforms, knives, shoes, books and other equipment. Students should wait until after the first day of class to purchase these items.

LBCC has an outstanding food service facility with a wide variety of modern equipment. The students become skilled at working with virtually all types of standard kitchen equipment and tools. The kitchen provides service for the cafeteria, catering functions, a snack bar and a working sit-down restaurant. By working in this excellent learning environment, students learn to care for and maintain a full-service kitchen.

(Continued on next page)

Associate of Applied Science in Culinary Arts with a Chef Training Option

General Ed. Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 82

Fall - First year
CA 8.310 Culinary Arts Practicum I 7
CA 8.336 Food Service Safety & Sanitation 1
CA 8.337 Station, Tools & Culinary Techniques 3
CA 8.345 Service Techniques 1
*CA 8.354 Banquet & Buffet Lab E ..... (1)

Winter
CA 8.311 Culinary Arts Practicum II 8
CA 8.350 Banquet & Buffet Lab A 1
CA 8.373 Costing 1

Spring
CA 8.312 Culinary Arts Practicum III 8
CA 8.351 Banquet & Buffet Lab B 2

Fall - Second Year
CA 8.321 Adv. Cooking Management I 7
*CA 8.354 Banquet & Buffet Lab E ..... (1)
CA 8.368 Creating the Menu 2
CA 8.409 Meats 3
CA 8.419 Nutrition and Special Diets 1

Winter
CA 8.309 Purchasing for Chefs 2
CA 8.322 Adv. Cooking Management II 7
CA 8.341 Soups and Sauces 3
CA 8.352 Banquet & Buffet Lab C 1
CA 8.418 Beverage Operations 2

Spring
CA 8.323 Adv. Cooking Management III 7
CA 8.353 Banquet & Buffet Lab D 2
CA 8.355 Banquets & Buffet Planning 1
CA 8.414 Garde Manger 3
CA 8.421 International Cuisine 2

Other Required Courses
BA 101 Intro to Business 4
SD 101 Supervision Fundamentals 3
≠SP1.103 Occupational Speech Comm. ..... (3)

101

* Optional.
≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

CHILD AND FAMILY STUDIES

Program Contact:
Beth Hogeland

The Family Resources Department offers a one-year certificate in Child and Family Studies for students planning to enter the workforce after completing the certificate. Graduates may be assistant teachers of young children in child care centers, Head Start programs or public schools. They also may become registered family child care providers. Assistant teachers implement daily educational programs planned by the teacher; provide input for purchasing supplies and equipment; maintain the environment, supplies and equipment; maintain written records; report and record accidents; and communicate with the director and other staff about routines, family concerns, events, problems and maintenance needs.

Students earning the certificate will have completed 40-46 credit hours of a two-year Associate of Applied Science, Associate of Science or Associate of Arts (Oregon Transfer) degree in Child and Family Studies. For information about the degree programs, see the "Human Resources Learning Community" section of this catalog.

Students interested in completing an Associate of Applied Science degree and pursuing a career in childhood care and education have several educational options. One is to enter LBCC's two-year degree program in Child and Family Studies. Another option is to transfer to a professional technical program at a neighboring community college that also offers early childhood education; Chemeketa Community College has an established program.

One-Year Certificate in Child and Family Studies

General Education Requirements 16
ENG 104 Intro to Literature: Fiction 3
HDFS 201 Individual and Family Development *or* PSY 215 Intro to Developmental Psychology. 3
MTH 105 Intro to Contemporary Math *or* MTH 211 Fundamentals of Math I 4
SP 218 Interpersonal Communication 3
WR 121 English Composition 3

Program Requirements 24
ED 101 Observation and Guidance 3
ED 102 Practicum 3
ED 103 Advanced Practicum 6
ED 179 Literature, Science and Math 3
ED 282 Working with Children with Special Needs 3
HDFS 225 Child Development 3
HDFS 248 Learning Experiences with Children 3

Suggested Electives 6
The six credit hours must address one of these central themes: infant care, early childhood care and education, or school age care.

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COLLISION REPAIR TECHNOLOGY

The Collision Repair program is designed to develop the skills and knowledge necessary in vehicle collision repair and refinishing. The program provides variable credit, hands-on instruction in ar. industry-type environment.

Block classes are held Monday through Thursday. Additional technical course work is scheduled on Friday.

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 $300 for books and supplies, students should expect to spend $300 to $600 for a personal set of tools.

The Collision Repair curriculum leads to a one-year certificate.

One-Year Certificate in Collision Repair Technology

Course sequence required for students beginning Fall Term

Major Requirements 52

Fall - First Year
CR 3.511 Auto Collision Basics 12
MTH 20 Basic Math 4
WD 4.151 Welding I 2

Winter
CR 3.512 Auto Collision Procedures 12
HE 125 Occupational Safety 3
WD 4.152 Welding II 2

Spring
CR 3.513 Shop Procedures 12
CR 3.514 Auto Body Electrical Reconstruction 2
WR 115 Intro to Writing 3

52

COMPUTER PROGRAMMING

See Business Computer Systems. Also see Computer Science in the College Transfer section.

COMPUTER USER SUPPORT

Program Advisor:
Peggy Weems

Computer User Support classes prepare students for entry-level positions that provide technical support, assistance, troubleshooting, training and documentation to end users. Common entry-level job titles include End-user Computer Support Specialist, Help Desk Assistant, Computer Lab Assistant, Computer Services Representative, Network Support Assistant, Software Trainer and Documentation Specialist. Students who successfully complete the full two-year curriculum are granted an Associate of Applied Science degree in Computer User Support.

Computer facilities for students in this program are provided by the Forum Computer Lab and the Business Management Department. The lab is well equipped with modern hardware and software. Students have access to networked IBM-compatible personal computers for completing assignments.

(Continued on next page)

Associate of Applied Science in Computer User Support

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 72-73

Fall - First Year
BA 110D Data Base 2
BA 110O Windows 2
BA 110S Spreadsheets 2
BA 131 Business Productivity Software 2

❑ Accounting Option (Select one): 3-4
BA 2.530 Practical Accounting I
BA 211 Principles of Accounting I
≠Health or PE ..... (1)
≠Science, Technology and Society ..... (3)

Winter
BA 271 Information Technology in Business 3
CS 133V Beg. Programming-Visual BASIC 4
≠Health or PE ..... (1)
≠MTH 95 Intermediate Algebra (or higher) ..... (4)
≠WR 121 English Composition ..... (3)

Spring
BA 110H Advanced DOS/Hard Disk Management . 2
BA 210S Advanced Spreadsheets 2
≠BA 285 Business Relations in a Global Economy...(3)
CS 145 Hardware/Software Selection/Support 3
WR 227 Technical report Writing 3
≠Speech ..... (3)

Fall-Second Year
CS 227H Systems Support: Hardware 2
CS 244 Systems Analysis and Design 4
CS 279 Newtwork Management (Novell) 3
EE Microcomputer Hardware 4
≠Health or PE ..... (1)

Winter
CS 199 Special Studies: Consulting 2
CS 225 End User Computing Support 4
CS 227N Systems Support: Network and Operating Systems 2
CS 282 Expert Systems 4
Business electives 3

Spring
CS 226 Advanced Computer User Support 4
CS 227S Systems Support: Computer Systems .. 2
CS 280 CWE Computer User Support 3
SD 103 Supervision: Communications 3

❑ Advanced programming option (Select one): . 5
CS 162 Intro to Computer Science II (C++)
CS 233V Advanced Programming-Visual BASIC

91-92

≠Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

CRAFTS & TRADES

See Apprenticeship Program.

CRIMINAL JUSTICE

Faculty:
Jerald Phillips

The primary objective of the Criminal Justice program is providing students with a balanced inquiry into the complex process of administering justice in society. A secondary objective is to help students prepare for entry into, and advancement within, a variety of public service careers in the criminal justice field.

Criminal justice majors are presented with an opportunity to gain a basic understanding of criminal behavior theory, of historical and current criminal justice processes, and how to utilize 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.

For more information about this program, see the "Human Resources Learning Community" section of this catalog.

CULINARY ARTS

See individual program listings under Chef Training and Restaurant and Catering Management.

DATA PROCESSING

See Business Computer Systems. Also see Computer Science in the College Transfer section.

DENTAL ASSISTANT

Faculty:
Cathy Taylor

The one-year Dental Assistant program is accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by The United States Department of Education.

The program prepares students for chairside assisting, office laboratory activities and front office procedures. Clinical experience is held in two fully equipped treatment rooms in the on-campus Dental Clinic. Lab areas include 20 individual stations equipped with mannequins and rotary handpieces to ensure quality hands-on experience. Three fully equipped radiology rooms are available for radiological experience. Summer office practicums are held with 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 "Special Admissions Programs" in the "Entering the College" section of this catalog.)

Continuation in the program is contingent on satisfactory completion of all course work with a minimum "C" grade in each required course, to be taken in the specified sequence. Permission to continue in the Dental Assistant program with an incomplete in any required course is considered on an individual basis. Students unable to meet the required competency level for the program may be advised of other alternatives to meet their goal. Petitions to complete the Dental Assistant program at a later time are reviewed by the program coordinator and the Health Occupations Department chair.

The Dental Assistant curriculum leads to a one-year certificate; however, courses in the Dental Assistant Program fulfill some requirements for the Associate of General Studies degree. Students successfully completing Radiology I, II and III are eligible to take the Dental Radiation Health and Safety exam, administered by the Dental Assisting National Board, Inc. (DANB), and are awarded the state of Oregon Expanded Functions Dental Assistant (EFDA) certificate, after receiving their certificate in Radiology. Graduates also are eligible to take the national Certified Dental Assistant (CDA) examination and the Infection Control examination, also administered by the DANB.

One-Year Certificate in Dental Assistant

Major Requirements 62

Fall
BI 4.220 Integrated Basic Science I 4
DA 5.461 Dental Radiology I 2
DA 5.491 Dental Office Records 1
DA 5.494 Clinical Practice I 4
DA 5.497 Dental Health Education I 1
DA 5.500 Oral Anatomy & Histology 2
DA 5.501 Dental Infection Control 1
HE 261 CPR 1
OA 201B Beginning WordPerfect w/Windows .. 1

Winter
BI 4.221 Integrated Basic Science II 3
DA 5.462 Dental Radiology II 2
DA 5.484 Dental Materials I 3
DA 5.488 Expanded Duties I 2
DA 5.495 Clinical Practice II 4
DA 5.498 Dental Health Education II 1
HE 112 Emergency First Aid 1
SP 1.103 Occupational Speech 3

Spring
DA 5.453 Dental Pathology 2
DA 5.463 Dental Radiology III 1
DA 5.485 Dental Materials II 3
DA 5.489 Expanded Duties II 2
DA 5.492 Dental Office Emergencies 1
DA 5.496 Clinical Practice III 4
DA 5.499 Dental Health Education III 1
PSY 101 Psychology & Human Relations 3

Summer
DA 5.510 Office Practicum 8
DA 5.515 Office Practicum Seminar 1

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(Continued on next page)

Pre-professional Program

Linn-Benton Community College offers a pre-professional program in dental hygiene in preparation for transfer to the Oregon Institute of Technology Hygiene program. Students should take the following pre-dental hygiene courses to prepare for either OIT's associate or bachelor degree program.

BI 231, 232, 233 Human Anatomy & Physiology
BI 234 Microbiology
CH 121, 122, 123 College Chemistry
MTH 95 Intermediate Algebra
PSY 200, 205 Psychology as a Natural Science
WR 121, 122 English Composition
Introductory Computer Science Course

EDUCATIONAL ASSISTANT

Program Contacts:
May Garland, Beth Hogeland, Gina Vee

The one-year certificate in Educational Assisting is designed to prepare educational assistants to help teachers maximize learning for all students now and in the 21st century. Assistant teachers typically implement daily educational programs planned with the teacher; maintain the environment, supplies, and equipment; maintain written records; and participate in staff and team meetings. Graduates may work with students in grades K-12 and with students with learning disabilities and other special needs.

Full-time students may complete this program in one year. Currently employed educational assistants who are upgrading their skills can complete the program in two years by taking courses in the evenings and summer.

Students who earn the certificate will have completed course work required in the two-year Associate of Arts (AA) Oregon Transfer, Associate of Science (AS) or Associate of Applied Science (AAS) degrees in Child and Family Studies and in Education. Students interested in working with children eight years of age and younger are encouraged to work with an advisor in Child and Family Studies. Students interested in working with children in grades 4 - 12 are encouraged to work with an advisor in Education. Students pursuing an AA(OT) or an AS in Education may complete the Educational Assistant certificate as part of their program of studies. For information about these degree programs, see the "Human Resources Learning Community" section of this catalog.

One-Year Certificate in Educational Assistant

General Education 16
ENG 104 Intro to Literature: Fiction 3
HDFS 201 Individual and Family Development *or*
PSY 215 Intro to Developmental Psychology . 3
MTH 105 Intro to Contemporary Math *or*
MTH 211 Fundamentals of Math I 4
SP 218 Interpersonal Communication 3
WR 121 English Composition. 3

Program Requirements 21
ED 101 Observation and Guidance.. 3
ED 102 Practicum. 3
ED 103 Advanced Practicum 6
HDFS 248 Learning Experience with Children .. 3
PSY 212 Psychology of Learning 3
ED 282 Working the Children with Special Needs .. 3

Suggested Electives 9
The nine credit hours must address one of these central themes: 21st century schools, working with children with special needs or technology in the classroom.

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ELECTRONIC IMAGING AND PREPRESS TECHNOLOGY

Faculty:
Dennis Bechtel

The exciting field of graphic communications offers countless opportunities in graphic-related occupations in a wide variety of design and production environments.

The Electronic Imaging and Prepress Technology Program is dedicated to training students for entry-level positions in the printing and publishing fields. The curriculum prepares students for employment with advertising agencies, service bureaus, prepress trade houses and printing/publishing firms. Graduates carry with them an extensive, professional portfolio. The program also is committed to upgrading the skills of those already employed in the industry through evening desktop publishing workshops that offer training in the latest industry-standard imaging software applications.

The curriculum provides learning experiences consistent with the needs of potential employers in the industry. The equipment available for use is similar to that in the offices of printers, designers and the print media throughout the country. Projects in design and imaging provide opportunities for students to deal with clients and to accept responsibility for deadlines and quality control. Cooperative Work Experience (CWE) may offer on-the-job learning experiences.

The graphics facilities are well equipped, are handicapped accessible and include a printing technology classroom, a Macintosh-equipped electronic imaging laboratory, and graphic design and fine art studios. Completely equipped darkroom facilities support classes in photography. Display galleries provide space for presenting student work and the work of other artists and designers.

Students in the program should anticipate expenses of $400 per term during the first year and $600 each term during the second year for books, tools, supplies and materials.

Courses are highly sequential. Only those students who follow the recommended sequences for the degree may be assured of completing the program in two years. Students entering at times other than Fall Term may find it necessary to take more than six terms to complete degree requirements.

The Electronic Imaging and Prepress Technology curriculum leads to an Associate of Applied Science degree. (Also see Graphic Design.)

Associate of Applied Science in Electronic Imaging and Prepress Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

ART 102 Understanding Art is required.

Program Requirements 71

Fall - First Year
ART 115 Basic Design I: Composition 4
ART 131 Drawing I 4
GA 3.150 Intro to Printing & Graphic Arts 3
GA 3.151 Intro to Electronic Imaging 3
GA 3.152 Art and Copy Preparation 3

Winter
ART 116 Basic Design II: Color 4
GA 3.153 Electronic Illustration I 3
GA 3.156 Electronic Page Layout I 3
≠ MTH 61 Survey of Math Fundamentals ..... (3)

Spring
GA 3.157 Electronic Image Manipulation I 3
GA 3.158 Electronic Prepress I 3
≠ Health and PE ..... (3)
≠ SP 1.103 Occupational Speech Communication . (3)
≠ WR 121 English Composition ..... (3)

Fall - Second Year
≠ ART 102 Understanding Art ..... (3)
GA 3.154 Electronic Illustration II 3
GA 3.159 Electronic Prepress II 4
GA 3.160 Electronic Page Layout II 3
≠ Science, Technology and Society ..... (3)

Winter
GA 3.161 Electronic Image Manipulation II 3
GA 3.162 Multimedia I 3
GA 3.164 Electronic Design Principles I 4
Cooperative Work Experience *or*
Electives 4

Spring
GA 3.163 Multimedia II 3
GA 3.165 Electronic Design Principles II 4
GA 3.172 Electronic Project Management 4
≠ MTH 64 Business Applications of Math
Fundamentals ..... (1)
Cooperative Work Experience *or*
Elective 3

90

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

ELECTRONICS ENGINEERING TECHNOLOGY

Faculty:
Jeffrey Franzone, Kent Hansen, Sam Hoskinson, John Sweet, Dale Trautman

The Electronics Engineering Technology Department offers a two-year program that prepares students for occupations as electronics technicians, maintenance technicians or for further education. Course work is approximately half theoretical and half practical in content. Department courses and instructional techniques are continually reviewed to assure that both student and industry needs are met.

The department has three labs with a combined area of more than 5,500 square feet. The labs are equipped with industrial-quality instruments and work stations for the students.

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, Micron Technology, Inc., GE Medical Systems and Oregon Digital.

Other options available include further education at the Oregon Institute of Technology. An agreement with OIT allows an electronics graduate to enter OIT and pursue the bachelor of science in Electronic Engineering Technology (BSEET), which provides additional training for an engineering technologist-type assignment in industry. This degree may be pursued at Klamath Falls or at the Portland satellite campus of OIT.

Students entering LBCC's EET program must be prepared to enroll in MTH 111T College Algebra: Technical 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. Students are expected to achieve a minimum "C" grade in each required sequential electronics course.

The Electronics Engineering curriculum leads to an Associate of Applied Science degree.

Associate of Applied Science in Electronics Engineering Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

SP 1.103 Occupational Speech, WR 121T Composition: Technical and HE 125 Occupational Safety are required.

Major Requirements 86

Fall - First Year
EE 6.320 Fundamentals for Electronics 4
EE 6.380 EET Mechanic Skills I 3
≠MTH 111T College Algebra: Technical 1
(Four math credits apply toward general ed. requirements, 1 credit applies toward major.)
SS 1.150 Techniques of Studying 1

Winter
EE 6.321 DC/AC Circuit Analysis 6
EE 6.328 Pneumatics for Technicians 3
MTH 112T College Trigonometry: Technical 5

Spring
EE 6.322 Basic Semiconductors 6
EE 6.338 Electric Motors and Controls 3
EE 6.370 Technician Computer Practices 4
WR 227 Technical Report Writing 3

Fall - Second Year
EE 6.323 Analog Circuits 6
EE 6.346 Digital Circuits I 5
PH 201 General Physics 5

Winter
EE 6.324 Integrated Systems I 6
EE 6.347 Digital Circuits II 5
PH 202 General Physics 5

Spring
EE 6.325 Integrated Systems II 6
EE 6.333 Electromechanical Systems 4
EE 6.349 Basic Microprocessors 5

105

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

EMERGENCY MEDICAL TECHNICIAN

Faculty:
Susan Shulters

The Emergency Medical Technician (EMT) Certificate Program provides opportunities for both the rural volunteer and career EMT. LBCC provides training that leads to Oregon state certification as an EMT Basic or an EMT Intermediate.

Currently, the college does not provide paramedic training. We do provide, however, a path for the career EMT who wants to become certified at the paramedic level. All first-year courses required for the Associate Degree in Emergency Medical Services are offered at LBCC. Upon completion, the student is eligible for a one-year certificate in EMT. Those planning to continue to the paramedic level must transfer to another participating paramedic training institution to receive their Associate Degree in EMS.

The EMT certificate program is accredited by the Oregon Health Division's EMS and Trauma Systems Section and the Oregon Department of Education. The curriculum utilized is the National Department of Transportation (USDOT) National Standard Curriculum, 1994, and the Oregon EMT Intermediate Curriculum, second edition.

The EMT program utilizes qualified paramedic instructors for its course content. In addition, we maintain agreements with local fire departments and hospital emergency rooms for field experience and clinical rotation.

Special Requirements
The EMT certificate program is a special admission program that accepts students only one time each year. Those planning to continue to the paramedic level will need to apply in spring term for classes beginning fall term. Because the class is competitive and seating is limited, students are encouraged to apply early for acceptance into the program. In addition, because of the high physical demand and potential risk of exposure to infectious disease, all participants are required to complete and provide proof of immunizations and other health screening. Contact the EMT Department or Admissions for additional information.

On-the-Job Training
EMT students have the opportunity to work in field and clinical settings. Although not required for admission, all students are strongly encouraged to become affiliated with their local fire department or ambulance agency to gain additional skills and experience. Cooperative Work Experience is available for all students in area fire departments and EMT programs.

Career Opportunities
EMTs work in many different areas and in many different roles. Whether they are involved with public paid or volunteer fire departments or work for privately owned businesses, competent EMTs are always in demand. Currently, paid positions are competitive with wages ranging from entry-level minimum wage to EMT-paramedic positions starting at $2,500 per month.

One-Year Certificate in Emergency Medical Technician

Major Requirements 53

Fall
BI 231 Human Anatomy and Physiology 4
EM 5.801 Intro to EMS 3
EM 5.810 EMT Basic: Part A 7
MTH 95 Intermediate Algebra 4

Winter
AH 5.630 Medical Terminology I 3
BI 232 Human Anatomy and Physiology 4
EM 5.811 EMT Basic: Part B 3
EM 5.820 Emergency Communication and Patient Transportation 3
WE 1.280 CWE EMT 3
WR 121 English Composition 3

Spring
BI 233 Human Anatomy and Physiology 4
EM 5.825 EMT Rescue 3
EM 5.830 Crisis Intervention 3
PSY 101 Psychology and Human Relations 3
WE 1.280 CWE EMT 3

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ENGINEERING GRAPHICS TECHNOLOGY

Faculty:
David Kidd, Tony Shires

The two-year Engineering Graphics 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, while the second year provides more specific coverage of major occupational areas, such as civil, mechanical, electronic, architectural and technical illustration.

All engineering graphics students planning to complete the program within a two-year period are advised, as minimal requirements, to have a ninth-grade reading level and be prepared to register for MTH 97 Practical Geometry. Mathematics are important in this program. Students are required to complete MTH 111T College Algebra: Technical and MTH 112T Trigonometry: Technical as well as several engineering courses that require math skills. Students may take general education courses at nights, but most technical courses are offered only during the day. Students may attend on a part-time basis or start in the fall with little difficulty. Students starting winter, spring or summer terms may encounter some difficult in scheduling sequence courses with prerequisites. Many of the technical courses must be taken in a sequential order.

Engineering Graphics students are expected to achieve a minimum "C" grade in each required course. Required courses are to be taken in the sequence specified in the Engineering Graphics curriculum.

Students also are required to purchase basic drafting equipment at an approximate cost of $100.

Classes are held in well-equipped classrooms and laboratories. Computer Aided Drafting work stations (Pentium 90 MHz or better) are used in all courses. Current industry-standard versions of Auto CAD and CADKEY are utilized in all engineering graphics classes.

Associate of Applied Science in Engineering Graphics Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 84

Fall - First Year

ART 131 Drawing I	4
CS 2.578 Intro to the Internet	2
EE 6.336 Technical Electricity	3
EG 4.411 Drafting I: CAD Basics	4
≠MTH 97 Practical Geometry	(4)

Winter

EG 4.421 Drafting II: Applied CAD	4
EG 4.423 Architectural Design I	4
MTH 111T College Algebra: Technical	5
≠WR 121 English Composition	(3)
≠Perspectives Course	(3)

Spring

EG 4.431 Drafting III: 3-D CAD	4
EG 4.433 Production Methods	4
MTH 112T Trigonometry: Technical	5
≠SP 111 Fundamentals of Speech	(3)

Fall - Second Year

CEM 263 Plane Surveying	3
EG 4.441 Advanced Drafting I: Surfaces	4
EG 4.443 Schematics	4
ME 4.122 Strength of Materials	3
≠ Perspectives Course	(3)

Winter

CS 279 Network Management	3
EG 4.451 Advanced Drafting II: Solids	4
EG 4.453 Customizing CAD for Productivity	4
EG 4.455 Civil Drafting I	3
WR 227 Technical Report Writing	3

Spring

EG 4.461 Advanced Drafting III: Rendering	4
EG 4.463 Architectural Design II	4
EG 4.465 Civil Drafting II	3
≠HE 125 Occupational Safety	(3)
CWE 1.280R Technical Projects/CWE	3

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≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

FAMILY RESOURCES

The Family Resources Department offers an Associate of Applied Science degree in Child and Family Studies that is designed for students who plan to enter the workforce upon completing the degree. Graduates may work with children and families in a variety of settings, including childhood care and education and social services. Teachers of young children may work in child care centers, family child care homes, Head Start programs, parent cooperatives or public schools. They plan and evaluate developmentally appropriate learning experiences in music, art, science, math and language arts. They also design indoor and outdoor environments, keep children's records and confer with parents. Graduates also may work as program and social service aides. With experience, they can become case managers and social service workers. Graduates may elect to complete an additional fourteen hours of general education courses and earn an Associate of Science or an Associate of Arts Oregon Transfer degree. For specific program information, see the "Human Resources Learning Community" section of this catalog.

The department also offers certificates in Child and Family Studies and Educational Assistant. These programs are listed alphabetically in this section of the catalog.

In addition, a number of professional technical courses are offered for people who care for and work with children: parent education, work and family, and child care provide training. Please see the "Family Resources Department" in the "Community Outreach" section of this catalog.

FARRIER SCIENCE

Faculty:
Larry Bewley

Dates for Farrier School terms are:

Fall Term 1996: Sept. 9-Dec. 12*
Winter Term 1997: Jan. 6-April 10*
Spring Term 1997: April 21-July 24

The 14-week 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. Advanced instruction is available for those who have received a certificate in Farrier Science.

The program is located in Manchester Arena on the Oregon State University campus. The Farrier Science program maintains an active association with Oregon State University Animal Science and Veterinary Medicine departments. Instruction is provided in one of the newest and best-equipped farrier training facilities in the western United States. Students also participate in field trips to shoe horses in realistic work settings. Class sessions last from 8 a.m. to 4 p.m. daily, Monday through Friday. Admission is on a first-come, first-served basis and early application is advised.

In addition to books and supplies, students should expect to spend about $800 - $850 on a personal set of tools.

Two tuition grants of $100 each are available each term for Farrier School students. Applicants who want to be considered for a grant should address a letter to the attention of: Associate Dean, Science and Industry Division and attach their admission application. Grants are awarded based on individual needs of students and are used to pay $100 of their tuition.

*Depending on space availability, a limited number of new students may be accepted to the program during the mid-point of the fall and winter terms. Applicants for these dates

should clearly state their request for a mid-term starting date on their admission application. Mid-point starting and ending dates are determined on an individual-term basis.

The Farrier Science curriculum leads to a certificate.

Certificate in Farrier Science

Major Requirements 23
BA 2.123 Entrepreneurship for the Farrier 1
FA 8.200 Farrier Science 22

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GRAPHIC ARTS

Faculty:
John Aikman, Dennis Bechtel

The exciting field of graphic communications offers countless opportunities in graphic-related occupations in a wide variety of design and production environments.

The Graphic Arts Program is dedicated to training students for entry-level positions in the design, printing and publishing fields. The curriculum prepares students for employment with advertising agencies and in-house graphic design departments as graphic designers and/or illustrators or as self-employed free-lance graphic artists.

Emphasizing an integrated approach in which the fine arts and graphic arts faculty work as a team, students are immersed in both the creative demands of problem solving and the technical demands involved in producing the finished product. Graduates carry with them an extensive, professional portfolio.

The curriculum provides learning experiences consistent with the needs of potential employers in the industry. The equipment available for use is similar to that in the offices of printers, designers, illustrators and the print media throughout the country. Projects in design and imaging provide opportunities for students to deal with clients and to accept responsibility for deadlines and quality control. Cooperative Work Experience (CWE) may offer on-the-job learning experiences.

The graphics facilities are well equipped, are handicapped accessible and include a printing technology classroom, a Macintosh-equipped electronic imaging laboratory, and graphic design and fine art studios. Completely equipped darkroom facilities support classes in photography. Display galleries provide space for presenting student work and the work of other artists and designers.

Students in the program should anticipate expenses of $400 per term during the first year and $600 each term during the second year for books, tools, supplies and materials.

Courses are highly sequential. Only those students who follow the recommended sequences for the degree may be assured of completing the program in two years. Students entering at times other than Fall Term may find it necessary to take more than six terms to complete degree requirements.

The Graphic Arts curriculum leads to an Associate of Applied Science degree. (Also see the Electronic Imaging and Prepress Technology degree program in this section of the catalog.)

Associate of Applied Science in Graphic Arts

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

ART 206 Survey of Art History is required.

Program Requirements 89
AA 221 Graphic Design I 4
AA 222 Graphic Design II 4
AA 223 Graphic Design III 4
AA 224 Typographical Design I 4
AA 225 Packaging and 3-D Design 4
AA 226 Typographical Design II 4
AA 228 Portfolio Prep. and Prof. Practices 3
AA 237, 238, 239 Illustration I, II, III 12
ART 115 Basic Design: Composition 4
ART 116 Basic Design: Color 4
ART 131, 132, 133 Drawing I, II, III 12
ART 204, 205 Survey of Art History 6
GA 3.150 Intro to Printing and Graphic Arts 3
GA 3.151 Intro to Electronic Imaging 3
GA 3.152 Art and Copy Preparation 3
GA 3.153 Electronic Illustration I 3
GA 3.156 Electronic Page Layout I 3
GA 3.157 Electronic Image Manipulation I 3
GA 3.158 Electronic Prepress I 3
PHO 261 Intro to Photography 3

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HEAVY EQUIPMENT MECHANICS/DIESEL

Faculty:
Mike Henich, Allan Jackson, Carl Reeder, Bryan Schiedler

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 technicians repair and maintain diesel engines, which power railroad trains; ships; generators; and construction, highway and farm equipment. To become a diesel technician, 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.

The Heavy Equipment Mechanics/Diesel program supports student participation in Vocational Industrial Clubs of America (VICA) and student competition in the Untied States Skills Olympics (USSO). Through student involvement in fund-raising projects, funds are made available to pay students cost of travel, lodging and entry fees in the annual state skills contest. Any student who earns a first place at state level also will have expenses paid to participate in the national competition.

In addition to the usual books and supplies, students should expect to spend about $550 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 technicians. Electric power plants, local industries, and both state and federal government have a great need for trained technicians. Starting salaries range from $1,300 to $2,500 per month.

Mechanical Processes I, II and III are required for all Heavy Equipment Mechanics/Diesel majors and must be taken concurrently with their major field of study. Course content may be challenged for full or partial credit. Students also can improve their skills through laboratory experience in HV 3.131 Service and Repair Practices.

The Heavy Equipment Mechanics/Diesel curriculums lead to an Associate of Applied Science degree or a two-year certificate.

Associate of Applied Science in Heavy Equipment Mechanics/Diesel

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 81

Fall - First Year
≠HE 125 Occupational Safety ..... (3)
HV 3.295 Power Train Systems 10
*HV 3. 307 Mechanical Processes I 2
WD 4.151 Welding I 2

Winter
HV 3.296 Steering/Suspension/Braking Systems 10
*HV 3.308 Mechanical Processes II 2
≠MTH 61 Survey of Math Fundamentals ..... (3)
≠MTH 63 Industrial Shop Math ..... (1)
WD 4.152 Welding II 2
≠WR 121 English Composition ..... (3)

Spring
HV 3.131 HE Service and Repair Pract or CWE . 1
HV 3.297 Electrical and Fuel Systems 10
*HV 3.309 Mechanical Processes III 2

Fall - Second Year
*HV 3.128 Pneumatic Braking and Fuel Injection Systems 10
*HV 3.303 Mobile A/C and Comfort Systems I . 3

Winter
HV 3.129 HE/Diesel Engines 10
HV 3.131 HE Service and Repair Practices or CWE 1
*HV 3.134 Basic Hydraulics 3
≠Cultural Diversity & Global Awareness ..... (3)

Spring
*HV 3.130 HE/Diesel Tune-Up 10
HV 3.131 HE Service and Repair Practices *or* CWE 1
*HV 3.132 Advanced Mobile Hydraulics 2
≠ *SP 1.103 Occupational Speech ..... (3)
≠Science, Technology & Society ..... (3)

100

* Courses marked with an asterisk are offered that term only.
≠ Applies toward General Ed. Requirements.
Credits not included in Major Requirements total.

(Continued on next page)

Two-Year Certificate in Heavy Equipment Mechanics/Diesel

Major Requirements 94

Fall - First Year
HE 125 Occupational Safety 3
HV 3.295 Power Train Systems 10
*HV 3.307 Mechanical Processes I 2
WD 4.151 Welding I 2

Winter
HV 3.296 Steering/ Suspension/Braking Systems .. 10
*HV 3.308 Mechanical Processes II 2
MTH 61 Survey of Math Fundamentals 3
MTH 64 Business Applications: Math Fundamentals 1
WD 4.152 Welding II 2

Spring
HE 261 CPR 1
HV 3.297 Electrical and Fuel Systems 10
*HV 3.309 Mechanical Processes III 2
WR 115 Intro to Writing 3

Fall - Second Year
*HV 3.128 Pneumatic Braking and Fuel Injection Systems 10
*HV 3.303 Mobile A/C and Comfort Systems I . 3

Winter
HV 3.129 HE/Diesel Engines 10
HV 3.131 Service and Repair Practices *or* CWE 1
*HV 3.134 Basic Hydraulics 3

Spring
HE 112 Emergency First Aid 1
*HV 3.130 HE/Diesel Tune-Up 10
*HV 3.132 Advanced Mobile Hydraulics 2
*SP 1.103 Occupational Speech 3

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HV 3.131 HE Service & Repair Practices is recommended every term.

*Courses marked with an asterisk are offered that term only

HORTICULTURE

Faculty:
Gregory Paulson

The Horticulture curriculums are based on necessary competencies identified by industry and reviewed by advisory committees. Students learn facts and skills necessary for entry-level technical employment.

Neither the certificate nor the Associate of Applied Science degree programs have official prerequisites. Students do take a variety of science-oriented courses, however, and are expected to have basic mathematical skills. In order to graduate with an AAS degree, each student needs to complete a four-credit algebra course while at LBCC.

All of the Horticulture program classes are offered during the day and part-time enrollment is common. Many students start in the middle of the academic year, but two full years are required to complete the AAS degree. If students attend part time, they will need to attend longer to complete the program. While not every course listed in the Horticulture program must be taken in the order shown in the curriculum, some courses are offered only every other year. Consequently, students need to take those particular courses in the order they are offered.

Instructional facilities, including a greenhouse, labs, vegetable and ornamental gardens, a land lab and the campus grounds, are used for demonstrations, skill building and evaluation.

The Horticulture curriculums lead to an Associate of Applied Science degree or a One-Year Certificate.

Associate of Applied Science in Horticulture

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree

Major Requirements 71

Fall - First Year
AG 8.125 Soils I 3
AG 8.165 Plant Science 4
AG 111 Computers in Agriculture 3
HT 8.140 Landscape Maintenance 3

Winter
AG 8.126 Soils II 3
AG 8.138 Irrigation Systems 3
HT 8.102 Career Exploration: Horticulture 1
HT 8.135 Turf Management I 3

Spring
CSS 105 Soils and Man 3
HT 8.136 Turf Management II 3
HT 8.168 Plant Identification 3

Fall - Second Year
AG 8.131 Pest Management 3
HT 8.169 Tree Identification 3
*Laboratory Science 4
SPN 101 First-Year Spanish I 4

Winter
AG 8.130 Agricultural Chemicals 4
HT 8.132 Arboriculture I 3
HT 8.141 Landscape Planning 3
*Laboratory Science 4

Spring
≠HE 252 First Aid ..... (3)
HE 261 CPR 1
HT 8.133 Arboriculture II 3
HT 8.137 Plant Propagation 4
CWE Horticulture 3

Electives 8
Additional courses or approved CWE.
Recommended: Business, math, science, industrial, communication skills, drafting, graphics, Spanish.

* Biological or Physical Science.
≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

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One-Year Certificate in Horticulture

Major Requirements 36

Fall
AG 8.125 Soils I 3
AG 8.165 Plant Science 4
AG 111 Computers in Agriculture 3
HT 8.140 Landscape Maintenance (offered alternate years) *or* HT 8.169 Tree Identification (offered alternate years) 3

Winter
AG 8.126 Soils II 3
AG 8.138 Irrigation Systems 3
HT 8.102 Career Exploration: Horticulture 1
HT 8.132 Arboriculture I (offered alternate years) *or* HT 8.135 Turf Management I (offered alternate years) 3

Spring
CSS 105 Soils and Man 3
HT 8.133 Arboriculture II (offered alternate years) *or* HT 8.136 Turf Management II (offered alternate years) 3
HT 8.137 Plant Propagation 4
HT 8.168 Plant Identification 3

Math and writing courses at appropriate level (based on Placement Test scores).....7

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LEGAL SECRETARY

Program Advisor:
Sue Trautwein

Graduates of the Legal Secretary program may expect to work for attorneys or large corporations that have legal departments. Course work emphasizes legal terminology; preparing legal documents; and developing good word processing, English and communication skills. As a part of the program, students work for 240 hours in a legal-related office. The Legal Secretary program represents exciting and challenging opportunities for secretaries. Students training in this field can easily enter other secretarial areas as well. Skills classes are taught in self-paced laboratory classrooms. New technology is introduced both through concepts courses and through hands-on experience with microcomputers and word processing.

The Legal Secretary program is designed to be completed in two years. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the college Placement Test: WR 115 Intro to Writing and MTH 60 Intro to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, we recommend that it be taken summer term prior to enrolling in the regular degree program. Pre-training might include some or all of the following courses: *OA 121A Keyboarding I (2 credits), RD 1.175 or RD 1.176 Reading Improvement I or II* (3 credits), *EN 1.133 The Write Course* (4 credits), *MTH 20 Basic Mathematics* (4 credits).

Students should work with an advisor to interpret the test scores and get help in planning their program.

Associate of Applied Science in Legal Secretary

General Education Requirements..... 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 75

Fall - First Year
BA 2.518 Commercial Law 3
BA 110O Windows 2
OA 2.500B Business Orientation: Legal 1
OA 2.515 Business Math with Calculators 2
OA 2.652 Filing 1
OA 123A Typing: Skill Building 2
OA 201A Formatting and WordPerfect 5.1 2
≠WR 121 English Composition ..... (3)

Winter
OA 2.588 Editing Skills for Info Processing 3
OA 2.675 Legal Term. and Office Proced. I 3
OA 2.683 Computerized Records Management ... 3
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3
≠PE 231 Lifetime Wellness ..... (3)

Spring
OA 2.527 Transcribing Machines I 3
OA 2.551 Office Communications 3
OA 2.616 Job Success Skills: Legal 1
OA 2.653 Automated Business Systems 3
OA 2.676 Legal Term. and Office Proced. II ... 3
OA 203 Advanced Word Processing 3

Fall - Second year
BA 2.530 Practical Accounting I 4
OA 2.647 High Performance Office 3
OA 2.662 Legal Transcription 3
OA 2.677 Legal Term and Office Proced. III 3
*OA 124 Typing: Speed and Accuracy Dev. 3

Winter
BA 2.684 Computerized Accounting 3
BA 110S Spreadsheets 2
≠OA 2.557 Adv. Bus. Math Applications ..... (1)
OA 2.613 On-the-Job Training 4
OA 2.656L Info Processing Practicum: Legal 2
OA 2.682 Desktop Publishing 3

Spring
≠BA 285 Business Relations/Global Economy (3)
≠MTH 61 Survey of Math Fundamentals ..... (3)
OA 2.613 On-the-Job Training 4
≠SP 218 Interpersonal Communication ..... (3)
≠Science, Technology and Society Elective .... (3)

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* May be waived through testing at 60 wpm on a 5-minute timing with five or fewer errors.

**HE 250, HE 252 and/or Multimedia First Aid and/or PE Activity courses may be substituted for Lifetime Wellness.

≠Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

MACHINE TOOL TECHNOLOGY

Faculty:
Michael Burke, Stephen Etringer

The Machine Tool Technology curriculum is designed to develop skills in a wide variety of machining processes. These include the operation of the drill press, engine lathe, vertical and horizontal milling machine, C/N/C mills and lathes, surface and cylindrical grinders, tool and cutter grinders and other machines associated with the machinist's trade.

Students learn the basics of transforming raw material into finished parts. They study the principles of blueprint interpretation, material selection, operational sequence, machine operation, metal removal rates, deburring and final dimensional 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 are emphasized continually.

The lab facilities and machine 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 is optional. It is recommended, however, that the student have mechanical interest or some demonstrated aptitude toward manipulative skills.

The Machine Tool Technology program supports student participation in Vocational Industrial Clubs of America (VICA) and the Society of Manufacturing Engineers (SME). These associations provide for professional development and skills competition.

The Machine Tool Technology curriculums lead to an Associate of Applied Science degree or a two-year certificate.

Associate of Applied Science in Machine Tool Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 80

Fall - First Year
≠HE 125 Occupational Safety ..... (3)
IN 3.4221 ITS Machine Tool 1
*MA 3.396 Operations and Processes I 3
*MA 3.399 Precision Measurement 1
*MA 3.417 Machining Graphics 2
MA 3.422 Manufacturing Lab I 5

Winter
IN 3.4221 ITS Machine Tool 1
*MA 3.397 Operations and Processes II 2
*MA 3. 420 Numerical Control: Mill 3
MA 3.423 Manufacturing Lab II 4
*MA 3.425 Machinery's Handbook I 2
*ME 3.446 Metals Investigation and Eval. 2

Spring
IN 3.4221 ITS Machine Tool 1
*MA 3.398 Operations and Processes III 2
*MA 3.418 Geometric Controls 2
*MA 3. 421 Numerical Control: Lathe 3
MA 3.424 Manufacturing Lab III 4
*MA 3.426 Machinery's Handbook II 2
≠MTH 61 Survey of Math Fundamentals ..... (3)
≠MTH 62 Occupational Trigonometry ..... (1)

Fall - Second Year
IN 3.4221 ITS Machine Tool 1
MA 3.401 Operations and Processes IV 4
*MA 3.409 Computer Integrated Mfg. I 2
MA 3. 419 CNC Lab 1
MA 3.427 Manufacturing Lab IV 4
WD 4.151 Welding I 2
≠WR 121 English Composition ..... (3)

Winter
IN 3.4221 ITS Machine Tool 1
MA 3.402 Operations and Processes V 4
*MA 3.410 Computer Integrated Mfg. II 2
MA 3.419 CNC Lab 1
MA 3.428 Manufacturing Lab V 4
WD 4.152 Welding II 2
≠Cultural Diversity and Global Awareness ..... (3)

Spring
IN 3.4221 ITS Machine Tool 1
MA 3.404 Operations and Processes VI 4
*MA 3.411 Computer Integrated Mfg. III 2
MA 3.419 CNC Lab 1
MA 3.429 Manufacturing Lab VI 4
≠*SP 1.103 Occupational Speech ..... (3)
≠Science, Technology and Society ..... (3)

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* Courses marked with an asterisk are offered that term only.
≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

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Two-Year Certificate in Machine Tool Technology

Major Requirements 93

Fall-First Year

HE 125 Occupational Safety 3
IN 3.4221 ITS Machine Tool 1
*MA 3.396 Operations and Processes I 3
*MA 3. 399 Precision Measurement 1
*MA 3.417 Machining Graphics 2
MA 3.422 Manufacturing Lab I 5

Winter

IN 3.4221 ITS Machine Tool 1
*MA 3.397 Operations and Processes II 2
*MA 3.420 Numerical Control: Mill 3
MA 3.423 Manufacturing Lab II 4
*MA 3.425 Machinery's Handbook I 2
**MTH 60 Intro to Algebra 4

Spring

IN 3.4221 ITS Machine Tool 1
*MA 3.398 Operations and Processes III 2
*MA 3.421 Numerical Control: Lathe 3
MA 3.424 Manufacturing Lab III 4
*MA 3.426 Machinery's Handbook II 2
MTH 61 Survey of Math Fundamentals 3
MTH 62 Occupational Trigonometry 1

Fall - Second Year

IN 3.4221 ITS Machine Tool 1
MA 3.400 Machine Tool Projects 3
MA 3.401 Operations and Processes IV 4
MA 3.427 Manufacturing Lab IV 5
WD 4.151 Welding I 2

Winter

IN 3.4221 ITS Machine Tool 1
MA 3.402 Operations and Processes V 4
MA 3.428 Manufacturing Lab V 5
WD 4.152 Welding II 2
WR 115 Intro to Writing 3

Spring

IN 3.4221 ITS Machine Tool 1
MA 3.400 Machine Tool Projects 3
MA 3.404 Operations and Processes VI 4
MA 3.429 Manufacturing Lab VI 5
*SP 1.103 Occupational Speech 3

93

* Courses marked with an asterisk are offered that term only.
** Based on Placement Test scores.

MEDICAL OFFICE SPECIALIST

Program Advisor:
Gail Dameworth

The Medical Office Specialist is a one-year program preparing people for entry-level positions as records clerks, ward clerks or receptionists in medical offices. The course work lays the foundation for a two-year program for those students who want to continue their education.

Skills classes are taught in self-paced laboratory classrooms. New technology is introduced both through concepts courses and through hands-on experience with modern equipment.

The Medical Office Specialist program is designed to be completed in one year. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the college Placement Test: WR 115 Intro to Writing and MTH 60 Intro to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, we recommend that it be taken summer term prior to enrolling in the regular certificate program. Pre-training might include some or all of the following courses: *OA 121A Keyboarding I (2 credits), RD 1.175 or RD 1.176 Reading Improvement I or II (3 credits), EN 1.133 The Write Course (4 credits), MTH 20 Basic Mathematics* (4 credits).

Students should work with an advisor to interpret the test scores and get help in planning their program.

One-Year Certificate in Medical Office Specialist

Major Requirements 50

Fall Term

AH 5.630 Medical Terminology I 3
OA 2.500C Business Orientation: Medical 1
OA 2.513 Data Entry Skill Building 2
OA 2.588 Editing Skills for Info. Processing 3
OA 2.652 Filing 1
OA 123A Typing: Skill Building 2
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3
OA 201A Formatting and WordPerfect 5.1 2

Winter

AH 5.414 Drug Classifications and Names 2
AH 5.633 Medical Terminology II 3
BA 110O Windows 2
OA 2.515M Business Math w/Calculator: Med. . 2
OA 2.527 Transcribing Machines I 3
OA 2.656M Info. Proc. Practicum: Med. Reports 3
OA 2.671 Medical Law and Ethics 2

Spring

AH 5.634 Medical Terminology III 3
OA 2.524 Medical Transcription I 3
OA 2.565 Coding and Insurance Procedures 3
OA 2.616 Job Success Skills: Medical 1
OA 5.670 Medical Office Procedures 3
OA 2.673 Computerized Med. Accts Receivable 3

50

MEDICAL TRANSCRIPTIONIST

Program Advisor:
Peggy Lind

The one-year Medical Transcriptionist program prepares people for entry-level positions in transcribing medical records at hospitals and clinics. Emphasis is placed on medical terminology, spelling, English, transcription and word processing skills. Job opportunities are good with pay being above average compared to other secretarial/clerical positions. Medical transcriptionists can easily work part time if they choose to do so.

Skills are taught in self-paced office laboratory classrooms. New technology is introduced both through concepts courses and through hands-on experience with modern equipment.

The Medical Transcriptionist program is designed to be completed in one year. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the college Placement Test: WR 115 Intro to Writing and MTH 60 Intro to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, we recommend that it be taken summer term prior to enrolling in the regular certificate program. Pre-training might include some or all of the following courses: *OA 121A Keyboarding I* (2 credits), *RD 1.175 or RD 1.176 Reading Improvement I or II* (3 credits), *EN 1.133 The Write Course* (4 credits), *MTH 20 Basic Mathematics* (4 credits).

Students should work with an advisor to interpret the test scores and get help in planning their program.

One-Year Certificate in Medical Transcriptionist

Major Requirements 51

Fall

AH 5.630 Medical Terminology I 3
OA 2.500 Business Orientation: Medical 1
OA 2.589 Editing Skills for Info. Processing 3
OA 123A Typing Skill Building 2
OA 123B Advanced Typing: Skill Building 2
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3
OA 201A Formatting and WordPerfect 5.1 2
WR 1.131 Spelling (may be waived based on competency exam) 3

Winter

AH 5.414 Drug Classifications and Names 2
AH 5.633 Medical Terminology II 3
OA 2.515C Electronic Calculator 1
OA 2.527 Transcribing Machines I 3
OA 2.656M Info. Processing Practicum: Medical Reports 3
OA 2.671 Medical Law and Ethics 2
OA 124 Typing: Speed and Accuracy Devel. 3

Spring

AH 5.634 Medical Terminology III 3
BA 110O Windows 2
OA 2.529 Applied Medical Transcription 5
OA 2.616 Job Success Skills: Medical 1
OA 2.652 Filing 1
OA 2.670 Medical Office Procedures 3

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METALLURGY AND MATERIALS TECHNOLOGY

Program Advisor:
Seaton McLennan

The Metallurgy and Materials Technology program offers a two-year Associate of Applied Science degree that prepares men and women for a variety of entry-level positions involving industrial materials. Students have access to state-of-the-art equipment and instrumentation, such as real time data acquisition, statistical

process control hardware and software, and a full line of the latest nondestructive testing and digital imaging equipment.

A one-year certificate in Nondestructive Testing is offered in accordance with the American Society of Nondestructive Testing (ASNT) TC-1A. Preparatory course work for taking QC-1 Inspection examination is included in this program.

Students may choose to emphasize their work at LBCC in occupations involving the extraction, purification, treatment, fabrication, examination and testing of materials; the evaluation of industrial processes; or process and quality control. Students completing prescribed courses may qualify for a certificate of completion according to the American Society of Nondestructive Testing standards. In addition to ASNT, a student may take the Engineering Council for Professional Development (ECPD) examination to obtain the Engineering Technician Certificate.

Students wanting to enter the Metallurgy and Materials Technology program should be aware of the variety of jobs available and the requirements necessary for the type of employment for which they intend to qualify. Students may need preparatory classes in math, chemistry and English in order to complete the level of classes required for graduation.

The job market for Metallurgy and Materials Technology graduates is excellent, especially for those willing to relocate. Chances of advancement and retention within the industry are exceptional. Recent salaries range from $15,000 to $40,000 annually, with excellent benefits and educational opportunities.

Career choices include metallurgical technician, metallographer, materials testing technician, radiographer, ultrasonic testing technician, production control technician, quality control technician, failure analyst, forensic metallurgical technician, metrologist (calibration), spectroscopist (alloy analyst), dimensioning technician, heat treatment technician, penetrant testing technician, magnetic particle testing technician, and research and development.

The Metallurgy Technology program supports student participation in Vocational Industrial Clubs of America (VICA) and student competition in the United States Skills Olympics (USSO). Through student involvement in fund-raising projects, funds are made available to pay student cost of travel, lodging and entry fees in the annual state VICA skills contest. Any student who earns a first place at the state level qualifies for USSO and also will have expenses paid to participate in the national competition.

Associate of Applied Science in Metallurgy and Materials Technology

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 72-74

Fall - First Year
EG 4.403 Print Reading: Metals 2
GS 104 Physical Science 4
*ME 6.281 Magnetic Particle/Penetrant Testing: Level I & II 3
*ME 6.293 Intro to Metallurgy 4
WD 3.448 Welding Processes 2

Winter
≠MTH 65 Elementary Algebra ..... (4) **or**
≠MTH 61 + 62, 63, 64 (four math credits apply toward general ed. requirements/two credits apply toward major) 2
*ME 3.445 Welding Metallurgy II 4
*ME 6.276 Physical Metallurgy 4
*ME 6.282 Ultrasonic/Electromagnetic Testing: Level I 3
*ME 6.298 Metallography I 3

Spring
≠HE 125 Occupational Safety ..... (3)
*ME 4.120 Fund. of Specification 3
*ME 6.283 Radiographic Testing: Level I 3
*ME 6.299 Metallography II 3
≠WR 121 English Composition ..... (3)

Fall - Second Year
*CH 113 Technical Chemistry 4
*ME 4.122 Strength of Materials 3
*ME 4.161 Materials Testing I 3
≠Cultural Diversity & Global Awareness ..... (3)
IN 3.442G ITS or approved CWE 2

Winter
*MA 4.130 Machine Processes 2
*ME 4.162 Materials Testing II 3
*ME 6.285 Ultrasonic/Electromagnetic Testing: Level II 4
≠Science, Technology & Society ..... (3)

Spring
MA 3.418 Geometric Controls 2
*ME 4.163 Materials Testing III 3
*ME 6.284 Radiographic Testing: Level II 4
*ME 6.294 Process Metallurgy 4
* SP 1.103 Occupational Speech ..... (3)

91-93

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

One-Year Certificate in Nondestructive Testing

Major Requirements 42-44

Fall
EG 4.403 Print Reading: Metals 2
HE 125 Occupational Safety 3
ME 6.281 Magnetic Particle/Penetrant Testing: Level I & II 3
ME 6.293 Intro to Metallurgy 4
WD 3.448 Welding Processes 2

Winter
BA 110O Windows 2
BA 110S Spreadsheets 2
*ME 3.445 Welding Metallurgy II 4
*ME 6.282 Ultrasonic/Electromagnetic Testing: Level I 3
MTH 65 Elementary Algebra ..... 4 ***or***
MTH 61 & MTH 62, 63, 64 6

Spring
MA 3.418 Geometric Controls 2
MA 4.130 Machine Processes 2
*ME 6.283 Radiographic Testing: Level I 3
*SP 1.103 Occupational Speech 3
*WD 4.251 Fundamentals of Welding Inspection 3

42-44

* Courses marked with an asterisk are offered that term only.

NONDESTRUCTIVE TESTING

See Metallurgy Technology.

NURSING

Faculty:
Jacqueline Paulson, Vicki Beck, Rachel Hagfeldt, Judy Kraft, Taffy Johnson, Marjean Niemiec

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 prepare highly skilled nurses (RN) oriented to patient care. Clinical facilities are the hospitals, nursing homes and health agencies in Linn and Benton counties.

Following acceptance into the nursing program (See "Special Admission Programs" in the "Entering the College" section of this catalog), the student must 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 112 Chemistry for Health Occupations and MTH 65 Elementary Algebra as program prerequisites. The chemistry course must have been completed within the last five years.

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 Applied Science degree. Graduates are eligible to take the National Council Licensing Examination for Registered Nurse licensing (NCLEX-RN).

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The Oregon State Board of Nursing reviews applicants for RN licensure upon completion of LBCC's nursing program and is responsible for ensuring that approved applicants meet certain criteria regarding issues of substance abuse and some felony convictions. Specific questions regarding these issues should be directed to Suite 465, 800 NE Oregon St. #25, Portland, OR 97232. (503) 731-4745.

Associate of Applied Science in Nursing

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree

MTH 65 Elementary Algebra is required. SP 111 Interpersonal Communication is required.

Major Requirements 87

Fall - First Year
*BI 231 Human Anatomy & Physiology 4
HDFS 201 Individual & Family Development *or*
PSY 215 Intro to Developmental Psychology 3
NUR 101 Nursing I 6
NUR 121 Drug Administration 2

Winter
*BI 232 Human Anatomy & Physiology 4
*BI 234 Microbiology 4
NUR 102 Nursing II 8
PSY 205 Psychology as a Social Science 4

Spring
*BI 233 Human Anatomy & Physiology 4
FN 225 Nutrition 4
NUR 103 Nursing III 9
NUR 122 Contemporary Nursing I 1

Fall - Second Year
NUR 201 Nursing IV 10
NUR 215 Health and Physical Assessment 3

Winter
NUR 202 Nursing V 10
NUR 222 Contemporary Nursing II 1

Spring
NUR 203 Nursing VI 10

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* These courses must have been completed within the last five years

NURSING ASSISTANT

Faculty:
Missy Dutson

The Nursing Assistant program is a 120-hour course of study preparing students for positions as nursing assistants in nursing homes. Graduates often use this program as a starting point for related health careers. Through classroom lecture and clinical experience under the supervision of a professional nurse, students gain the background needed to care for the convalescent patient or long-term care patient.

Students interested in this program should contact the Nursing Office at 917-4511. Instructor permission is required to enroll. Students must show proof of immunizations, TB screening and pass a reading test.

Following completion of the program, the student is eligible for certification through the Oregon State Board of Nursing.

* Nursing Assistant

Major Requirements 7
NU 5.406 Nursing Assistant 7

7

* Prerequisites: Reading test; measles and Hepatitis B immunization; negative TB screen.

OFFICE SPECIALIST

Program Advisor:
Jean Geiger, Joyce Moreira

Job opportunities are excellent for well-trained office employees. The Office Specialist is a one-year program providing students the opportunity to acquire skills for entry-level positions, such as general clerk, file clerk, receptionist, typist, transcriptionist and word processor. Opportunities for advancement are available with experience and proven aptitude.

The Office Specialist certificate is designed to be completed in one year. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the college Placement Test: WR 115 Intro to Writing and MTH 60 Intro to Algebra. It is advisable to take the college Placement Test as early as possible. If developmental course work is required, we recommend that it be taken summer term prior to enrolling in the regular certificate program. Pre-office specialist training might include some or all of the following courses: • *OA 121A Keyboarding I* (2 credits), • *RD 1.175 or RD 1.176 Reading Improvement I or II* (3 credits), • *EN 1.133 The Write Course* (4 credits), • *MTH 20 Basic Mathematics* (4 credits).

Students should work with an advisor to interpret the test scores and get help in planning their program.

One-Year Certificate in Office *Specialist*

Major Requirements 46-50

Fall
BA 1100 Windows 2
OA 2.500 Business Orientation 1
OA 2.515 Business Math with Calculators 2
OA 2.588 Editing Skills for Info. Processing 3
OA 201A Formatting and WordPerfect 5.1 2
OA 2.513 Data Entry Skill Building 2
OA 123A Typing: Skill Building 2

Winter
BA 110D Data Base 2
BA 110S Spreadsheets 2
OA 2.527 Transcribing Machines I 3
OA 2.551 Office Communications 3
OA 2.652 Filing 1
OA 201 WordPerfect 6.1 for Business *or*
OA 202 MS Word 6.0 for Business 3
Approved electives (see list next column) 4-6

Spring
OA 2.579 Integrated Software Applications 3
OA 2.610 Office Procedures 3
OA 2.616 Job Success Skills 1
OA 203 Advanced Word Processing 3
Approved electives (see list next column) 4-6

46-50

Approved Electives:
BA 2.530 Practical Accounting I 4
BA 2.684 Computerized Accounting 3
BA 110H Adv. DOS and Hard Disk Mgmt. 2
OA 2.656 Information Processing Practicum 3
OA 2.682 Desktop Publishing 3
OA 2.683 Computerized Records Management .. 3
OA 123B Advanced Skill Building 2

OFFICE TECHNOLOGY

See Business Technology.

PARENT EDUCATION, WORK AND FAMILY, AND CHILD CARE PROVIDER TRAINING

The Family Resources Department offers a number of professional technical classes for people who care for and work with children: parent education, work and family, and child care provider training. The content covered in several of these classes is included in the one-year certificate and associate degree programs in Child and Family Studies. Students can begin their professional training by taking non-credit classes and continue by enrolling in certificate and degree programs. Please see the "Family Resources Department" in the "Community Outreach" section of this catalog.

REFRIGERATION, HEATING AND AIR CONDITIONING

Faculty:
Dick Abernathy, Jack Campbell

The Refrigeration, Heating and Air Conditioning (RHAC) program offers many career opportunities for men and women. Students are trained to become skilled specialists who create, install and maintain healthy, comfortable environments for people in almost any structure in which they live, work and play. Special indoor climates must be created and maintained for products, computers, medicine and electronic components. Another vital service is transporting and storing food and other perishables in trucks, trains, ships and aircraft.

The RHAC program includes courses in the terminology and the fundamentals of electrical components and connections. Students learn to read, interpret and work from sketches, layouts and blueprints. Tools, materials and equipment used in the trade are available in the campus lab. Equipment operation and repair diagnosis are

(Continued on next page)

emphasized. The curriculum also includes sheet metal work for duct installation and repair. Safety and personal work habits are covered.

The industry is multifaceted, with many areas of expertise required. Customer relations, job scheduling, paper work, ordering parts, inventory and requisitions are included in the two-year program.

The Refrigeration, Heating and Air Conditioning A.A.S. program is designed to be completed in two years. This assumes, however, that the entering student has sufficient math and writing skills to be able to enroll in WR 121 English Composition and MTH 60 Intro to Algebra. Students who are placed below these levels may not be able to finish in two years. In addition, it is strongly advised that beginning students be ready to enter, at a minimum, WR 115 Introduction to Writing and MTH 20 Basic Mathematics before attempting the specified program sequence. Students are expected to achieve a minimum "C" grade in each required program course.

A variety of tools and specialized instruments are required. In addition to books and supplies, students should expect to spend about $500 over the two-year period for a personal set of tools.

Job prospects in this field are good. Beginning pay ranges from $8 to $10 per hour. Qualified workers may advance to other positions, with pay ranging from $15 to $24 per hour.

The Refrigeration/Heating/Air Conditioning program supports student participation in Vocational Industrial Clubs of America (VICA) and student competition in United States Skills Olympics (USSO). Through student involvement in fund-raising projects, funds are made available to pay student cost of travel, lodging and entry fees in the annual state VICA skills contest. Any student who earns a first place at the state level qualifies for USSO and also will have expenses paid to participate in the national competition.

The Refrigeration, Heating and Air Conditioning curriculums lead to an Associate of Applied Science degree or a one-year or two-year certificate.

Associate of Applied Science in Refrigeration, Heating and Air Conditioning

General Education Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 73

Fall - First Year
≠HE 125 Occupational Safety ..... (3)
IN 3.442E I.T.S. RHAC 1
MTH 60 Intro to Algebra 4
*RH 3.552 Trade and Electrical Components I .. 3
*RH 3.580 Intro to Ref/Heat/AC 6

Winter
*RH 3.553 Trade and Electrical Components II . 3
*RH 3.583 Principles of Refrigeration 6
*RH 3.584 Sheet Metal Basics 4
WD 4.151 Welding I 2

Spring
*RH 3.542 RHAC Graphics 2
*RH 3.585 Principles of Heating 6
*RH 3.586 Mechanical Installation Procedures .. 4
≠SP 1.103 Occupational Speech ..... (3)

Fall - Second Year
≠RH 3.527 Alternate Energy Sources** ..... (3)
*RH 3.588 Pneumatic Controls 4
*RH 3.589 Diagnosis, Service and Repair 6

Winter
≠MTH 61 Survey of Math Fundamentals ..... (3)
*RH 3.587 Operation Principles of AC and Air Movement 6
*RH 3.590 Control Applications 4
≠WR 121 English Composition ..... (3)

Spring
≠MTH 62 Occupational Trigonometry ..... (1)
*RH 3.591 Commercial and Industrial Refrig. ... 6
*RH 3.592 Systems Design 4
≠ Cultural Diversity & Global Awareness ..... (3)
Technical Electives 2

92

* Courses marked with an asterisk are offered that term only.
** Also counts as a program course.
≠ Applies toward General Ed. Requirements.
Credits not included in Major Requirements total.

Two-Year Certificate in Refrigeration/ Heating/Air Conditioning

Major Requirements 84

Fall - First Year
HE 125 Occupational Safety 3
IN 3.442E I.T.S. RHAC 1
MTH 60 Intro to Algebra 4
*RH 3.552 Trade and Electrical Components I .. 3
*RH 3.580 Intro to Ref/Heat/AC 6

Winter
*RH 3.553 Trade and Electrical Components II . 3
*RH 3.583 Principles of Refrigeration 6
*RH 3.584 Sheet Metal Basics 4
WD 4.151 Welding I 2

Spring
*RH 3.542 RHAC Graphics 2
*RH 3.585 Principles of Heating 6
*RH 3.586 Mechanical Installation Procedures .. 4
SP 1.103 Occupational Speech 3

Fall - Second Year
RH 3.588 Pneumatic Controls 4
RH 3.589 Diagnosis, Service and Repair 6
WR 115T Intro to Writing: Technical 3

Winter
*RH 3.587 Operational Principles of AC 6
*RH 3.590 Control Applications 4
RH 3.594 RHAC Skills Lab 2

Spring
*RH 3.591 Commercial and Industrial Refrig. ... 6
*RH 3.592 Systems Design 4
RH 3.594 RHAC Skills Lab 2

84

* Courses marked with an asterisk are offered that term only.

One-Year Certificate in Heating

Major Requirements 47

Fall
HE 125 Occupational Safety 3
IN 3.442E I.T.S. RHAC 1
MTH 60 Intro to Algebra 4
*RH 3.552 Trade and Electrical Components I .. 3
*RH 3.580 Intro to Ref/Heat/AC 6

Winter
*RH 3.553 Trade and Electrical Components II . 3
*RH 3.583 Principles of Refrigeration 6
*RH 3.584 Sheet Metal Basics 4
WD 4.151 Welding I 2

Spring
*RH 3.542 RHAC Graphics 2
*RH 3.585 Principles of Heating 6
*RH 3.586 Mechanical Installation Procedures .. 4
SP 1.103 Occupational Speech 3

47

* Courses marked with an asterisk are offered that term only.

RESTAURANT AND CATERING MANAGEMENT

Faculty:
Scott Anselm, Mark Whitehead

The Restaurant and Catering Management program is an in-depth, hands-on program especially tailored to the student who wants to own or manage a restaurant or catering operation. The curriculum is demanding in the basic cooking techniques as well as in the fundamentals of money, personnel and facilities management.

Students must be 18 years of age and have a high school diploma or General Education Development (GED) certificate. Students should possess a strong understanding of business math, good communication skills and have a desire to work directly with customers and staff. Students should be able to work under pressure and should demonstrate manual dexterity, physical stamina, concentration, good memory and have a cheerful, friendly, out-going personality. In addition to the regular college costs, students spend about $350 to purchase uniforms, knives, books, shoes and other equipment. Students should wait until after the first day of class to purchase these items.

LBCC has an outstanding food service facility with a wide variety of modern equipment. The students become skilled at working with virtually all types of standard kitchen equipment and tools. The kitchen provides service for the cafeteria, catering functions, a snack bar and a working sit-down restaurant. By working in this excellent learning environment, students learn to care for and maintain a full-service kitchen.

Associate of Applied Science in Culinary Arts with a Restaurant and Catering Management Option

General Ed. Requirements 19
See graduation requirements for Associate of Applied Science degree.

Major Requirements 85

Fall - First Year
CA 8.310 Culinary Arts Practicum I 7
CA 8.336 Food Service Safety and Sanitation 1
CA 8.337 Station, Tools and Culinary Techniques ... 3
CA 8.345 Service Techniques 1
*CA 8.354 Banquet & Buffet Lab E ..... (1)

Winter
CA 8.311 Culinary Arts Practicum II 8
CA 8.350 Banquet and Buffet Lab A 1
CA 8.373 Costing 1

Spring
CA 8.312 Culinary Arts Practicum III 8
CA 8.351 Banquet and Buffet Lab B 2

(Continued on next page)

Fall - Second Year
CA 8.321 Adv. Cooking Management I 7
*CA 8.354 Banquet and Buffet Lab E ..... (1)
CA 8.368 Creating the Menu 2
CA 8.409 Meats 3
CA 8.419 Nutrition and Special Diets 1

Winter
CA 8.309 Purchasing for Chefs 2
CA 8.322 Adv. Cooking Management II 7
CA 8.341 Soups and Sauces 3
CA 8.352 Banquet and Buffet Lab C 1
CA 8.418 Beverage Operations 2

Spring
CA 8.353 Banquet and Buffet Lab D 2
CA 8.355 Banquets and Buffet Planning 1
CA 8.421 International Cuisine 2
**WE 1.280 CWE Management Project 6

Other Required Courses
BA 2.530 Practical Accounting I 4
BA 101 Intro to Business 4
BA 223 Principles of Marketing 3
SD 101 Supervision Fundamentals 3
≠SP 1.103 Occupational Speech Communication . (3)

104

* Optional.
** May be taken any term following completion of first-year requirements.

SUPERVISORY MANAGEMENT

Program Advisor:
Myrna Gusdorf

Faculty:
Maynard Chambers, Gerry Conner, Ed Knudson, Wendy Krislen, Larry Schuetz, Andy VanderPlaat, Al Walczak

This program is designed to meet the needs of individuals currently supervising or preparing to supervise personnel in a wide variety of business or industry settings. In order to accommodate individuals working full time, the program allows completion of course work during the evening hours.

Three curriculum options are available. Students may complete an 19-credit program in supervision, a 45-credit program in advanced supervisory development or a 90-credit program in supervision leading to an associate degree. Students are encouraged to first complete the 19- and 45-credit programs before completing the Associate degree program.

The Supervision curriculums lead to an Associate of Applied Science degree in Supervisory Management or a certificate in Basic Supervisory Management or Advanced Supervisory Management.

Associate of Applied Science in Supervisory Management

General Education Requirements 19
≠BA 285 Business Relations/Global Economy..(3)
≠HE 125 Occupational Safety ..... (3)
≠ HST 150 Science/Culture in West. Trad. ..... (3)
≠MTH 65 Elementary Algebra ..... (4)
≠SP 111 Fundamentals of Speech ..... (3)
≠WR 121 English Composition ..... (3)

Major Requirements 39-40
BA 131 Business Productivity Software 2
BA 215 Survey of Accounting 4
BA 229 Financial Planning 3
BA 230 Business Law 4
BA 271 Information Technology in Business 3
EC 115 Outline of Economics 4
SD 101 Supervision: Fundamentals 3
SD 102 Supervision: Techniques 3
SD 103 Supervision: Communication 3
SD 104 Supervision: Applied Communication ... 3

Management
Select one from the following:
BA 206 Principles of Management 3
BA 207 Labor Management Relations 3
BA 224 Human Resources Management 3

Word Processing
Select one from the following:
OA 201 WordPerfect 6.1 for Business 3
OA 201A Formatting and WordPerfect 2
OA 201B Beg. WordPerfect w/Windows 2
OA 202 MS Word 6.0 for Business 3
OA 202A Beg. MS Word w/Windows 2

Computer Skills
Select one from the following:
BA 110D Data Base 2
BA 110H Adv. DOS/Hard Disk Management 2
BA 110O Windows 2
BA 110S Spreadsheets 2

Electives (See Program Advisor) 31-32

90

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

Basic Supervisory Management

Major Requirements 16
HE 125 Occupational Safety 3
MTH 65 Elementary Algebra 4
SD 101 Supervision: Fundamentals 3
SD 102 Supervision: Techniques 3
SD 103 Supervision: Communication 3

Electives (See Program Advisor) 3

19

Certificate in Advanced Supervisory Management

Major Requirements 35-36
BA 229 Financial Planning 3
BA 285 Business Relations/Global Economy 3
HE 125 Occupational Safety 3
MTH 65 Elementary Algebra 4
SD 101 Supervision: Fundamentals 3
SD 102 Supervision: Techniques 3
SD 103 Supervision: Communication 3
SD 104 Supervision: Applied Communication ... 3
WR 121 English Composition 3

Management
Select one course from the following:
BA 206 Principles of Management 3
BA 207 Labor Management Relations 3
BA 224 Human Resources Management 3

Word Processing
Select one course from the following:
OA 201 WordPerfect 6.1 for Business 3
OA 201A Formatting and WordPerfect 5.1 2
OA 201B Beg. WordPerfect w/Windows 2
OA 202 MS Word 6.0 for Business 3
OA 202A Beg. MS Word w/Windows 2

Computer Skills
Select one course from the following:
BA 110D Data Base 2
BA 110O Windows 2
BA 110H Advanced DOS/Hard Disk Management . 2
BA 110S Spreadsheets 2

Electives (See Program Advisor) 9-10

45

WATER/WASTEWATER TECHNOLOGY

Faculty:
Mark Edwards, David Kidd, Holly Ploetz, Ronald M. Sharman

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.

Classes are held in modern, well-equipped classrooms and laboratories. Modern chemistry and microbiological laboratory equipment, such as spectrophotometers and microscopes are available. A complete mechanical laboratory is available for instruction on various aspects of pump maintenance. Microcomputers are available for student use.

The two-year (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 and advanced operations.

The Water/Wastewater Technology curriculum requires enrollment for seven consecutive terms. Due to the technical nature of the field, students must be prepared to enroll in MTH 111T College Algebra: Technical during winter term of their sophomore year.

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

(Continued on next page)

operations. Students are required to complete MTH 65 Elementary Algebra.

The one-year Water/Wastewater Plant Operations curriculum requires enrollment for four consecutive terms. Students completing the one-year program may choose to transfer credits to the two-year Associate of Applied Science degree program.

Students in both the one-year certificate program and the two-year associate degree program must complete an in-plant practicum during the summer term. This may require relocation of the student for one term. There is no guarantee of funding for students during this period. Entering students must be prepared to enroll in MTH 60 Introduction to Algebra and WR 115 Introduction to Writing by fall term of their first year.

The Water/Wastewater Technology curriculums lead to an Associate of Applied Science degree or a one-year certificate.

Associate of Applied Science in Water/ Wastewater Technology

General Education Requirements 19
See Graduation requirements for Associate of Applied Science degree.

Major Requirements 86

Fall - First Year
WW 6.190 Intro to Environ. Science and Tech. . 5
WW 6.193 Intro to Aquatic Chem and Micro 4
WW 6.199 Intro to Hydraulics 2

Winter
EG 4.405 Print Reading: Water/Wastewater 2
WW 6.180 W/WW Mechanics I 2
WW 6.192 Wastewater Systems 7
WW 6.194 Basic Aquatic Chem and Micro 4

Spring
≠HE 112 First Aid ..... (1)
WW 6.181 W/WW Mechanics II 2
WW 6.191 Water Systems Operation 7
WW 6.195 Intermed. Aquatic Chem and Micro . 4

Summer
WW 6.168 In-Plant Practicum 12

Fall - Second Year
≠MTH 111T College Algebra: Technical 1
(Four math credits apply toward general ed. requirements/one credit applies toward major)
≠PE ..... (1)
≠WR 121 English Composition ..... (3)
WW 6.154 Process Control I 4
WW 6.164 Water Sources 3
WW 6.166 Water Purification Systems 4

Winter
EE 6.330 Industrial Electricity 3
≠PE ..... (1)
≠Science, Technology and Society ..... (3)
WR 227 Technical Report Writing 3
WW 6.155 Process Control II 4
WW 6.235 Applied Hydraulics 3

Spring
≠Cultural Diversity ..... (3)
≠Speech ..... (3)
WW 6.165 Water Distribution and Collect. Sys . 3
WW 6.197 Solids Handling 3
WW 6.198 Instrumentation 4

105

≠ Applies toward General Ed. Requirements. Credits not included in Major Requirements total.

One-year Certificate in Water/Wastewater Plant Operations

Major Requirements 59

Fall
MTH 60 Introduction to Algebra 4
WR 115 Intro to Writing 3
WW 6.190 Intro to Environ. Science and Tech .. 5
WW 6.193 Intro to Aquatic Chem and Micro 4
WW 6.199 Intro to Hydraulics 2

Winter
EG 4.405 Print Reading:Water/Wastewater 2
WW 6.180 W/WW Mechanics I 2
WW 6.192 Wastewater Systems 7
WW 6.194 Basic Aquatic Chem and Micro 4

Spring
HE 112 Emergency First Aid 1
WW 6.181 W/WW Mechanics II 2
WW 6.191 Water Systems Operations 7
WW 6.195 Intermediate Aquatic Chem & Micro 4

Summer
WW 6.168 In-Plant Practicum 12

59

WELDING TECHNOLOGY

Faculty:
Dean Dowless, Dennis Wood

The Welding Department offers several options to men and women wanting to prepare for entry-level positions in welding repair, fabrication and industrial mechanics. A two-year Associate of Applied Science Degree Program, two-year certificate program and one-year certificate program all provide extensive training in welding procedures, blueprint reading, fabrication and layout.

Students interested in becoming an Industrial Maintenance Mechanic should consider the Associate of Applied Science Degree or the two-year certificate. Students who desire to transfer to Oregon Institute of Technology or other four-year bachelor of science degree technical institutions should consult with a Welding Department advisor for a recommended schedule of classes.

The Welding Technology program supports student participation in Vocational Industrial Clubs of America (VICA) and student competition in United States Skills Olympics (USSO). Through student involvement in fund-raising projects, funds are made available to pay student cost of travel, lodging and entry fees in the annual state skills contest. Any student who earns a first place at state level also will have expenses paid to participate in the national competition.

People already employed in the welding field or a related area may upgrade their skills by enrolling in the classes offered through the Welding Department. Welding I, II and Preparation for Certification offer students limited exposure to welding techniques but provide the opportunity to become certified in pipe or plate welding. An Independent agency conducts the testing in the LBCC Welding Lab.

The department recommends that students enter the program in September (Fall Term). Admission is possible at the beginning of Winter or Spring Term, depending on space availability and/or the student's previous experience. Students wanting to enter the Welding Technology program should have a basic math background and high school-level reading skills. Because a variety of working conditions exist in the welding field, a person generally should be in good physical condition and be able to stand, stoop, kneel and bend. Good eyesight, especially depth perception, is necessary for a welder.

Personal qualities desirable in a welder include preciseness and creativity. As with most career fields, the ability to get along with others is a valuable asset. The program requires that students have the initiative to work on class projects independently.

The job outlook for welding is excellent both locally and regionally. Wages vary greatly between union and non-union shops. A variety of local machine shops, repair shops and industrial firms hire welders. Some students use the Welding Technology program as a basis for applying to apprenticeship programs, such as millwright, pipefitter, steamfitter, iron workers and other related trades.

For more information, please contact Dennis Wood at (541)917-4583.

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Associate of Applied Science Degree in Welding

General Education Requirements 19
All General Education Requirements are included in the curriculum.

Major Requirements 82

Fall-First Year
≠MTH 61 Survey of Math Fundamentals ..... (3)
*WD 4.240 Basic Arc Welding 6
*WD 4.242 Fab. and Repair Practices I 4
*WD 4.258 Welding Prints and Projects 3

Winter
IN 1.197 Intro to Industrial Computers 1
≠MTH 63 Industrial Math ..... (1)
*WD 4.241 Intermediate Arc Welding 6
*WD 4.243 Fab. and Repair Practices II 4
*WD 4.247 Interp. Metal Fab Drawings 3
≠WR 121 English Composition ..... (3)

Spring
*ME 3.444 Welding Metallurgy I 4
*WD 4.245 Layout Procedures for Welding 3
*WD 4.246 Advanced Arc Welding 6
*WD 4.250 Fab. and Repair Practices III 4

Fall-Second Year
MA 3.396 Operation and Processes I 3
MA 3.399 Precision Measurement 1
MA 3.422 Manufacturing Lab I 4
RH 3.552 Trade Electrical Components 3
*WD 4.255 Fab. and Repair Practices IV 1
9.061 Industrial Fluid Power I 3

Winter
MA 3.397 Operation and Processes II 2
MA 3.423 Manufacturing Lab II 5
MA 3.445 Welding Metallurgy II 4
≠Science, Technology and Society ..... (3)
WD 4.256 Fab. and Repair Practices V 1
9.062 Industrial Fluid Power II 3

Spring
HE 112 Emergency First Aid 1
≠HE 125 Occupational Safety ..... (3)
HV 3.295 Power Train Systems 6
≠SP 1.103 Occupational Speech ..... (3)
WD 4.257 Fab. and Repair Practices VI 1
≠Cultural Diversity and Global Awareness ..... (3)

101

*Courses marked with an asterisk are offered that term only.
≠Applies toward general education requirements.

Two-Year Certificate in Welding

Major Requirements 94

Fall-First Year
MTH 60 Intro to Algebra 4
*WD 4.240 Basic Arc Welding 6
*WD 4.242 Fab. and Repair Practices I 4
*WD 4.258 Welding Prints and Projects 3

Winter
*WD 4.241 Intermediate Arc Welding 6
*WD 4.243 Fab. and Repair Practices II 4
*WD 4.247 Interp. Metal Fab Drawings 3
WR 115 Intro to Writing 3

Spring
*ME 3.444 Welding Metallurgy I 4
*WD 4.245 Layout Procedures for Welding 3
*WD 4.246 Advanced Arc Welding 6
*WD 4.250 Fab. and Repair Practices III 4

Fall-Second Year
MA 3.396 Operation and Processes I 3
MA 3.399 Precision Measurement 1
MA 3.422 Manufacturing Lab I 4
RH 3.552 Trade Electrical Components 3
*WD 4.255 Fab. and Repair Practices IV 1
9.061 Industrial Fluid Power I 3

Winter
MA 3.397 Operation and Processes II 2
MA 3.423 Manufacturing Lab II 5
MA 3.445 Welding Metallurgy II 4
WD 4.256 Fab. and Repair Practices V 1
9.062 Industrial Fluid Power II 3

Spring
HE 112 Emergency First Aid 1
HE 125 Occupational Safety 3
HV 3.295 Power Train Systems 6
SP 1.103 Occupational Speech 3
WD 4.257 Fab. and Repair Practices VI 1

94

* Courses marked with an asterisk are offered that term only.

One-Year Certificate in Welding

Major Requirements 50

Fall
MTH 60 Intro to Algebra 4
*WD 4.240 Basic Arc Welding 6
*WD 4.242 Fab. and Repair Practices I 4
*WD 4.258 Welding Prints and Projects 3

Winter
*WD 4.241 Intermediate Arc Welding 6
*WD 4.243 Fab. and Repair Practices II 4
*WD 4.247 Interp. Metal Fab Drawings 3
WR 115 Intro to Writing 3

Spring
*ME 3.444 Welding Metallurgy I 4
*WD 4.245 Layout Procedures for Welding 3
*WD 4.246 Advanced Arc Welding 6
*WD 4.250 Fab. and Repair Practices III 4

50

* Courses marked with an asterisk are offered that term only.

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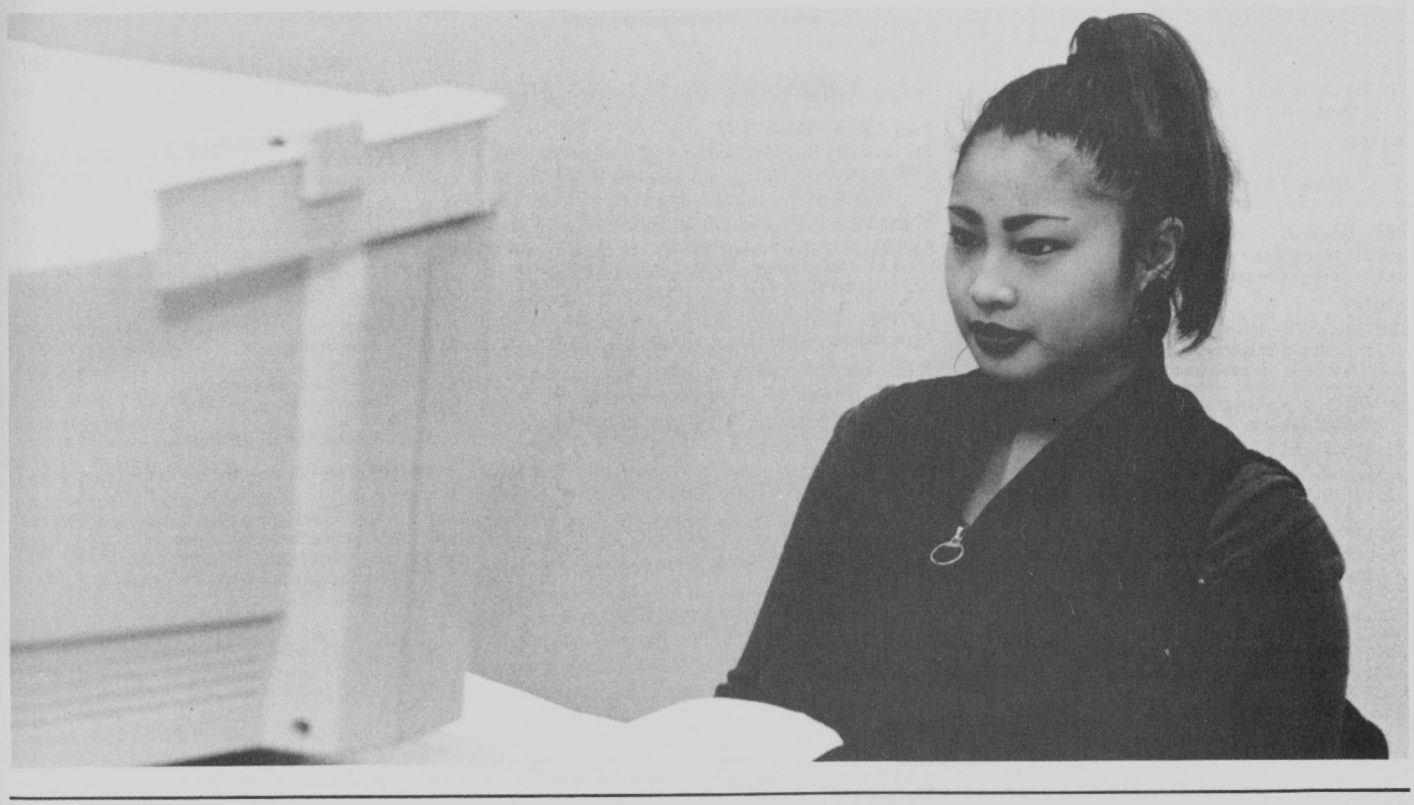
TRANSFER PROGRAMS

- Agricultural Education
- Agriculture Business Management
- Animal Science
- Anthropology
- Art
- Automotive Technology (Special Agreement)
- Biological Sciences
- Business Administration
- Child and Family Studies (See Human Resources Learning Community)
- Computer Science
- Criminal Justice (See Human Resources Learning Community)
- Economics
- Education (See Human Resources Learning Community)
- Engineering Transfer
- English/Foreign Languages
- Geography
- Heavy Equipment/Diesel Technology (Special Agreement)
- History
- Home Economics
- Human Performance
- Human Services (See Human Resources Learning Community)
- Journalism and Mass Communications
- Liberal Studies
- Mathematics
- Music
- Philosophy
- Physical Sciences
- Political Science
- Psychology
- Public Health and Health Education
- Religion
- Social Sciences
- Sociology
- Spanish
- Speech Communications
- Theatre



AGRICULTURAL EDUCATION

Faculty:
Rick Klampe, Jim Lucas, Bruce Moos

Curriculum completion initiates the first step of meeting lower-division requirements for those students interested in pursuing a career in teaching. Also available are lower-division transfer courses in a variety of agricultural areas that will provide practical background and experiences for anyone entering the field of education.

This program is designed to be completed in two years. This assumes, however, that the entering student has been placed at or above the following levels on the College Placement Test: WR 121 English Composition and MTH 95 Intermediate Algebra. It is advisable to take the College Placement Test as early as possible. If developmental course work is required, it may take the student longer than two years to complete the program.

Associate of Science with a major emphasis in Agricultural Education

General Education Requirements 24

See the graduation requirements for Associate of Science degree.

The math, biological and physical science and four of the perspectives credits are met by the listed major requirements.

Major Requirements 55

Fall - First Year
AG 111 Computers in Agriculture 3
BI 101 General Biology 4
MTH 105 Intro to Contemporary Math 4

Winter
ARE 221 Marketing in Agriculture 3
BI 102 General Biology 4

Spring
ANS 231 Livestock Evaluation 3
BI 103 General Biology 4
CSS 200 Principles of Crop Science 4

Fall - Second Year
ARE 211 Management in Agriculture 4
CH 121 College Chemistry 5

Winter
BA 215 Survey of Accounting 4
CH 122 College Chemistry 5
EC 201A Intro to Microeconomics 4

Spring
BA 230 Business Law 4

Electives 11
Approved electives include:
ANS 121 Animal Science 4
ANS 210 Feeds and Feed Processing 4
ANS 211 Applied Animal Nutrition 3
ANS 215 Applied Beef Production 4
ANS 216A Applied Sheep Production 4
ANS 216B Applied Swine Production 4
ANS 220 Introductory Horse Science 4
ANS 221 Equine Industries 3
ANS 223 Equine Marketing 2
BI 251 Principles of Wildlife Conservation 3
BI 252 Wildlife Resources: Birds 3

90

AGRICULTURE BUSINESS MANAGEMENT

Faculty:
Rick Klampe, Jim Lucas, Bruce Moos

The Agriculture Business Management curriculum is designed for students who want to complete their lower-division course work prior to transferring to a four-year institution. It allows for completion of general education requirements as well as the preparatory course work that precedes specialized course involvement. Agriculture Resource Economics interests also could be pursued.

This program is designed to be completed in two years. This assumes, however, that the entering student has been placed at or above the following levels on the College Placement Test: WR 121 English Composition and MTH 95 Intermediate Algebra. It is advisable to take the College Placement Test as early as possible. If developmental course work is required, it may take the student longer than two years to complete the program.

Associate of Science with a major emphasis in Agriculture Business Management

General Education Requirements 21

See graduation requirements for Associate of Science degree.

The math, biological and physical science and four of the perspectives credits are met by the listed major requirements.

Major Requirements 51- 53

Fall - First Year
AG 111 Computers in Agriculture 3
MTH 111 College Algebra 5
Physical Science 4-5

Winter
ARE 221 Marketing in Agriculture 3
MTH 241 Math for Bus., Mgmt. & Soc. Science 4
Biol./Physical Science 4-5

Spring
Agric. Science Elective 4

Fall - Second Year
ARE 211 Management in Agriculture 4
BA 215 Survey of Accounting 4
BI 101, 102 or 103 General Biology 4

Winter
EC 201A Intro to Microeconomics 4

Spring
BA 230 Business Law 4
EC 202A Intro to Macroeconomics 4

Electives 16-18
Additional courses in Animal Science, Crop Science, Fish and Wildlife.

90

ANIMAL SCIENCE

Faculty:
Rick Klampe, Jim Lucas, Bruce Moos

All of the lower-division transfer courses that a potential transfer student in Animal Science needs are available at LBCC. These courses provide the proper background for those wanting to further their educational goals. Valuable practical instruction assists students in meeting their objectives.

The Animal Science program is designed to be completed in two years. This assumes, however, that the entering student has been placed at or above the following levels on the College Placement Test: WR 121 English Composition and MTH 95 Intermediate Algebra. It is advisable to take the College Placement Test as early as possible. If developmental course work is required, it may take the student longer than two years to complete the program.

Associate of Science with a major emphasis in Animal Science

General Education Requirements 24

See graduation requires for Associate of Science degree.

The math, biological and physical science and four of the perspectives credits are met by the listed major requirements.

Major Requirements 60

Fall - First Year
AG 111 Computers in Agriculture. 3
ANS 121 Animal Science 4
CH 121 College Chemistry 5
MTH 111 College Algebra 5

Winter
ARE 221 Marketing in Agriculture 3
CH 122 College Chemistry 5

Spring
ANS 231 Livestock Evaluation 3
CH 123 College Chemistry 5
CSS 200 Principles of Crop Science 4

Fall - Second Year
ARE 211 Management in Agriculture 4
BI 101 General Biology *or*
BI 211 Biology 4

Winter
ANS 210 Feeds and Feed Processing 4
BI 102 General Biology *or*
BI 212 Biology 4
EC 201A Intro to Microeconomics 4

Spring
ANS 211 Applied Animal Nutrition 3

Electives 8
ANS 207 Careers in Animal Agriculture 1
ANS 215 Applied Beef Production 4
ANS 216A Applied Sheep Production 4
ANS 216B Applied Swine Production 4
ANS 220 Introductory Horse Science 4
BI 213 Biology 4

92

ANTHROPOLOGY

See Social Sciences.

ART

Faculty:
Doris Litzer, Judy Rogers, Sandra S. Zimmer

The Fine Art curriculum seeks to enable students to understand visual art. As a process of that understanding, students develop skills enabling them to express ideas through art.

Studio classes provide experience in drawing, painting, composition and color. Lecture courses in art history and understanding art embrace the realm of human experience presented through art. Historical and cultural perspective regarding visual expression is explored.

The Fine and Applied Arts Department has well-equipped studios to support instruction in design, drawing and painting. In addition, the department has a gallery for the exhibit of both student and professional art work. Facilities are handicapped accessible.

The department offers coursework leading to an Associate of Science degree with a major emphasis in Fine Art. This degree is designed for students seeking transfer as art majors. Students also may earn an Associate of Science degree with a major emphasis in Liberal Studies and a Fine Art concentration. (See Liberal Studies)

Associate of Science with a major emphasis in Fine Art

General Education Requirements 46
See graduation requirements for Associate of Science degree.
ART 204, 205, 206 Survey of Art History required.

Major Requirements 24
ART 115 Basic Design I: Composition 4
ART 116 Basic Design II: Color 4
ART 131 Drawing I 4
ART 132 Drawing II 4
ART 133 Drawing III 4
ART 234 Figure Drawing 4

Selectives (Painting) 8
(Select two courses):
ART 181 Intro to Painting 4
ART 225 Painting: Computer 3
ART 281 Painting 4
ART 294 Intro to Watercolor 4
ART 295 Watercolor II 4

***Electives 12**

90

* Additional courses in ceramics, fine art, graphic design and photography are recommended. (Ceramics courses are offered through the Benton Extended Learning Center in Corvallis.)

Students should check the requirements of the institution they plan on transferring to and consider their desired area of emphasis.

Associate of Science with a major emphasis in Liberal Studies: Art Concentration

General Education Requirements 46
See graduation requirements for Associate of Science degree.
ART 204, 205, 206 Survey of Art History required.

Liberal Arts Core Requirements 18
(See Liberal Studies)

Concentration Requirements 20
ART 115, 116 Basic Design I, II 8
ART 131, 132, 133 Drawing I, II, III 12

***Electives 6**

90

*Additional courses in fine art, photography and graphic design recommended.

AUTOMOTIVE TECHNOLOGY

An Associate of Science with a major emphasis in Automotive Technology is available through a special agreement. See Program Advisor.

BIOLOGICAL SCIENCES

Faculty:
Stephen Lebsack, Carolyn Lebsack, Richard Liebaert, Robert Ross, Charles Wert

In addition to offering the Associate of Science with a major emphasis in Biological Science degree, the Biology Department provides a variety of courses to meet the needs and interests of at least four groups of students: (1) Transfer students in majors other than science who take General Biology courses to meet their perspectives or science requirement for an Associate of Arts, Associate of Science or a Bachelor's degree. (2) Students who require specific biology courses in order to earn a degree or certificate. For example, students in the Nursing, Dental Assisting and Animal Technology programs are required to take courses such as Human Anatomy and Physiology, Integrated Basic Science, Nutrition or Microbiology. (3) Science majors in fields such as forestry, fisheries and wildlife, agriculture or pre-medicine, who complete their first two years at LBCC and then transfer to a four-year institution. These students enroll in required courses such as General Biology or Wildlife Conservation. (4) Students who have an avocational interest in biology and take courses such as Natural History and Nature Photography.

In biology courses, students learn to understand life processes, the diversity of life and the role and responsibility of humans in the natural environment. Most courses are laboratory- or field-oriented.

The Associate of Science Degree with a major emphasis in Biological Science is a lower division transfer program designed to assist students planning to complete their baccalaureate studies in a biological science at any four-year institution. The program is primarily designed, however, for those students intending to transfer to Oregon State University. Baccalaureate degrees may be earned in any of the following areas: Biology, Microbiology, Botany, Entomology, General Science or Zoology. Students completing the degree requirements will be prepared to enroll in upper division course work.

Associate of Science with a major emphasis in Biological Science

General Education Requirements 30
See graduation requirements for Associate of Science degree.
The mathematics, biological science and physical science requirements are met by the listed major requirements.

Major Requirements 59-62

Fall - First Year
CH 121 College Chemistry *or* 5
CH 221 General Chemistry 4

Winter
CH 122 College Chemistry *or* 5
CH 222 General Chemistry 4
MTH 111 College Algebra 5

Spring
CH 123 College Chemistry *or* 5
CH 223 General Chemistry 4
MTH 112 Trigonometry 5

Fall - Second Year
BI 211 Biology 4
CH 241 Organic Chemistry 4
MTH 251 Calculus 5

Winter
BI 212 Biology 4
BI 214 Cell and Molecular Biology 3
CH 242 Organic Chemistry 4

Spring
BI 213 Biology 4
CH 243 Organic Chemistry 4
MTH 252 Calculus 5

Electives 9
BI 231, 232, 233 Human Anat. and Physiology 4
BI 234, 235, 236 Microbiology 4
BI 251 Principles of Wildlife Conservation 3
BI 252 Wildlife Resources: Birds 3
GS 108 Oceanography 4
PH 201, 202, 203 General Physics 5
PH 211, 212, 213 General Physics/Calculus 5

98-101

BUSINESS ADMINISTRATION

(Oregon Transfer Degree)

Program Advisors:
Gerry Conner, Al Walczak

Faculty:
Maynard Chambers, Myrna Gusdorf, Ed Knudson, Wendy Krislen, Larry Schuetz, Andy VanderPlaat

This two-year program is recommended to prepare students for transfer into any of the major programs in Business Administration offered by any four-year college or university in Oregon. Students may complete requirements for the baccalaureate degree with two additional years of work. Students planning to transfer to any other four-year institution should contact the transfer curriculum advisor before enrolling in any courses.

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

Associate of Arts (Oregon Transfer) with an emphasis in Business Administration

All General Education Requirements are included below.

Fall - First Year

BA 101 Intro to Business	4
BA 131 Business Productivity Software	2
+BI 101 General Biology	4
MTH 111 College Algebra	5
WR 121 English Composition	3

Winter

BA 271 Information Technology in Business	3
+BI 102 General Biology	4
+HUM 100 Intro to Humanities	3
MTH 241 Math for Biological, Mgmt., Soc. Science	4
WR 122 English Composition	3

Spring

BA 206 Principles of Management	3
+BI 103 General Biology	4
MTH 245 Math for Biological, Mgmt., Soc. Science	4
SP 111 Fundamentals of Speech	3
WR 227 Technical Report Writing	3

Fall - Second Year

BA 211 Principles of Accounting I	3
BA 230 Business Law	4
EC 201 Principles of Economics I	3
+ENG 104 Intro to Literature: Fiction	3
+PE 180/185/190 Activity Class	1
+PHL 202 Elementary Ethics	3

Winter

BA 212 Principles of Accounting II	3
BA 275 Business Quantitative Methods	4
EC 202 Principles of Economics II	3
EC 215 Economic Development of the U.S. *or* EC 216 Intro to Labor Economics	3
+ENG 105 Intro to Literature: Drama	3
+PE 180/185/190 Activity Class	1

Spring

BA 213 Principles of Accounting III	3
BA 278 Intro to Management Science	4
EC 203 Principles of Economics III	3
+ENG 106 Intro to Literature: Poetry	3
+PE 180/185/190 Activity Class	1
Elective (minor)	3

103

+ Other classes may substitute. See Advisor.

BUSINESS ADMINISTRATION

Program Advisors:
Gerry Conner, Al Walczak

Faculty:
Maynard Chambers, Myrna Gusdorf, Ed Knudson, Wendy Krislen, Larry Schuetz, Andy VanderPlaat

This two-year program is designed for students who plan on transferring to Oregon State 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 Science with an emphasis in Business Administration.

Associate of Science with an emphasis in Business Administration

All General Education Requirements are included below.

Fall - First Year

BA 101 Intro to Business	4
BA 131 Business Productivity Software	2
+BI 101 General Biology	4
MTH 111 College Algebra	5
WR 121 English Composition	3

Winter

BA 271 Information Technology in Business	3
+BI 102 General Biology	4
MTH 241 Math for Biological, Mgmt., Soc. Science	4
PE 231 Lifetime Wellness	3
Electives (See Advisor)	3

Spring

Cultural Diversity	3
+GS 106 Physical Science *or* GS 107 Astronomy	4
MTH 245 Math for Biological, Mgmt., Soc. Science	4
SP 111 Fundamentals of Speech	3
WR 214 Business Communications	3

Fall - Second year

BA 211 Principles of Accounting I	3
BA 223 Principles of Marketing	3
BA 230 Business Law	4
EC 201 Principles of Economics I	3
Literature and the Arts	3

Winter

BA 206 Principles of Management	3
BA 212 Principles of Accounting II	3
BA 275 Business Quantitative Methods	4
EC 202 Principles of Economics II	3
EC 215 Economic Devel. in the US	3

Spring

BA 213 Principles of Accounting III	3
BA 278 Intro to Management Science	4
EC 203 Principles of Economics III	3
Elective	3
Western Culture	3

100

+ Other classes may substitute. See Advisor.

CHILD AND FAMILY STUDIES

(Oregon Transfer Degree)

Program Advisors:
Beth Hogeland, Liz Pearce-Smith, Bobbie Weber

Faculty:
Pam Dunn, Beth Hogeland, Liz Pearce-Smith, Bobbie Weber

This two-year program prepares students for transfer to any four-year college or university in Oregon offering programs in Early Childhood Education, Elementary Education or Human Development/Family Sciences. The curriculum leads to an Associate of Arts degree with an emphasis in Child and Family Studies. This Family Resources Department program is offered as part of the Human Resources Learning Community. For specific program information, see the "Human Resources Learning Community" section of this catalog.

CHILD AND FAMILY STUDIES

(Associate of Science)

Program Advisors:
Beth Hogeland, Liz Pearce-Smith, Bobbie Weber

Faculty:
Pam Dunn, Beth Hogeland, Liz Pearce-Smith, Bobbie Weber

This two-year program is for students who plan on transferring to Oregon State University to complete a baccalaureate degree in Human Development/Family Sciences. The curriculum leads to an Associate of Science degree with an emphasis in Child and Family Studies. Offered by the Family Resources Department, the program is part of the Human Resources Learning Community. For specific program information, see the "Human Resources Learning Community" section of this catalog.

COMPUTER SCIENCE

Program Advisor:
Peggy Weems

Faculty:
Peggy Weems, Kitson Yu

Computer Science is the study of programming, data storage and retrieval, and computing machinery and the interaction with people. Graphics, artificial intelligence, robotics and expert systems are some of the products of computer science. This is an exciting career area that affects many aspects of our lives.

The LBCC Computer Science program provides students with the first two years of a four-year degree program. Upon successful completion of these requirements, the student receives an Associate of Science degree with a major emphasis in Computer Science. Students enrolling in this program should have a strong aptitude for mathematics and the logic of problem solving.

Computer Science students need to decide where they will complete their four-year degree so that appropriate courses can be selected at Linn-Benton. The program is designed to be completed in two years. This assumes, however, that the entering student is prepared to take CS 133V Beginning Programming: Visual Basic, MTH 251 Calculus and WR 121 English Composition. If this is not the case, the student needs to allow extra time to complete this degree.

Associate of Science with a major emphasis in Computer Science

All General Education Requirements are included below.

Fall - First Year

CS 133V Beg. Programming: Visual BASIC	4
MTH 251 Calculus	5
WR 121 English Composition	3
Cultural Diversity	3
Literature and the Arts	3

Winter

BA 271 Information Technology in Business	3
CS 161 Intro to Computer Science I (C++)	4
MTH 252 Calculus	5
WR 122 English Composition	3
Elective	3

Spring

CS 162 Intro to Computer Science II (C++)	4
MTH 253 Calculus	4
PE 231 Lifetime Wellness	3
WR 227 Technical Report Writing	3
Social Processes and Institutions	3

Fall - Second Year

ENGR 201 Electrical Fundamentals	4
PH 211 General Physics/Calculus	5
Western Culture	3
+BI 101 General Biology	4

Winter

MTH 231 Elements of Discrete Mathematics I	4
PH 212 General Physics/Calculus	5
SP 111 Fundamentals of Speech	3

Spring

CS 261 Data Structures	4
ENGR 271 Digital Logic Design	4
MTH 232 Elements of Discrete Mathematics II	4
PH 213 General Physics/Calculus	5

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+ Other classes may substitute. See advisor.

CRIMINAL JUSTICE

Faculty:
Jerald Phillips

This Criminal Justice Program prepares students for transfer to any state of Oregon college or university baccalaureate program with a criminal justice emphasis. The curriculum leads to an Associate of Arts (Oregon Transfer) degree with an emphasis in Criminal Justice. General Education courses meet both the college AAOT requirements and the academic preparation suggested for transfer to a Criminal Justice baccalaureate degree program.

Criminal Justice students participate in the Human Resources Learning Community their first year and complete 42 credits of general education and six credits of Criminal Justice Distribution Requirements. The remaining 42 credits are completed in the second year, after consultation with the program advisor. See the "Human Resources Learning Community" section in this catalog.

ECONOMICS
(Oregon Transfer Degree)

Program Advisors:
Gerry Conner, Al Walczak

Faculty:
Maynard Chambers, Myrna Gusdorf, Ed Knudson, Wendy Krislen, Larry Schuetz, Andy VanderPlaat

This two-year program is recommended for students transferring into any of the major Economics programs offered by any four-year college or university in Oregon. Students may complete requirements for the baccalaureate degree with two additional years of work. Students planning to transfer to any other four-year institution should contact the transfer curriculum advisor before enrolling in any courses.

Associate of Arts (Oregon Transfer) with an emphasis in Economics

All general education requirements are included below.

Fall - First Year

BA 131 Business Productivity Software	2
+ENG 104 Intro to Literature: Fiction	3
MTH 111 College Algebra	5
+PE 231 Lifetime Wellness	3
WR 121 English Composition	3

Winter

BA 271 Information Technology in Business	3
+ENG 105 Intro to Literature: Drama	3
MTH 241 Math for Biol., Mgmt. & Soc. Science	4
WR 122 English Composition	3
Elective	3

Spring

*EC 115 Outline of Economics	4
+ENG 106 Intro to Literature: Poetry	3
+ HUM 100 Intro to Humanities	3
MTH 245 Math for Bio., Mgmt., Soc. Science	4
WR 123 English Composition	3

Fall - Second Year

+BI 101 General Biology	4
EC 201 Principles of Economics I	3
EC 216 Intro to Labor Economics	3
+PHL 202 Elementary Ethics	3
SP 111 Fundamentals of Speech	3

Winter

+BI 102 General Biology	4
EC 202 Principles of Economics II	3
EC 215 Economic Development of the U.S.	3
Electives	6

Spring

+BI 103 General Biology	4
EC 203 Principles of Economics III	3
EC 220 Contemporary U.S. Econ. Issues	3
+PSY 216 Social Psychology	3
Elective	3

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+ Other classes may substitute. See Advisor.
* If high school economics was taken, this will be waived.

ECONOMICS

Program Advisors:
Gerry Conner, Al Walczak

Faculty:
Maynard Chambers, Myrna Gusdorf, Ed Knudson, Wendy Krislen, Larry Schuetz, Andy VanderPlaat

This two-year program is recommended to prepare students for transfer into any of the major programs in Economics offered by Oregon State University. Students may complete requirements for the baccalaureate degree with two additional years of work. Students planning to transfer to any other four-year institution should contact the transfer curriculum advisor before enrolling in any courses.

Associate of Science with an emphasis in Economics

All general education requirements are included below.

Fall - First Year

+BI 101 General Biology	4
MTH 111 College Algebra	5
WR 121 English Composition	3
*Elective	3

Winter

BA 131 Business Productivity Software	2
+BI 102 General Biology	4
MTH 241 Math for Bio,/ Mgmt/Soc Science	4
+WR 227 Technical Report Writing	3
Cultural Diversity	3

Spring

BA 271 Information Technology in Business	3
+GS 106 Physical Science	4
MTH 245 Math for Bio,/Mgmt/Soc. Science	4
Literature/Arts	3
Elective	3

(Continued on next page)

Fall - Second Year
EC 201 Principles of Economics I 3
EC 216 Intro to Labor Economics 3
SP 111 Fundamentals of Speech 3
Electives (see advisor) 6

Winter
EC 202 Principles of Economics II 3
EC 215 Economic Development of the U.S. 3
+PE 231 Lifetime Wellness 3
Electives (see advisor) 6

Spring
EC 203 Principles of Economics III 3
EC 220 Contemporary U.S. Economic Issues 3
Electives (see advisor) 9

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+ Other classes may substitute. See Advisor.

* If high school economics was not taken, then EC 115 Outline of Economics should be taken instead of the elective.

EDUCATION

Faculty Advisors:
Marthajane Christensen, May Garland, Beth Hogeland, Liz Pearce-Smith, Gina Vee, Carolyn Wright

Education programs leading to certification by the state of Oregon are available only at four-year colleges and universities. Students may, however, complete the first two years of course work in Education at LBCC. The Teacher Standards and Practices Commission (TSPC) is the licensing agent for teachers in Oregon. Oregon college and university programs offer several different options leading to TSPC certification and to endorsements. Because of the differences in these programs, students are encouraged to identify at an early stage the school they hope to attend and to work closely with an advisor.

The Education Program at LBCC is offered as part of the Human Resources Learning Community. For specific program information, see the "Human Resources Learning Community" section of this catalog.

ENGINEERING TRANSFER

Advisor: David Kidd, John Sweet

The Engineering Transfer program provides a balanced pre-engineering curriculum to prepare students for transfer to a four-year program at the professional level. At the same time, the program offers an Associate of Science degree with a major emphasis in Pre-engineering. The curriculum for this degree program features a broad base of pre-engineering courses, a solid foundation in mathematics and the physical sciences and core requirements in general education. The curriculum meets the requirements for admission to the professional programs at most Oregon institutions.

Students entering the program with solid high school backgrounds in physics, chemistry and pre-calculus mathematics can expect to complete the program in two years. Students who need to pick up any pre-calculus mathematics after their arrival on campus should expect to spend more than two years in the program.

Associate of Science with a major emphasis in Engineering Transfer

General Education Requirements 46

See the graduation requirements for the Associate of Science degree.

SP 112 Introduction to Persuasion and WR 121 English Composition are required to transfer into a Professional Engineering Program.

Major Requirements 60*

Fall - First Year
CH 221 General Chemistry 4
ENGR 111 Engineering Orientation I 4
MTH 251 Calculus 5

Winter
CH 222 General Chemistry 4
ENGR 112 Engineering Orientation II 4
MTH 252 Calculus 5

Spring
MTH 253 Calculus 4

Fall - Second Year
ENGR 201 Electrical Fundamentals 4
ENGR 211 Statics 4
MTH 254 Calculus 4
PH 211 General Physics with Calculus 5

Winter
ENGR 212 Dynamics 4
PH 212 General Physics with Calculus 5

Spring
MTH 256 Applied Differential Equations 4

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* Students should select from the list of approved electives *(see below)* those courses that are required for admission, at the professional level, to the institution they plan to attend. In any case, sufficient selections must be made to bring the credit total to a minimum of 104. Oregon State University will accept a maximum of 108 transfer credit hours. Approved electives include:

BA 230 Business Law 4
BA 275 Business Quantitative Methods 4
BA 278 Intro to Management Science 4
CEM 263 Plane Surveying 3
CH 223 General Chemistry 4
CH 241 Organic Chemistry 4
CH 242 Organic Chemistry 4
CH 243 Organic Chemistry 4
CS 161 Intro to Computer Science I (C++) 4
CS 162 Intro to Computer Science II (C++) 4
ENGR 202 Electrical Fundamentals 4
ENGR 203 Electrical Fundamentals 4
ENGR 213 Strength of Materials 4
ENGR 245 Engineering Graphics and Design 4
ENGR 271 Digital Logic Design 4
MTH 255 Vector Calculus 4
MTH 265 Stats for Scientists & Engineers 4
PH 201 General Physics 5
PH 202 General Physics 5
PH 203 General Physics 5
PH 213 General Physics with Calculus 5

ENGLISH / FOREIGN LANGUAGES

Faculty:
English: Art Bervin, Beth Camp, Tom Chase, Paul Hagood, Linda Spain, Jane White
Spanish: Vera Harding

The English/Foreign Languages Department offers courses that encourage students to improve their writing; to read, analyze, evaluate and appreciate literature; and to develop fluency in a second language.

Students with an interest in creative writing and graphic arts may take a literary publications class and/or work with faculty advisors from the English and Fine and Applied Arts departments to produce LBCC's annual literary publication, *The Eloquent Umbrella.*

Students can apply classroom theory to the workplace by developing a Cooperative Work Experience (CWE) program that helps them satisfy degree requirements while gaining work experience related to their major. For example, students from technical and business writing classes have worked with local employers on writing projects.

Students may earn an Associate of Science degree with a major emphasis in Liberal Studies and a concentration in English: Literature or with a concentration in English: Creative Writing.

To major in Spanish, please see the Associate of Arts (Oregon transfer) degree in Liberal Studies (Bachelor of Arts Preparatory Option).

Associate of Science with a major emphasis in Liberal Studies: English Concentration

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Liberal Arts Core Requirements 18

(See Liberal Studies)

Concentration Requirements 27

(Select one option)

Literature Option ..... (27)

Choose two sequences of courses 18
ENG 107, 108, 109 Literature of Western World
ENG 204, 205, 206 Survey of English Literature
ENG 253, 254, 255 Survey of American Literature
Choose 3 credits from: 3
ENG 201, 202, 203 Shakespeare
Choose 6 credits from any literature courses 6

Creative Writing Option ..... (27)

Repeat each course for 6 credits:
WR 240 Personal Journal Writing (3) 6
WR 241 Intro to Imag. Writing: Fiction (3) 6
WR 242 Intro to Imag. Writing: Poetry (3) 6
WR 247 Literary Publication 3
Select 6 credits from any literature courses 6

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GEOGRAPHY

See Social Sciences.

HEAVY EQUIPMENT/ DIESEL TECHNOLOGY

An Associate of Science with a major emphasis in Heavy Equipment/Diesel Technology is available through a special agreement. See program advisor.

HISTORY

See Social Sciences.

HOME ECONOMICS

Advisors:
Beth Hogeland, Bobbie Weber

Home economists work to improve the quality of family life through the practical application of science and technology. They learn to use skills from a wide variety of disciplines, from art to science to communications. They may choose to specialize in such diverse careers as textile design, child and family studies or food systems management. Throughout this multi-disciplinary field runs a common thread: a real concern for the family as it faces the challenges of a changing world. A large number of areas of concentration exist in the field of Home Economics. Degree requirements vary according to the area of concentration chosen. Four-year programs may require specific general education courses as prerequisites for upper division course work. Students who make an early identification of the college or university to which they plan to transfer can ease the transfer process by choosing carefully their associate degree course work.

Students interested in Home Economics are encouraged to participate in the Human Resources Learning Community as freshmen. The Child and Family Studies degree programs are embedded in the Human Resources Learning Community. For specific information, see the "Human Resources Learning Community" section of this catalog.

Associate of Science with a major emphasis in Home Economics

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Requirements for all Home Economics Majors 10

FN 225 Nutrition 4
HDFS 200 Human Sexuality 3
HDFS 201 Individual and Family Development 3

Requirements dependent upon area of concentration 34

90

HUMAN PERFORMANCE

Faculty:
Brad Carman, Arlene Crosman, Randy Falk, Richard Gibbs, Greg Hawk, Louise Muscato

The Health and Human Performance Department offers an Associate of Science Degree for students planning to transfer to a four-year program to earn a baccalaureate degree in the area of physical education or human performance. Career options include physical education, fitness program management, physical education for the disabled, pre-therapy, sports leadership, coaching, or applied exercise and sports science.

The Health and Human Performance 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 enhance overall wellness.

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 competition.

The department has excellent indoor and outdoor facilities to support exercise, physical education activities and athletics. A fully equipped, double-court gymnasium is located in the Activity Center as well as a weight training room. Complete shower facilities are available for men and women. Outside are two baseball diamonds, a complete track facility, tennis courts and four outdoor sand volleyball courts. The department also utilizes non-college facilities for activities such as swimming and bowling.

Intercollegiate athletics are offered in men's and women's basketball, men's baseball, women's volleyball, and men's and women's track and field.

Associate of Science with a major emphasis in Human Performance

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Students are encouraged to include the following courses:

SP 111 Fundamentals of Speech and PE 231 Lifetime Wellness required for the Skills component.

BI 101 and BI 102 General Biology required for biology Perspectives component.

CH 121 College Chemistry required for physical science Perspectives component.

Program Requirements 21

HE 250 Personal Health 3
HE 252 First Aid 3
PE 131 Intro to Health & Physical Education 3

Professional Courses: 12

PE 194A Prof. Act.: Basketball/Volleyball . 2
PE 194C Prof. Act.: Golf/Tennis 2
PE 194E Prof. Act.: Swimming 2
PE 194F Prof. Act.: Track 2
PE 194H Prof. Act.: Weight Training/Aerobic Fitness 2
PE 194J Prof. Act.: Racquet Games 2

Required Support Course 4

BI 103 General Biology 4

Selective Support Courses 19

(Select 19 credits from the following courses)

*BI 231, 232, 233 Human Anatomy & Phys. .. 12
CH 122, 123 College Chemistry 10
FN 225 Nutrition 4
HE 151 Drugs in Society 3
HE 201 A Living Look at Death 3
HE 204 Exercise and Weight Management 3
HE 207 Stress Management 3
HE 220 Intro to Epidemiology/Health Data Analysis 3
HE 222 Consumer Health Issues of the '90s 3
HE 253 Trends in AIDS and Sexually Transmitted Diseases 3
HE 263 Psychosocial Dimensions of Health 3
PE 180, 185, 190 (Selective Areas of Need) 1
PE 207 Sports Officiating 2-6
PE 232 Backpacking 3
PE 280 CWE Physical Education/Health 2-14
PE 299 Care & Prevention of Athletic Injuries ... 3
PSY 231 Human Sexuality *or* HDFS 20 Human Sexuality 3
PSY 236 Human Development: Adult 3

90

* Recommended for students intending to transfer to Western Oregon State College.

HUMAN SERVICES

Program Contact:
Gina Vee

The Human Services program prepares students for transfer to any four-year college or university in Oregon offering programs in Human Services, Psychology, Social Work or Gerontology. The curriculum leads to an Associate of Arts degree with an emphasis in Human Services. General education courses may be selected that meet both the college Associate of Arts (Oregon Transfer) requirements and the academic preparation recommended at the transferring institution. Major requirements give students practical experience and academic preparation in the Human Services field.

For specific program information, see the "Human Resources Learning Community" section of this catalog.

JOURNALISM AND MASS COMMUNICATIONS

Faculty:
Rich Bergeman

The Journalism and Mass Communications program emphasizes writing for the print media and serves a two-fold purpose: to prepare students for transfer to a four-year college or university and to provide entry-level skills to those who want to change careers.

Students enrolled in the journalism program at LBCC have the opportunity to participate on the staffs of *The Commuter*, the college's weekly student newspaper, and other publications. Cooperative Work Experience (CWE) offers additional on-the-job learning opportunities on and off campus. Facilities for the program include a computer-equipped newsroom and production lab. Photography classes are supported by a series of fully equipped instructional darkrooms and electronic imaging labs. Besides the cost of books, students may expect to spend about $75 for photographic materials.

Students who intend to pursue a bachelor's degree can choose between two associate degree programs at LBCC: the Associate of Science or the Associate of Arts (Oregon Transfer).

Those planning to transfer to the University of Oregon should pursue the Associate of Arts degree in journalism, with an emphasis in Liberal Studies, and include within their Bachelor of Science Preparatory Option the following courses: JN 216 News Reporting and Writing and JN 224 Mass Media and Society. See the "Liberal Studies (Oregon Transfer) section" for complete degree requirements.

Students planning to transfer to Oregon State University, or to any other college without a complete bachelor's degree program in journalism, should pursue the Associate of Science in Journalism and Mass Communications at LBCC. This transfer degree program is designed to complement a baccalaureate degree in the liberal arts at any of Oregon's colleges and universities. At OSU, for example, LBCC journalism graduates can pursue a Bachelor of Science in Liberal Studies and specialize in writing, communications and/or photography.

In all cases, students should consult with their advisor at LBCC and make early contact with an advisor at the institution to which they plan to transfer.

Associate of Science with a major emphasis in Journalism and Mass Communications

All General Education requirements are included below:

Fall-First Year

JN 215A Journalism Lab	1
JN 216 News Reporting and Writing	3
JN 224 Media and Society	3
PHO 261 Intro to Photography	3
WR 121 English Composition	3

Winter

+ENG 104 Intro to Literature: Fiction	3
JN 134 Intro to Photojournalism	3
JN 215A Journalism Lab	1
JN 215B Design and Production Lab	2
PE 231 Lifetime Wellness	3
+Elective	3

Spring

AA 229 Electronic Imaging I	3
+HST 203 History of U.S.	3
JN 215A Journalism Lab	1
JN 215B Design and Production Lab	2
JN 217 Feature Writing	3
+SP 112 Intro to Persuasion	3

Fall-Second Year

+BI 103 General Biology: Environment	4
JN 215B Design and Production Lab	2
+PS 201 American Government	3
WR 122 English Composition	3
Elective	3

Winter

+CJ 120 Intro to Judicial Process	3
+GS 106 Physical Science	4
MTH 105 Intro to Contemporary Mathematics *or* MTH 111 College Algebra	4-5
JN 280 Cooperative Work Experience	3
+Elective	3

Spring

+ART 102 Understanding Art	3
+GEOG 202 World Regional Geography	3
+GS 107 Astronomy	4
JN 218 Copy Editing and Page Design	3
PS 203 American Government	3

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+Other courses may substitute. See advisor.

LIBERAL STUDIES
(Oregon Transfer Degree)

Liberal Studies is an interdepartmental curriculum offering students a broad, general education that provides flexibility and a good foundation for a variety of career options. Programs in liberal studies prepare students for transfer to four-year colleges and universities and develop the reading, writing and critical/analytical thinking skills necessary in any career.

Both the Associate of Arts Oregon Transfer (AAOT) and the Associate of Science degrees are supported by emphases within the liberal arts. Both degree programs are organized to provide appropriate options for students intending to earn a Bachelor of Arts or a Bachelor of Science degree from a four-year college or university.

Completion of the AAOT degree with an emphasis in Liberal Studies will satisfy all institutional lower division general education requirements at any Oregon State System of Higher Education college or university.

Associate of Arts (Oregon Transfer) with an emphasis in Liberal Studies

General Education Requirements 65-73

See graduation requirements for Associate of Arts (Oregon Transfer) degree.

Program Requirements

(Select one option below):

Bachelor of Arts Preparatory Option 24

SPN 101, 102, 103 First-year Spanish	12
SPN 201, 202, 203 Second-year Spanish*	12

*May be applied to General Education Requirements

Bachelor of Science Preparatory Option . 21

Credits selected from anthropology, art, creative writing, criminal justice, geography, history, humanities, journalism, literature, music, philosophy, political science, psychology, religion, sociology, theatre.

Additional Electives to total 90 credits

90

LIBERAL STUDIES

Liberal Studies is an interdepartmental curriculum offering students a broad, general education that provides flexibility and a good foundation for a variety of career options. Programs in liberal studies prepare students for transfer to four-year colleges and universities and develop the reading, writing and critical/analytical thinking skills necessary in any career.

Both the Associate of Arts Oregon Transfer (AAOT) and the Associate of Science degrees are supported by emphases within the liberal arts. Both degree programs are organized to provide appropriate options for students intending to earn a Bachelor of Arts or a Bachelor of Science degree from a four-year college or university.

The Associate of Science degree with an emphasis in liberal studies is intended especially to facilitate transfer to Oregon State University's College of Liberal Arts. Although AS degree credits transferred to OSU are accepted on a course-by-course basis, it is expected that students who complete this degree will have completed all of OSU's lower-division baccalaureate core requirements as well as additional CLA liberal arts core requirements.

The liberal studies AS degree consists of three sets of requirements: institutional general education requirements, liberal studies core requirements and program requirements. No course can be used to meet more than one requirement.

Associate of Science with a major emphasis in Liberal Studies

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Liberal Studies Core 18

(select from list below*)
Fine Arts 3
Humanities 3
Non-western Culture 3
Social Sciences 3
6 additional credits from 2 areas above 6

***Liberal Studies Core List**

Fine Art:
ART 102, 115, 116, 131, 132, 133, 154, 181, 204, 205, 206, 234, 281, 282, 294, 295, 296
MP 115/215, 122/222, 141/241
MUS 105, 161, 205
SP 229
TA 111, 114, 121, 122, 123, 124, 125, 161, 162, 163, 180/282, 185/285
WR 241, 242

Humanities:
ENG 104, 105, 106, 107, 108, 109, 121, 201, 202, 203, 204, 205, 206, 207, 208, 209, 211, 253, 254, 255, 260, 261, 275
HST 101, 102, 103, 201, 202, 203
HUM 100
PHL 201, 202, 215
R 101, 102, 103, 211, 212

Non-western Culture:
ANTH 210, 232
ENG 207, 208, 209
GEOG 202, 203, 204
HST 157, 158, 159
R 103

Social Science:
ANTH 101, 102,103, 107, 232
EC 115, 201, 202, 203, 201A, 202A, 215, 216, 220
GEOG 190, 202, 203, 204
HDFS 200, 201, 225
PS 104, 201, 202, 203, 205, 206, 207, 220, 252
PSY 101, 200, 205, 215, 231, 235, 236, 237
SOC 204, 205, 206, 214, 221, 222, 244

*Additional courses may have been approved since this catalog was published. Check with counseling or the Liberal Arts and Human Performance Division office for current list.

Program Options

(Select one option)

❑ Bachelor of Arts Preparatory Option (24)

SPN 101, 102, 103 First-year Spanish 12
SPN 201, 202, 203 Second-year Spanish 12

❑ Bachelor of Science Preparatory Option

Select either the Major Subject Program or the Interdisciplinary Program.

Major Subject program:

Complete major subject program requirements listed under one of the following catalog headings: English, Fine Art, Music, Social Science, Theatre or Speech Communications.

Interdisciplinary Program (21)

Credits selected from anthropology, art, creative writing, criminal justice, geography, history, humanities, journalism, literature, music, philosophy, political science, psychology, religion, sociology, theatre.

Electives (As necessary to total not less than 90 credits)

90

MATHEMATICS

Faculty:
Judy deSzoeke, Rob Lewis, Elizabeth Lundy, Ron Mason, Roger Maurer, Ann Mills, Lynn Trimpe, Bob Ulrich, Betty Westfall

The Mathematics Department offers a full complement of courses for transfer students and provides service courses for students in the college's technical and professional programs. The department also offers developmental courses for students with little mathematics background or who are returning to school. The department participates in the operation of the Learning Center, which features individualized assistance for math students. The department also operates a computer lab, which provides support for a variety of courses in math, engineering, physics, agricultural science and others.

The Mathematics Department offers a two-year Associate of Science degree with a major emphasis in mathematics designed for students who plan to transfer to a four-year institution to complete a baccalaureate degree in mathematics. This program provides those students with a solid foundation in mathematics and physics. Students entering the program with a strong high school mathematics and science background can expect to complete the program in two years. Students who must take pre-calculus mathematics courses should expect to spend more than two years in the program.

Associate of Science with a major emphasis in Mathematics

General Education Requirements 34

See graduation requirements for Associate of Science. The mathematics and physical science requirements are met by the listed major requirements.

Major Requirements 52

Computer Science 3
(A programming course approved by the department.)
MTH 231 Elements of Discrete Math 4
MTH 251, 252, 253, 254 Calculus 18
MTH 255 Vector Calculus 4
MTH 256 Applied Differential Equations 4
MTH 265 Stats for Scientists & Engineers 4
PH 211, 212, 213 General Physics w/ Calculus . 15

Electives 8-12

BA 211, 212, 213 Principles of Accounting 9
BI 101, 102, 103 General Biology 12
BI 211, 212, 213 Biology 12
CH 121, 122, 123 College Chemistry 15
CH 221, 222, 223 General Chemistry 12
CS 161, 162 Computer Science (C++) 8
EC 201, 202, 203 Principles of Economics 9
EC 201A Intro to Microeconomics 4
EC 202A Intro to Macroeconomics 4
GS 104 Physical Science 4
GS 107 Astronomy 4
GS 108 Oceanography 4
MTH 111 College Algebra 5
MTH 111T College Algebra: Technical 5
MTH 112 Trigonometry 5
MTH 112T Trigonometry: Technical 5
MTH 116 Calculus Preparation 5
MTH 150 Intro to Statistics 4
MTH 232 Elements of Discrete Math 4
MTH 241 Math for Biol./Mngmn.t/Soc. Sciences 4
MTH 245 Math for Biol./Mngmnt./Soc.Sciences 4

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MUSIC

Faculty:
Hal Eastburn, Gary Ruppert

The Performing Arts Department offers students a variety of academic and performance opportunities in music. Certain courses in music support general education degree requirements in the arts. Group classes are offered in voice and piano, and individual lessons are available for many instruments and voice.

Students may participate in any of several performance groups: Concert Choir; Chamber Choir; Community Chorale and instrumental performance groups in conjunction with the Music Department at Oregon State University.

The Performing Arts Department supports the Associate of Science degree with a major emphasis in Liberal Studies and a concentration in music. (Also see Liberal Studies)

Associate of Science with a major emphasis in Liberal Studies: Music Concentration

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Liberal Arts Core Requirements 18

(See Liberal Studies)

Concentration Requirements 16-19

MUS 101 Music Fundamentals 3
MUS 105 Intro to Rock Music 3
MUS 131 Group Piano I 2
MUS 134 Group Voice I 2
MUS 161 Music Appreciation 3
At least 3 terms of performance classes from list below 3-6
Concert Choir, Community Chorale, Chamber Choir, Symphonic Band, Marching Band, Concert Band, Symphony Orchestra

Electives
(Additional electives to total not less than 90 credits. Select from MUS, MP or TA prefixes.)

90

PHILOSOPHY

See Social Science.

PHYSICAL SCIENCES

Faculty:
David Benson, John Griffith, John Kraft, Raymond David Perkins

The Physical Science Department offers professional, technical and transfer courses in physics, chemistry, astronomy and general science.

POLITICAL SCIENCE

See Social Sciences.

PSYCHOLOGY

See Social Sciences and Human Resources: Learning Community.

PUBLIC HEALTH AND HEALTH EDUCATION

Faculty:
Brad Carmen, Arlene Crosman, Richard Gibbs, Louise Muscato

This two-year program is for students who plan on transferring to a four-year institution to complete a degree in Public Health or Health Education. The program is designed for students who want a non-clinical profession in public health or health promotion, environmental health, occupational safety, child and adolescent health, addiction studies, community health, gerontology or health care administration.

The Public Health and Health Education curriculum leads to an Associate of Science degree with an emphasis in Public Health and Health Education.

Associate of Science with a major emphasis in Public Health and Health Education

General Education Requirements 44

See graduation requirements for Associate of Science degree. *(Students are encouraged to include the following courses.)*

Writing I 3
WR 121 English Composition
Writing II 3
JN 216 News Reporting and Writing
WR 122 English Composition
WR 123 English Composition
WR 123C English Composition: Computer
WR 214 Business Communications
WR 227 Technical Report Writing
Speech 3
SP 111 Fundamentals of Speech
Fitness 3
PE 231 Lifetime Wellness

Mathematics 4
MTH 105 Intro to Contemporary Math or higher level
Perspectives:
Physical Science
CH 121 College Chemistry 5
Biological Science
BI 101 General Biology 4
Biological or Physical Science
BI 102 General Biology 4
Cultural Diversity 3
Literature and the Arts 3
Social Processes and Institutions 3
Western Culture 3
Elective 3

Program Requirements 31
BI 103 General Biology 4
HE 220 Intro to Epidemiology/Health Data 3
HE 250 Personal Health 3
HE 252 First Aid 3
HE 263 Psychosocial Dimensions of Health 3
PE 131 Intro to Health and Physical Education . 3

Select 12 credits:
ANTH 103 Intro to Cultural Anthropology 3
BI 231,232, 233 Human Anatomy and Physiology ... 4
BI 234 Microbiology 4
CH 121, 122 College Chemistry ..... 5 *or*
CH 221, 222 General Chemistry 4
FN 225 Nutrition 4
PSY 200 Psychology as a Natural Science 4
SOC 204 General Sociology 3

Selective Support Courses 19
(Select 19 credits from the following courses)
BI 231 Human Anatomy and Physiology 4
BI 232 Human Anatomy and Physiology 4
BI 233 Human Anatomy and Physiology 4
CH 122 College Chemistry 5
CH 123 College Chemistry 5
FN 225 Nutrition 4
HE 151 Drugs in Society 3
HE 201 A Living Look at Death 3
HE 204 Exercise and Weight Management 3
HE 205 Diet and Nutrition in the Nineties 3
HE 207 Stress Management 3
HE 222 Consumer Health Issues of the '90s 3
HE 253 Trends in AIDS and Sexually Transmitted Diseases 3
HE 280 CWE Health 2-14
HE 298 Men's Health Issues 3
HE 298 Women's Health Issues 3
PSY 231 Human Sexuality *or* HDFS 200 Human Sexuality 3
PSY 236 Human Development: Adult 3

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RELIGION

See Social Sciences.

SOCIAL SCIENCES

Faculty:
James Bell ..... Anthropology/Geography
Doug Clark ..... History/Political Science
Max Lieberman .. Sociology
Jerald Phillips ..... Sociology/Criminal Justice
Gina Vee ..... Psychology/Sociology
Michael Weiss .... History
Carolyn Wright .. Psychology

In general, social science is the field of human knowledge that deals with all aspects of the individual and group life of men and women. Considered separately, the social sciences include a variety of specialized ways of looking at the world: anthropologists study the evolution of human beings and their ways of life; geographers describe the planet and concern themselves with distribution of population, economic conditions, ecological systems and the interaction between humans and their environment; historians seek to understand the present by analyzing the complexities of the past; political scientists explore the nature of government and the uses of power; psychologists are concerned with individual behavior and development; philosophers probe issues of truth, goodness and beauty; religionists examine how faith has expressed itself among groups and individuals; while sociologists consider group behavior and the structure of society.

Social science is a practical field for both the short term and the long run. It provides a valuable background for people interested in social and civil services, law, education, journalism, government and business and for those pursuing undergraduate and graduate degrees in the humanities and the specialized fields of the social sciences.

Because all aspects of human culture are related and interdependent, the LBCC social science curriculum is designed to provide students with a broad and integrated picture of the nature of human society along with some understanding of the major forces operating within it. The Social Science Department supports the Associate of Science degree with a major emphasis in Liberal Studies and a concentration in Social Science with options in Behavioral Studies, American Studies and International/Intercultural Studies.

Behavioral Studies Option: Behavioral studies deal chiefly with the mind and personality of the individual, the relationship between men's and women's biological traits and their socially acquired characteristics, and the social interaction of individuals with one another and with groups.

American Studies Option: American studies deal with the culture, the development and the character of the United States and the Western Hemisphere, as well as contemporary social, economic and political problems and possibilities.

International/Intercultural Studies Option: International/intercultural studies deal chiefly with the study of ourselves as a part of a larger world consisting of a variety of culture and social systems that profoundly shape the nature of cooperation and conflict on the planet.

Associate of Science with a major emphasis in Liberal Studies: Social Science Concentration

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Liberal Arts Core Requirements 18

(See Liberal Studies)

Concentration Requirements 21

(Complete 21 credits in one area listed below, including at least one 9-credit sequence.*)

❑ Behavioral Studies Option ..... (21)

ANTH 101 Intro to Physical Anthropology 3
CJ 101 Intro to Criminology 3
CJ 201 Juvenile Delinquency 3
CJ 202 Social Problems: Violence and Aggression .. 3
PHL 201 Intro to Philosophy 3
PS 207 Intro to Political Science 3
PSY 101 Psychology and Human Relations 3
PSY 200, 205 General Psychology ..... (8)
PSY 215 Intro to Developmental Psychology **or**
HDFS 201 Individual and Family Development 3
PSY 216 Social Psychology 3
PSY 231 Human Sexuality ***or***
HDFS 200 Human Sexuality 3
*PSY 235 Human Development: Child ***or***
HDFS 225 Child Development 3
*PSY 236 Human Development: Adult 3
*PSY 237 Human Development: Aging 3
*SOC 204, 205, 206 General Sociology ..... (9)
SOC 222 Marriage Relations 3

❑ American Studies Option ..... (21)

ANTH 232 Native North Americans 3
*HST 201, 202, 203 United States History ..... (9)
PS 104 Problems in American Politics 3
*PS 201, 202, 203 American Government ..... (9)
PS 220 U.S. Foreign Policy 3
PS 252/CJ 226 Constitutional Law 3
SOC 206 General Sociology 3

❑ International/Intercultural Studies Option ..... (21)

*ANTH 101 Intro to Physical Anthropology 3
*ANTH 102 Intro to Archaeology/Prehistory 3
*ANTH 103 Intro to Cultural Anthropology 3
ANTH 210 Comparative Cultures 3
*GEOG 202, 203, 204 World Regional Geography...(9)
*HST 101, 102, 103 Western Civilization ..... (9)
*HST 157 History of the Middle East and Africa 3
*HST 158 History of Latin America 3
*HST 159 History of Asia 3
PHL 201 Intro to Philosophy 3
PHL 202 Elementary Ethics 3
PHL 215 History of Western Philosophy 3
PS 205 International Relations 3
PS 206 Comparative European Governments 3
PS 207 Intro to Political Science 3
PS 220 U.S. Foreign Policy 3
R 102 Religions of the Western World 3
R 103 Religions of the Eastern World 3

Selectives 6

(Select 6 credits from the two areas not selected as the major area of concentration, a minimum of 3 credits from each area. Three of these credits may be taken as CWE Social Science Internship.)

*Identifies courses that comprise elements of a 9-credit sequence.

SOCIOLOGY

See Social Sciences

SPANISH

See English/Foreign Languages

SPEECH COMMUNICATIONS

Faculty: Jane Donovan, George Lauris, Gary Ruppert

The Performing Arts Department offers a broad perspective background in speech communications. Courses in speech communications support institutional general education degree requirements in communication as well as offering a broad base of opportunity for students interested in pursuing fields of study in communication, media and public relations.

The Performing Arts Department offers the Associate of Science degree with a major emphasis in Liberal Studies and a concentration in Speech Communications.

Associate of Science with a major emphasis in Liberal Studies: Speech Communication Concentration

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Liberal Arts Core Requirements 18

See Liberal Studies.

Speech Communication Concentration Requirements 21

Choose six credits from:
SP 111 Fundamentals of Speech ***and***
SP 112 Introduction to Persuasion ***or***
SP 218 Interpersonal Communication 6
(Cannot use the same course that is used to fulfill the General Ed. Requirement.)

JN 224 Media & Society 3
SP 219 Small Group Communication 3
SP 229 Oral Interpretation of Literature 3
SP 237 Communication and Gender 3
TA 121 Fundamentals of Acting I ***or***
TA 125 Improvisation 3

Additional electives to total not less than 90 credits

THEATRE

Faculty:
Jane Donovan, George Lauris, Bruce Peterson, Gary Ruppert

The Performing Arts Department offers students a variety of academic and performance opportunities in the area of theatre. Theatre courses, such as Introduction to Theatre, may be applied to requirements in arts and letters; courses such as Fundamentals of Acting and Improvisation are intended for students seeking to gain performance and communication skills. Credit opportunities also are available in technical theatre.

Most department performances are held in the fully equipped Takena Theatre. The department also makes use of The Loft Theatre, a converted classroom in Takena Hall, for reader's theatre, chamber theatre and other small theatre performances.

The Performing Arts Department offers the Associate of Science degree with a major emphasis in Liberal Studies and a concentration in theatre. (See Liberal Studies.)

Associate of Science with a major emphasis in Liberal Studies: Theatre Concentration

General Education Requirements 46

See graduation requirements for Associate of Science degree.

Liberal Arts Core Requirements 18

See Liberal Studies.

Theatre Concentration Requirements 27

Choose one of the following sets:
TA 121, 122, 125 Acting I, II and Improvisation 9
or
TA 161, 162, 163 Fundamentals of Technical Theatre 12

Choose 6 credits from:
TA 180/282 Rehearsal and Performance
and/or
TA 185/285 Production Workshop 6

Additional courses selected from TA, MUS or MP prefixes to total 27 credits for the Theatre Concentration:

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HUMAN RESOURCES LEARNING COMMUNITY

Dean: John Berg, Business, Training and Health Occupations Division
Dean: Ann Smart, Extended Learning and Information Services Division
Dean: Ed Watson, Liberal Arts and Human Performance Division
Dean: Pete Scott, Science and Industry Division
Dean: Student Services Division

HUMAN RESOURCES

Program Contacts:

Child and Family Studies ..... Beth Hogeland (541)917-4911
Criminal Justice ..... Jerry Phillips (541)917-4560
Education ..... May Garland (541)917-4699
Human Services ..... Gina Vee (541)917-4549
Career Advising ..... Marthajane Christensen (541)917-4780

Faculty:
Art Bervin, Tom Chase, Marthajane Christensen, Doug Clark, Kathy Clark, Jane Donovan, Mike Hoaglum, Beth Hogeland, May Garland, Rob Lewis, Jerry Phillips, Mimi Schaefer, Gina Vee, Carolyn Wright

The Human Resources Program offers lower division college transfer preparation leading to the Associate of Arts (Oregon Transfer) degree as well as a variety of other degrees and certifications for individuals interested in careers in Child and Family Studies, Criminal Justice, Education and Human Services.

Human Resources Core. During the first year, all students participate in a learning community for the common core of courses that fulfill the general education requirements for speech, writing, math, English, social sciences and humanities. The integrated curriculum gives students a unique opportunity to develop college-level basic skills in the context of career interest areas. Students participate in both classroom and field learning experiences. Group assignments, as well as traditional individual work, enhance the student's abilities to work with diverse populations in their chosen careers.

Human Resources Professional Program. The second year of the program will be available beginning in 1997-98. Students who successfully complete the first-year core experience go on to fulfill general education requirements in the biological and physical sciences and in physical education, along with specific program courses in their career areas.

Learning Community Experience. All students receiving a certificate or degree in one of the Human Resources fields must participate in a learning community. Students who cannot attend school full time should see an advisor about alternative learning community arrangements.

CHILD AND FAMILY STUDIES
(Oregon Transfer Degree)

Program Contact:
Beth Hogeland

Faculty:
Beth Hogeland, Liz Pearce-Smith, Bobbie Weber

This Family Resources Department program prepares students for transfer to any four-year college or university in Oregon that offers programs in Early Childhood Education, Elementary Education or Human Development/Family Sciences. The curriculum leads to an Associate of Arts degree with an emphasis in Child and Family Studies. General education courses may be chosen that meet both LBCC's Associate of Arts (Oregon Transfer) requirements and the academic preparation suggested by the Oregon Office of Teacher Standards and Practices. Major requirements provide students practical experience planning and implementing curricular activities with young children.

Associate of Arts with an emphasis in Child and Family Studies

General Education Requirements 58

Students participate in the Human Resources Learning Community during their first year and complete 42 credits of General Education Requirements. The remaining 16 credits are completed in the second year.

Learning Community Process Requirements..6

Major Requirements 9

ED 209A Theory and Practicum 3
HDFS 225 Child Development *or*
PSY 235 Human Development: Child 3
HDFS 248 Learning Experiences with Children..3

Teacher Preparation Electives 17

Students preparing to teach in public schools should work with an advisor to choose courses that meet certification guidelines.

Students may choose to earn the one-year certificate for Educational Assistant. The following courses are part of that program:

ED 101 Observation and Guidance 3
ED 102 Practicum 3
ED 103A Advanced Practicum 3
ED 179 Literature, Science and Math *or*
PSY 212 Psychology of Learning 3
ED 282 Working w/Children w/Special Needs . 3

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CHILD AND FAMILY STUDIES
(Associate of Science degree)

Program Contact:
Beth Hogeland

Faculty:
Beth Hogeland, Liz Pearce-Smith, Bobbie Weber

This Family Resources Department program is designed for students who plan to transfer to Oregon State University to complete a baccalaureate degree in Human Development/ Family Sciences. The curriculum leads to an Associate of Science degree with an emphasis in Child and Family Studies. For those students interested in pursuing a Master's of Arts in Teaching (MAT) in Education at OSU, general education requirements may be chosen that meet both the Associate of Science degree requirements and the academic preparation suggested by Oregon's Office of Teacher Standards and Practices. Major requirements prepare students to work with children and families and provide practical experience planning and implementing curricular activities with young children.

Associate of Science with an emphasis in Child and Family Studies

General Education Requirements 46

Students participate in the Human Resources Learning Community for their first year and complete 37 credits of general education. They must complete nine additional hours of general education during the second year.

Learning Community Process Requirements.....11

Major Requirements 19

ED 209A Theory and Practicum
FN 225 Nutrition 4
HDFS 200 Human Sexuality 3
HDFS 222 Partner and Family Relationships 3
HDFS 225 Child Development 3
HDFS 248 Learning Experiences with Children .. 3

Electives 14

These credits should be chosen in consultation with an advisor.

Students may choose to earn the one-year certificate for Educational Assistant. The following courses are part of that program:
ED 101 Observation and Guidance 3
ED 102 Practicum 3
ED 103 Advanced Practicum 3
ED 179 Literature, Science and Math *or*
PSY 212 Psychology of Learning 3
ED 282 Working w/Children w/Special Needs 3

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CHILD AND FAMILY STUDIES

(Associate of Applied Science)

Program Contact:
Beth Hogeland

Faculty:
Beth Hogeland, Liz Pearce-Smith, Bobbie Weber

This Family Resources Department program is designed for students who plan to enter the workforce upon completing the degree. Graduates may work with children and families in a variety of settings, including childhood care, education and social services. Teachers of young children may work in child care centers, family child care homes, Head Start programs, parent cooperatives or public schools. They plan and implement developmentally appropriate learning experiences in music, science, art, math and language arts. They also design indoor and outdoor environments, keep children's records and confer with parents. Graduates employed in public school may work with students in grades K-12 and with students with learning disabilities and other special needs. Graduates also may work as program and social service aides. With experience, they can become case managers and social service workers. Graduates may elect to complete an additional 14 hours of general education courses and earn a transfer degree.

Associate of Applied Science with an emphasis in Child and Family Studies

General Education Requirements 51

Students participate in the Human Resources Learning Community their first year and complete 42 credits of general education. The remaining 9 credits are completed in the second year.

Learning Community Process Requirements 6

Students who enroll in this program after completing a one-year certificate in Child and Family Studies or Educational Assistant do not have to meet these requirements.

Major Requirements.....36

Fall Term - Second Year
ED 101 Observation and Guidance 3
ED 152 Creative Activities 3
HDFS 222 Partner and Family Relationships 3
HDFS 225 Child Development 3

Winter Term
ED 102 Practicum 3
HDFS 248 Learning Experiences with Children .. 3
HDFS 285 Prof. Issues in Child/Family Studies .. 3

Spring Term
ED 103 Advanced Practicum 6
ED 179 Literature, Science and Math 3
ED 282 Working w/ Children w/Special Needs ... 3
HDFS 257 Family, School and Community 3

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CRIMINAL JUSTICE

(Oregon Transfer Degree)

Program Contact:
Jerald Phillips

This Criminal Justice Program prepares students for transfer to any Oregon college or university baccalaureate degree program with a Criminal Justice emphasis. The curriculum leads to an Associate of Arts degree with an emphasis in Criminal Justice. General education courses are chosen in a way that meets LBCC Associate of Arts requirements and the academic preparation suggested for transfer to a Criminal Justice baccalaureate degree program.

Associate of Arts with an emphasis in Criminal Justice

First Year 48

Students participate in the Human Resources: Learning Community their first year and complete 42 credits of general education and 6 credits of Criminal Justice distribution requirements. The Criminal Justice courses are CJ 101 Intro to Criminology and CJ 202 Violence and Aggression.

Second Year 42

The remaining 42 credits are completed in the second year after consultation with the program advisor.

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CRIMINAL JUSTICE

(Associate of Applied Science)

Program Contact:
Jerald Phillips

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 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 (CWE) program by active participation in criminal justice agencies, including police departments, sheriff offices, probation and parole offices, jails and other correctional facilities, halfway houses and juvenile group homes.

Associate of Applied Science in Criminal Justice

General Education Requirements 19

Students participate in the Human Resources Learning Community during their first year and complete 48 credits. Within the 48 credits, students satisfy 19 credits of general education requirements, 6 credits of Criminal Justice program requirements and 23 credits of electives.

Core Requirements 27

CJ 100 Survey of Criminal Justice Systems 3
*CJ 101 Intro to Criminology 3
CJ 110 Intro to Law Enforcement 3
CJ 120 Intro to Judicial Process 3
CJ 130 Intro to Corrections 3
CJ 201 Juvenile Delinquency 3
*CJ 202 Violence and Aggression 3
CJ 220 Substantive Law 3
CJ 222 Procedural Law 3

* Can be satisfied by participation in the Human Resources Learning Community.

Electives 44

The Human Resources Learning Community experience satisfies 25 of the 44 required elective credits. The remaining 21 credits may be met with additional Criminal Justice courses, approved CWE and/or other elective courses that are appropriate to the study of Criminal Justice, such as Social Sciences, Computer Science, Writing, Speech and approved PE activity classes The student is advised to consult with the Program Advisor before completing the electives portion of this degree.

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EDUCATION

Program Contacts:
May Garland, Beth Hogeland

Education programs leading to certification by the state of Oregon are available only at four-year colleges and universities. State system schools offering undergraduate programs in education, undergraduate preparation for graduate programs in education and MAT (Masters of Arts in Teaching) or other fifth-year graduate programs are:

Oregon State University offers undergraduate preparation for the professional MAT (fifth-year) program and has a four-year baccalaureate degree in Technology Education; Eastern Oregon State College offers a multi-disciplinary studies baccalaureate program and a variety of graduate programs; Portland State University offers a Master's in Education; Southern Oregon State College offers a baccalaureate program plus one graduate year for basic certification; the University of Oregon offers a baccalaureate program plus one graduate year for basic certification; and Western Oregon State College offers the B.A. B.S. and M.S., in Education and an M.A. in Teaching.

Admission into professional education programs at four-year colleges and universities is selective and highly competitive. Applicants typically must have higher-than-average grades, passing scores on the CBEST (California Basic Education Skills Test) and/or the National Teacher's Exam, and verified success in working with children. Admission to graduate (fifth-year) programs in education requires a baccalaureate degree in a content area. Admission to undergraduate programs requires significant lower-division course work as well as some upper-division course work as a prerequisite to application.

Additional prerequisites, including some upper-division courses, will need to be met before students qualify for admission to Western Oregon State College's Teacher Education Professional Core. Oregon State University recommends that students seeking admission to the MAT in Elementary Education (graduate) program pursue undergraduate degrees in Human Development/Family Studies.

During the freshman year, students planning to become teachers participate in the Human Resources Learning Community. Students interested in continuing their studies at Oregon State University may elect the Associate of Science degree program. Students interested in transferring to other colleges and universities should pursue the Associate of Arts - Oregon Transfer (AAOT) degree. During the freshman year, all students complete 42 credits of general education and six to eight credits of process courses in the Learning Community. Students pursuing the Associate of Science degree must complete an additional nine credits of general education in their second year. Students pursuing the AAOT degree must complete an additional 16 credits of general education.

During the sophomore year, students should focus on completing the general education requirements for the degree of their choice and on selecting an academic major or specialty area. Students interested in teaching grades 4-12 should work with Education advisors to plan their program of study. Students interested in teaching children eight years of age and younger should work with Child and Family Studies advisors to plan their program of study.

Students interested in the Education program have the option of earning the Educational Assistant certificate as part of their studies. Students interested in pursuing this option should notify their advisor during their freshman year.

Elementary Education
Students wanting to teach children eight years of age and younger should follow the program outlined for the Associate of Science in Child and Family Studies if they plan to transfer to Oregon State University. If they plan to transfer to any other four-year college of university, they should follow the Associate of Arts in Child and Family Studies. Students who want to teach grades 4-6 are encouraged to plan their program of studies with an Education advisor. These students are encouraged strongly to take MTH 211,212 and 213, HDFS 225 or PSY 235, and a practicum.

Students participate in the Human Resource Learning Community during their first year and complete 37-42 General Education credits. The remaining General Education credits are completed in the second year.

Secondary Education
Students who want to teach in departmentalized schools from grades 5-12 may pursue either the Associate of Arts (Oregon Transfer) or, if transferring to Oregon State University, the Associate of Science degree. Because entry requirements into four-year colleges and universities vary, students need to identify early the school they hope to attend and work with an Education advisor to plan an appropriate program of study. Students are encouraged to include a practicum in their programs of study.

Students participate in the Human Resources Learning Community during their first year and complete 37-42 General Education credits. The remaining General Education credits are completed in the second year.

Human Services
(Oregon Transfer Degree)

Program Contact:
Gina Vee

The Human Services Program prepares students for transfer to any four-year college or university in Oregon offering programs in Human Service, Psychology, Social Work or Gerontology. The curriculum leads to an Associate of Arts (Oregon Transfer) degree with an emphasis in Human Services. General Education courses may be selected that meet both LBCC's AAOT requirements and the academic preparation recommended at the transferring institution. Major requirements provide students with practical experience and academic preparation in the Human Services field.

Associate of Arts with an emphasis in Human Services

General Education Requirements 58

Students participate in the Human Resources Learning Community during their first year and complete 42 General Education credits. The remaining 16 credits are completed in the second year.

Additional credits 32

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COMMUNITY OUTREACH

Dean: John Berg, Business, Training and Health Occupations Division
Dean: Ann Smart, Extended Learning and Information Services Division
Dean: Pete Scott, Science and Industry Division

EXTENDED LEARNING CENTERS

ALBANY EXTENDED LEARNING AND EVENING SERVICES

Director: Barbara Rice
(541)917-4845

The Extended Learning and Evening Services Office is located in Takena Hall on the Albany campus, 6500 S.W. Pacific Blvd. The office establishes workshops and courses for professional upgrading and life enrichment in subjects such as conversational language, art, music, physical fitness, computers, personal growth, consumer education and professional development. The office serves primarily the communities of Albany, North Albany, Tangent and Shedd but also is responsible for district-wide programs such as Driver's Education, Motorcycle Safety and the Retired and Senior Volunteer Program (RSVP). Community educational activities are often cosponsored with various community agencies, such as the Albany Senior Center, Albany Parks and Recreation, and Albany General Hospital. The classes are held at sites throughout the Albany area.

The Extended Learning and Evening Services Office coordinates services to evening students and instructors and the After Four Program. Off-campus degree programs on the LBCC campus, such as Linfield College's bachelor degree programs, Portland State University's statewide MBA (Master's of Business Administration) Program, and Oregon State University's Division of Continuing Education programs, are operated out of the Extended Learning and Evening Services Office.

During the regular academic year, office hours are 8 a.m. to 10 p.m., Monday through Thursday, and 8 a.m. to 5 p.m. on Friday.

BENTON CENTER

Director: Dorie Nelson
Assistant Director: Lucy Noone
After Four Degree: Barbara Rice
(541)757-8944

The Benton Center is located at 630 NW 7th, Corvallis, in the former Washington Elementary School, and is open from 8 a.m. - 9:30 p.m. Monday through Thursday during school weeks and 8 a.m. - 4:30 p.m. on Friday. 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, other organizations and agencies in the area.

The center provides lower division transfer courses, professional technical courses and adult self-improvement courses. Popular life-long learning subject areas include art, writing, physical fitness, conversational languages, outdoor education, ceramics and parent education. Courses are offered during the day and in the evening.

Student services available in the center include Computerized Placement Testing, registration and bookstore selling books for classes offered through the center. An academic/career counselor is available to residents of the area at no charge. Appointments may be made by calling (541)757-8944.

SELF-STUDY, OPEN-ENTRY LABS

The center has many self-study, open-entry labs that allow students to start a program when they are ready and to make their own schedule. Read the quarterly Schedule of Classes for registration and attendance restrictions.

Accounting Lab

The Accounting Lab provides a place to upgrade accounting skills or learn practical accounting. Students may begin at any time and work at an individualized pace. The Practical Accounting course includes setting up journals and ledgers, preparing and understanding financial statements, and preparing payroll and payroll taxes. Students who complete all 12 credits should be equipped to handle full-cycle bookkeeping.

Adult Basic Skills Development

Programs offered at the Benton Center include Adult Basic Education, General Education Development and English to Speakers of Other Languages. For additional information, see "Adult Basic Skills Development Programs" in the "Student Services" section of this catalog.

Business Technology Lab

Faculty: Joyce Moreira

The Business Technology Lab offers a place to upgrade or to learn new office skills. Students work at an individualized pace with a manual of instructions and help from qualified instructors. An instructor and assistant are available during all open hours. The lab is open daily as well as four evenings a week for student convenience.

Students may choose from a variety of classes including Keyboarding, Computer Skill Building, Data Entry Skill Building, Business Math with Calculators, Editing Skills for Information Processing, WordPerfect, Windows, WordPerfect with Windows, and Word with Windows. Students also choose when they wish to come based on the number of hours their chosen course requires and the hours the lab is open.

The Keyboarding, Skill Building and all word processing classes are transferable to a four-year institution. Also, the Keyboarding and WordPerfect classes fulfill the General Education Requirements for computer competency.

The lab is designed to offer students a friendly and supportive environment in which to learn business technology skills.

Computer Lab

The Benton Center Computer Lab provides lecture classes, open labs and self-study classes. The lab has IBM-compatible computers, a wide variety of software and a friendly and helpful staff. The computers and software are available to all currently registered LBCC credit students at no cost during the open lab hours. Community members not enrolled in credit classes may purchase time to work on their own projects.

Math Lab

Faculty: Ann Mills

The Benton Center Math Lab enables students to take a mathematics class in a self-paced, self-study individualized setting. The classes offered in this format are MTH 20 through MTH 112. There are always instructors available to answer questions and show students how to use the supplementary instructional resources. The lab also is a resource for students registered in lecture math classes. It is designed to provide a non-threatening and supportive place to get help with mathematics.

EAST LINN - LBCC

Director: Al Barrios
Lebanon Center (541)451-1014
Sweet Home Center (541)367-6901

East Linn-LBCC encompasses centers in Lebanon at 550 Main Street and Sweet Home at 1314 Long Street. They serve the communities of Lebanon, Sweet Home, Brownsville, Cascadia, Crabtree, Foster, Halsey, Lacomb, Scio and rural Linn County. The East Linn centers were established to provide educational opportunities to members of the communities they serve.

The Lebanon and Sweet Home facilities house four and five classrooms respectively, plus several other sites are used throughout the area.

A broad range of courses to meet the interest and learning needs of the community are offered each term. Computer, math and business technology labs, as well as adult basic skills development, college transfer, job skills and professional upgrading courses, are routinely offered. A wide variety of credit and non-credit courses in art, agriculture, business, science, language arts, physical education and health, family living and self-improvement are available at both centers.

Other college services available in Lebanon and Sweet Home include career, academic and financial aid counseling; registration for part-time students; placement testing; test proctoring; telecourse tapes viewing; LBCC Library book pick up and drop off; textbook sales for classes offered through the East Linn centers; assistance to all LBCC students; and general information about LBCC and campus programs.

In addition, the services of a counselor from the Linn County Veterans' Affairs office is available through the East Linn centers, and the Lebanon Center houses the Linn County Business Development Center and a representative from SCORE. The JOBS program for East Linn County is located at the old Santiam School.

The centers provide self-study, open-entry labs that allow students to start programs during the term and the flexibility to schedule around a changing work shift.

SELF-STUDY, OPEN-ENTRY LABS

Accounting Lab (Lebanon only)

In the Lebanon Center's Accounting Lab, students can take the Practical Accounting series. These three (4-credit) accounting classes are self-study, variable credit and open entry, enabling students to start at any time during the term.

Adult Basic Skills Development

Programs offered at the centers include Adult Basic Education and General Education Development. English to Speakers of Other Languages is offered at the Lebanon Center only. For additional information see "Adult Basic Skills Development Programs" in the "Student Services" section of this catalog.

Business Technology Lab

Faculty: Carla Mundt

The Business Technology Lab offers a place to upgrade or learn new office skills. Students work at an individualized pace with a manual of instructions and help from instructors.

The hours of attendance required in the lab varies among classes based on the number of credits and duration of a class.

When registering, students must report to the Business Technology Lab to select their attendance times so equipment may be reserved. In addition to reserved hours, equipment may be used at other lab times on a seat-available basis.

IMPORTANT: *Preregistered students who do not attend during the first week of classes, including second half of the term classes, may be subject to administrative withdrawal if space is needed for students on the Wait List.*

Classes are available four mornings and four evenings per week in Lebanon and four afternoons per week in Sweet Home. Courses available during these times are Keyboarding, Skill Building, Windows, Word Processing, Word Processing with Windows, MS Word with Windows, Business Math, Formatting, Editing Skills, Transcription and Filing. These courses apply toward the certificates and degrees offered by LBCC's Business Technology Department. See the "Professional Technical Programs" section in this catalog for program requirements.

Credits must be earned and lab hours used within the term they are purchased. Refunds are not given for unused lab hours.

Computer Lab

Lecture classes, self-study classes and open labs are offered at various times throughout the week (see schedule of classes for specific times) and on Saturday mornings in Lebanon. Self-study courses enable you to learn individually at your own pace on IBM-compatible machines. Software selections include word processing, spreadsheets and data base programs. Open lab hours are available at no cost to all registered LBCC students and for a fee to other community members on a space-available basis.

Math Lab

The Math Lab is designed for individualized study and is available four days per week. Courses from Basic Mathematics through Trigonometry are offered in a self-study, variable-credit format, and classes may be entered at any time during the term.

FAMILY RESOURCES DEPARTMENT

PARENT EDUCATION

Faculty: Rebecca Brown, Christie Connard, Linda Donald, Jan Phoenix
(541)917-4897

Parent Education classes are offered to those parents interested in learning more about child development, guidance and discipline, and planning educational activities for their children.

Parent/child classes, in which parents work with college faculty to provide quality educational experiences for themselves and their children, are offered in communities throughout the district.

Community Access to Family Support and Education is a Department project that works with communities to provide parent education; trains and supports parent educators; and provides phone consultations and newsletters to help families access parent education, family support programs and children's recreational programs.

Some Department programs link parent education with adult education. These programs enable adults to obtain a GED or professional skills while learning how to help their children develop skills to ensure success in school.

For more information about parent education programs, call the Family Resources Department, (541)917-4897, or Family Connections, (541)917-4899.

WORK AND FAMILY

Faculty:
Pam Dunn, Bobbie Weber

Family Connections (formerly Child Care Resource and Referral)

Family Connections provides comprehensive information on available child care, parent education, recreational activities and other forms of family support in Linn and Benton counties. This service provides education, training and consultation to families and child care providers, employers and employees. Community residents can access this service through a district telephone line, 917-4899.

Services include:
- child care referrals
- education and information about child care
- education and information about parent education and family support programs
- information about recreational activities
- consultation and support services for child care providers and families
- consultation to employers/employees

PARENT EDUCATOR AND CHILD CARE PROVIDER TRAINING

Faculty:
Rebecca Brown, Christie Connard, Linda Donald, Beth Hogeland, Linda Nelson

Parent Educator Training

Parent educators receive training and practical assistance for the parent classes they teach in communities throughout Linn and Benton counties. This support is made possible by the Department's Community Access to Family Support and Education Project. This project also coordinates the class and program offerings in the district. Information about classes and programs is available through Family Connections (formerly Child Care Resource and Referral) Telephone: (541)917-4899.

Child Care Provider Training

A variety of courses and short-term training for child care providers is offered through Family Connections (formerly Child Care Resource and Referral). Designed for practicing providers, these courses are taught in the evenings and on weekends. Providers can begin their professional training with these courses. Providers may elect to continue their training by enrolling in the certificate and degree programs in Child and Family Studies. For more information, call Family Connections, (541)917-4899.

FIRE SCIENCE

A variety of Fire Science classes are available to paid and volunteer firefighters based on needs and demand.

HEALTH OCCUPATIONS/ SERVICES EDUCATION CENTER (HOSEC)

Faculty: Missy Dutson, Evon Bergstrom

HOSEC is a program in the Health Occupations Department of the Business, Training and Health Occupations Division of the College. The mission is to provide education for the health care community to meet the challenges of today and tomorrow. The education center seeks to respond to change by:

- Delivering quality short-term training
- Providing conferences and seminars
- Building partnerships with the health care community
- Providing leadership in technology information
- Articulating with the local high schools in education reform

HOSEC offers the following services:

- Curriculum development in health services
- Instructional resources (faculty, media, clerical)
- Marketing and registration services

For more information on any of the offerings or services provided by the center, please call (541)917-4510.

LIFE AND EMPLOYMENT DEVELOPMENT DEPARTMENT

Director:
Ted Swigart
(541)917-4870

The Life and Employment Development Department oversees three different training and workforce programs: Job Opportunities and Basic Skills (JOBS), Turning Point Transitions, and Choice and Options. Each program offers participants a unique opportunity to explore options available to them as they make life and career transitions.

The staff of the Life and Employment Development Department work closely with other college departments and community organizations to provide educational, professional, technical and counseling services as part of their comprehensive job training and educational programs.

CHOICES AND OPTIONS

Faculty:
Joanne Apter

Choices and Options is a two-week group assessment and life skills class for dislocated workers The class focuses on the student's identification of aptitudes, interests, life needs, transferrable skills, labor market information and professional/technical opportunities. The Choices & Options class empowers students to discover their strengths and build on their experiences to reach new goals.

Instructional areas include: aptitude and interest testing, interviewing techniques, resume writing, and career and life planning.

The program is a collaborative effort among LBCC, Community Services Consortium and Oregon Employment Department. The partners share the responsibility of curriculum development and training. Participants are referred to the program through the State Employment Division and the Community Services Consortium.

JOBS PROGRAM

Faculty:
Cherrill Boissonou, Susan Cogan, Susan Cowles, Carol Erickson, Nickie Frisch, Marie Laper, Elaine Leier, Ann Malosh, Terry Schukart, Beth Wibbens

The goal of the JOBS program is to enable individuals to make the transition from public assistance to self-sufficiency. Students, referred by Adult and Family Services and working with college faculty, develop individual programs that help prepare them for full-time, unsubsidized employment. Instructional areas include life and career planning; adult basic education; short-term, intensive professional/ technical training; work site training; and job search instruction.

TURNING POINT TRANSITIONS PROGRAM

Faculty:
Mary Lou Bennett

Turning Point Transitions is a program for single parents, displaced homemakers, dislocated workers, spouses of dislocated workers and others who are experiencing a major life transition.

Participants learn to build self-confidence by improving communication and assertive abilities. Time and money management; positive parenting; living alone; wellness; and goal setting, decision-making and problem-solving techniques are topics considered under the life skills segment of the program. Career exploration is tailored to meet the needs of the participants who want to seek further education/ training or to re-enter the job market. Child care and transportation are available to those in need of these services during the course. Call Family Connections, (541)917-4899, for more information.

For more information on any of the programs offered through the Life and Employment Development Department, call (541)917-4870

OREGON ADVANCED TECHNOLOGY CONSORTIUM

The Oregon Advanced Technology Consortium's mission is to improve Oregon's competitiveness by assisting manufacturers with the adoption and implementation of new technologies. Businesses require new and existing technologies - particularly readily available, off-the-shelf manufacturing technologies - to modernize their industries and enhance their ability to compete in the global market. New programs are needed to help manufacturers modernize their industrial infrastructure, increase the quality of their manufactured products, create shorter product cycle times, adopt advanced automation technologies and equipment, and raise the skill level of their workforce.

The OATC, a consortium of 12 Oregon community colleges, serves primarily small- and medium-sized manufacturers seeking access to advanced technology services and training. OATC services include technology demonstrations, prototyping, short production runs, engineering support, CAD/CAM services and support, and advanced technical training. The OATC is sponsored by the state of Oregon, 13 Oregon community colleges, and local and national manufacturing businesses.

Consortium members include:
Blue Mountain Community College
Central Oregon Community College
Chemeketa Community College
Clackamas Community College
Clatsop Community College
Columbia Gorge Community College
Lane Community College
Linn-Benton Community College
Mt. Hood Community College
Portland Community College
Rogue Community College
Southwestern Oregon Community College
Umpqua Community College

For more information about Consortium activities at Linn-Benton Community College, please contact David Hall, (541)917-4766.

RETIRED AND SENIOR VOLUNTEER PROGRAM

Director:
John Lee
(541)753-9197, FAX 757-9537 (Benton County)
(541)917-4476 (Linn County)

R.S.V.P. (Retired and Senior Volunteer Program) is part of the Extended Learning and Information Services Division. This program for people 55 years and older provides services to non-profit agencies and support services to the volunteers. Over 1100 seniors participate in the program in Linn and Benton counties. RSVP provides them with placement, counseling, training and recognition. RSVP's mission is to:

- Empower seniors and retirees to share their knowledge and skills through volunteer service.
- Support groups and agencies requiring volunteer staffing.
- Create partnerships for meeting community needs.

At Linn-Benton Community College, RSVP volunteers help prepare bulk mailings; assist with Student Programs-sponsored activities, such as the Children's Christmas Party and the blood drive; serve as student greeters; and assist in the Bookstore during the beginning of each term. RSVP also provides technical assistance to departments using volunteers.

TRAINING AND BUSINESS DEVELOPMENT CENTER

BUSINESS DEVELOPMENT CENTER

Faculty:
John Pascone, Dennis Sargent, Martin Schulz
(541)917-4923

This center offers assistance specially geared to businesses in the area. Assistance is designed to help businesses start up, stay in business and expand.

Available services include an information and referral service providing access to information regarding all aspects of business, such as start-up information, business plan preparation and preparing for financing. The center also provides confidential business counseling and can help the business owner find a variety of resources currently available in the community. Low-cost workshops are offered each term on a variety of business management topics.

The center provides intensive help to a select group of businesses through the Business Development and Business Management programs. These programs take the form of monthly meetings with instructors who work with participants on problems and help business owners maximize their capabilities to prosper and/or expand.

The center also makes available a variety of reference materials. The Business Development Center is cosponsored by the SBA (Small Business Administration), Oregon Economic Development Department and Albany-Millersburg Economic Development Corporation.

CONTRACTED TRAINING

Faculty:
Greg Hopkins, Carol Schaafsma, Sharyn Smith, Jon Wacker
(541)917-4923

Contracted Training responds to the unique training needs of business and industry. Demands are increasing to upgrade the workforce in many areas, and the college is providing training when and where business and industry needs it. Examples of the types of training that can be provided are computer applications, supervisory training, problem solving, interpersonal communication, total quality management and a wide variety of technical training topics.

Professional Development

The Training and Business Development Center offers quality, affordable professional development options for individuals and businesses. Many programs are available, including computer seminars, supervisory workshops and communication skills.

Short-Term Training

A variety of courses are offered to help people learn new skills or upgrade current skills. Courses to train employees for new industries moving into the area also are developed, including training areas such as retail sales, clerical, food service and electronics.

For more information on any of the programs offered through the Training and Business Development Center, call (541)917-4923.

COURSE DESCRIPTIONS

PROFESSIONAL TECHNICAL COURSES

All courses that apply to LBCC degree and certificates have alphabetical prefixes (for example, AU for Automotive Technology, EE for Electronics Engineering Technology, RH for Refrigeration, Heating and Air Conditioning).

Professional Technical courses are numbered 1.000 through 8.999.

Professional Technical courses generally do not transfer to four-year colleges and universities.

Courses with decimal point (0.---) and 9.000 - 9.999 numbers do not apply toward LBCC degree and certificate programs.

TRANSFER COURSES

All courses that apply to LBCC degrees have alphabetical prefixes, i.e. BI for Biology, WR for Writing. College transfer courses are those classes with 100 and 200 numbers.

Classes with a decimal point in the number (such as OA 2.530) ***are not transfer courses***.

Courses with numbers below 100 ***are not transfer courses***.

Courses with 100 numbers are considered freshman-level courses.

Courses with 200 numbers are considered sophomore-level courses.

Courses marked with this symbol ◆ meet the Computer Competency requirement for all degrees.

Courses marked with the symbols below may be applied toward fulfilling the General Education Requirements for the Associate of General Studies degree. These courses apply to that degree only. For lists of classes that fulfill General Education Requirements for other degrees offered at LBCC, see the "Graduation Requirements" section of this catalog.

- ◆ Computer Competency
- ➤ Humanities/Art
- ● Math/Science
- ■ Social Sciences

AA..... Art (Graphic Communications)

AA 198 INDEPENDENT STUDIES
(2-6 class hrs/wk 1-3 cr) F/W/Sp
Individual instruction in advanced problems relevant to the student's interests and needs. Prerequisite: Instructor approval.

AA 221 GRAPHIC DESIGN I
(6 class hrs/wk 4 cr) F
Introduces graphic design. Examines visual communication through the application of the elements and principals of art. Studies static vs. dynamic, visual centering, design systems, metamorphosis and continuums. Instills critical analysis and good design judgment. Prerequisites: ART 115 Basic Design: Composition; ART 116 Basic Design: Color; GA 3.150 Introduction to Printing and Graphic Arts; GA 3.152 Art and Copy Preparation; AA 224 Typographical Design I; PHO 261 Introduction to Photography; GA 3.157 Electronic Image Manipulation I; GA 3.158 Electronic Prepress I.

AA 222 GRAPHIC DESIGN II
(6 class hrs/wk 4 cr) W
Studies mark design, the development of symbols, logos, design programs and corporate identity systems. Examines the design's adaptability, application, practicality and integrity. Environmental issues are discussed. Prerequisite: AA 221 Graphic Design I.

AA 223 GRAPHIC DESIGN III
(6 class hrs/wk 4 cr) Sp
Studies publication design. Includes examination of formula vs. format, direct mail, poster, magazine and book design. Environmental implications are discussed. Prerequisite: AA 222 Graphic Design II.

AA 224 TYPOGRAPHICAL DESIGN I
(6 class hrs/wk 4 cr) W/Sp
Introduces letterforms. Develops a fundamental awareness of type and typographic design. Studies the evolution, art and vocabulary of typography; handbuilt letterforms; and designing with type. Emphasizes typography as a working tool.

AA 225 PACKAGING AND THREE-DIMENSIONAL DESIGN
(6 class hrs/wk 4 cr) W
Introduces design, display and merchandising of three-dimensional marketing solutions. 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. Environmental issues are discussed. Prerequisites: GA 3.152 Art and Copy Preparation; AA 224 Typographical Design I; AA 237 Illustration I; GA 3.157 Electronic Image Manipulation I; GA 3.158 Electronic Prepress I.

AA 226 TYPOGRAPHICAL DESIGN II
(6 class hrs/wk 4 cr) F
Continues the study, use and design of letterforms. Emphasizes creating original type variations and form manipulation. Prerequisites: GA 3.152 Art and Copy Preparation; AA 224 Typographical Design I; GA 3.157 Electronic Image Manipulation I.

AA 228 PORTFOLIO PREPARATION: PROFESSIONAL PRACTICES
(6 class hrs/wk 3 cr) Sp
Emphasizes re-evaluation of previously produced projects; organization and production of the business card, resume and portfolio. Current job opportunities; methods in merchandising job talents; action before, during and after the interview; business practices and ethics are covered. Intended for second-year graphic design students. Prerequisites: AA 222 Graphic Design II; AA 238 Illustration II.

AA 237 ILLUSTRATION I
(6 class hrs/wk 4 cr) F
Explores and develops skills in the use of various tools, materials and techniques. Increases student awareness of illustrative possibilities and processes. Pen and ink, graphite and ink wash are included. Prerequisites: ART 133 Drawing III; ART 115 Basic Design I: Composition; ART 116 Basic Design II: Color.

AA 238 ILLUSTRATION II
(6 class hrs/wk 4 cr) W
Explores rendering with markers. Moves from an exercise, process and technique orientation to product rendering and ad development. Prerequisite: AA 237 Illustration I.

AA 239 ILLUSTRATION III
(6 class hrs/wk 4 cr) Sp
Explores further possibilities in illustration using soft pastel and colored pencil. Stresses conceptual development of illustration dealing with written material. Prerequisite: AA 238 Illustration II.

AA 262 PHOTOGRAPHY: ART AND TECHNIQUE
(4 class hrs/wk 3 cr)
Bridges the gap between traditional photography and the newer techniques of electronic imaging. Students explore hand-constructed imagery based on the photograph. The methods, techniques and creative process employed have direct relationship to contemporary images produced on the computer. This class is intended for the non-photographer as well as the photographer seeking to expand his or her skills.

AA 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.

AG ..... Agriculture

◆ **AG 111 COMPUTERS IN AGRICULTURE**
(4 class hrs/wk 3 cr) F/W
Agricultural examples and problems are utilized as a basis for the material in this course. Provides hands-on experience in the areas of word processing, data base and spreadsheets. Prerequisite: Instructor approval.

AG 280A CWE AGRICULTURE
(6-42 class hrs/wk 2-14 cr) 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.

AG 280B CWE ANIMAL TECHNOLOGY
(6-42 class hrs/wk 2-14 cr)
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.

AG 280C CWE HORTICULTURE
(6-42 class hrs/wk 2-14 cr)
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.

AG 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.

AG 8.126 SOILS II
(4 class hrs/wk 3 cr) W
Covers 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, storage and handling are emphasized.

AG 8.130 AGRICULTURAL CHEMICALS
(5 class hrs/wk 4 cr) W
Covers background information in use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of materials, safety in handling, land 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 to keeping current with new product development.

AG 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. Introduces integrated pest management (IPM) and plant health care (PHC) programs.

AG 8.138 IRRIGATION SYSTEMS
(4 class hrs/wk 3 cr) W
Introduces principles and practices of irrigation, including soil, water and plant relations; water sources; quality; methods of distribution; and measurement. System design and selection also are emphasized, including surface and subsurface drainage systems.

AG 8.165 PLANT SCIENCE
(5 class hrs/wk 4 cr) F
Studies 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.

AG 8.171 FARM BUSINESS ANALYSIS
(4 class hrs/wk 3 cr)
Presents basic accounting methods to familiarize student with fundamentals of farm recordkeeping and business analysis using farm records. Includes use of computers in farm records and production recordkeeping.

AH.....Allied Health/HOSEC

AH 5.409 CAREER COUNSELING FOR PRE-NURSING
(10 class hrs/wk 1 cr) F/W/Sp
Provides pre-nursing applicants with an assessment of own personal characteristics as they examine the career of nursing. Guidance in choosing a nursing career. Note: Two-week class.

AH 5.411 CARE OF THE AGED
(10 class hrs/wk 1-2 cr) F
Explores changes and adaptations for the older adult in the aging process. Focuses on psychological needs and implications for nursing care.

AH 5.414 DRUG CLASSIFICATIONS AND NAMES
(2 class hrs/wk 2 cr)
Drug classifications and uses for students enrolled in the Health Occupations area. Covers spelling, pronunciation and basic uses of drugs utilized in local hospitals and clinics. Prerequisite: AH 5.630 Medical Terminology I.

AH 5.420 HEALTH OCCUPATIONS OVERVIEW A: INTRODUCTION TO HEALTH CARE SYSTEMS
(2 class hrs/wk 2 cr)
Surveys essential aspects of health occupations. Emphasizes health care delivery system's societal issues, health consumer decisions, health promotion and wellness, technology, communication, and worker rights and responsibilities in health care.

AH 5.421 HEALTH OCCUPATIONS OVERVIEW B: WORKING IN HEALTH CARE
(2 class hrs/wk 2 cr)
Continuation of Health Occupations Overview A: Introduction to Health Care Systems. Emphasizes legal and ethical concepts, death and dying, medical asepsis/universal precautions, patient and personal safety, and job-seeking skills.

AH 5. 625 CLINICAL OFFICE PROCEDURES
(4 hrs/wk 4 cr) F
Teaches the basic clinical office procedures that are performed in the medical office, such as vital signs, asepsis and sterilization, diagnostic procedures and specimen collection. Basic pharmacology included. Prerequisite: Completion of first year of the Administrative Medical Assistant program or instructor approval.

AH 5.630 MEDICAL TERMINOLOGY I
(3 class hrs/wk 3 cr) F/W/Sp/Su
Introduces the terminology of anatomy and physiology fundamental to the understanding of the physician's diagnosis and treatment. Includes basic root words, prefixes and suffixes.

AH 5.633 MEDICAL TERMINOLOGY II
(3 class hrs/wk 3 cr) F/W/Sp/Su
Continues 5.630 Medical Terminology I; emphasizes terminology related to body systems. Prerequisite: AH 5.630 Medical Terminology I.

AH 5.634 MEDICAL TERMINOLOGY III
(3 class hrs/wk 3 cr) Sp
Continues 5.633 Medical Terminology II; emphasizes specific pathology and medical practice areas. Prerequisite: AH 5.633 Medical Terminology II.

AH 5.735E EMT INDEPENDENT STUDIES
(3-9 class hrs/wk 1-5 cr) F/W/SP
Provides continuing education hours or EMT refresher training hours required by the state Health Division to complete the state testing process. Open to individuals who hold current state certification or who have completed an approved state Health Division EMT course within the last year. Prerequisite: Instructor approval required.

ANS ..... Animal Science

ANS 121 INTRODUCTION TO ANIMAL SCIENCE
(5 class hrs/wk 4 cr) F
Introduces the livestock industry, including the importance of the various types of livestock enterprises, terminology, marketing, basic production practices and management techniques.

ANS 207 CAREERS IN ANIMAL AGRICULTURE
(1 class hr/wk 1 cr) Sp
Explores career opportunities in animal science. Includes guest lecturers from various fields of animal agriculture as well as an emphasis on resume writing and job interviewing.

ANS 210 FEEDS AND FEED PROCESSING
(5 class hrs/wk 4 cr) W
Covers animal nutrition, including protein, vitamins, minerals, fat, carbohydrates, feed additives and the utilization of nutrients by livestock. Studies methods of determining feed values, types of feed, feed characteristics, nutritional requirements and composition, and methods of feeding.

ANS 211 APPLIED ANIMAL NUTRITION
(4 class hrs/wk 3 cr) Sp
Introduces 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. Prerequisite: ANS 210 Feeds and Feed Processing.

ANS 215 APPLIED BEEF PRODUCTION
(5 class hrs/wk 4 cr) F
Covers 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.

ANS 216A APPLIED 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. Note: Course offered alternate years only. *Offered Winter 1998.*

ANS 216B APPLIED SWINE PRODUCTION
(5 class hrs/wk 4 cr) W
Introduces modern swine production, including swine breeds, marketing, breeding, feeding, production testing, diseases and parasites, and production problems. Note: Course offered alternate years only. *Offered Winter 1997.*

ANS 217 ARTIFICIAL INSEMINATION
(5 class hrs/wk 4 cr) Sp
Includes instruction on 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. Certification available. Course offered alternate years only. *Offered Spring 1997.*

ANS 220 INTRODUCTORY HORSE SCIENCE
(5 class hrs/wk 4 cr) F
Basic course in commercial horse production and management. Covers breeds, breeding systems, nutrition, reproduction and diseases. Also develops basic skills in handling, foot care, feeding, selection and health management.

ANS 221 EQUINE INDUSTRIES
(5 class hrs/wk 3 cr) Sp
Provides students practical skills in three specific areas of horse science: foot and leg care, fitting and showing, and horse conformation judging. Anatomy of the foot and leg are studied, and basic foot trimming skills are taught. Recognizing common unsoundnesses and blemishes also are covered. In addition, students learn proper techniques for preparing horses for show competition in halter, English and Western showing. Evaluation of horse conformation and halter judging are taught.

ANS 222 YOUNG HORSE TRAINING
(6 class hrs/wk 2 cr) F
Provides hands-on ground training. The student is assigned a young horse to train for the term. Students may use their own horse or a horse will be provided. The training consists of halter breaking, leading, sacking, longeing, trailer loading and handling the feet. In addition, grooming, safety and use of equipment is taught.

ANS 223 EQUINE MARKETING
(2 class hrs/wk 2 cr) W
Introduces the practical concepts of equine marketing. Emphasizes assessing the market, targeting potential buyers, and preparing and presenting the product. Business law, as it relates to equine marketing, is discussed. Through practicing interviewing skills and writing a résumé, students learn to "market themselves."

ANS 231 LIVESTOCK EVALUATION
(5 class hrs/wk 3 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.

ANS 278 GENETIC IMPROVEMENT OF LIVESTOCK
(5 class hrs/wk 4 cr) W
Introduces 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.

ANTH... Anthropology

■ **ANTH 101 INTRODUCTION TO PHYSICAL ANTHROPOLOGY**
(3 class hrs/wk 3 cr)
Explores humankind's place in the natural order. Topics include origins of humankind; physical, behavioral and cultural development; and discovery and interpretation of various fossils.

■ **ANTH 102 INTRODUCTION TO ARCHAEOLOGICAL PREHISTORY**
(3 class hrs/wk 3 cr)
Introduces methods used to collect and interpret archaeological data. Includes major developments in technology that led to the establishment of ancient civilizations in the old and new worlds.

■ **ANTH 103 INTRODUCTION TO CULTURAL ANTHROPOLOGY**
(3 class hrs/wk 3 cr)
Introduces students to the cross-cultural perspectives necessary to examine the diversity of human cultures. Topics include cross-cultural perspectives of marriage and kinship; religious, economic, political and social systems; and language.

■ **ANTH 107 ANTHROPOLOGY TODAY**
(3 class hrs/wk 3 cr)
Surveys contemporary issues in anthropology as presented in popular media. Popular books, films and television offerings serve as the framework of the course.

ANTH 198 RESEARCH TOPICS
(1 class hr/wk 1 cr)
Offers topics of study in anthropology with individual research and/or field study. Prerequisite: WR 121 English Composition.

■ **ANTH 232 NATIVE NORTH AMERICANS**
(3 class hrs/wk 3 cr)
Studies the earliest inhabitants of North America, including discussion of archaeological evidence of these first Americans, customs before white contact, westernization and contemporary issues.

ANTH 280 CWE ANTHROPOLOGY/ ARCHAEOLOGY
(6-42 class hrs/wk 2-14 cr)
An instructional program designed to give students practical experience in supervised employment related to anthropology/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.

ARE ..... Agriculture Economics

ARE 211 MANAGEMENT IN AGRICULTURE
(4 class hrs/wk 4 cr) F
Covers agriculture as a business; the decision-making process; tools of decision making; acquiring, organizing and managing land, labor and capital resources; and reasons for success and failure. Students learn teamwork, cooperation and leadership skills through classroom simulation, group activities and assignments.

ARE 221 MARKETING IN AGRICULTURE
(3 class hrs/wk 3 cr) W
Covers all aspects of sales and marketing of agricultural products, including crops, commercial and purebred livestock, and ornamental plants. The commodities futures market, telemarketing and other specialized outlets also are included.

ART..... Art (Fine)

➤ **ART 102 UNDERSTANDING ART**
(3 class hrs/wk 3 cr) F/W/Sp
Surveys the principal concerns of art and artists through the study of visual art forms and aesthetics.

➤ **ART 115 BASIC DESIGN I: COMPOSITION**
(6 class hrs/wk 4 cr) F/W
Introduces values of black and white and concepts relating to shape, design structure, proportion and unity.

➤ **ART 116 BASIC DESIGN II: COLOR**
(6 class hrs/wk 4 cr) W/Sp
Studies concepts relating to color, its properties, combination, relatedness, proportions and interaction. Prerequisite: ART 115 Basic Design I: Composition or instructor approval.

➤ **ART 131 DRAWING I**
(6 class hrs/wk 4 cr) F/W/Sp
A basic-level course in drawing. Emphasizes the theories of drawing simple forms.

➤ **ART 132 DRAWING II**
(6 class hrs/wk 4 cr) W/Sp
Emphasizes composition and drawing complex forms. Prerequisite: ART 131 Drawing I or instructor approval.

➤ **ART 133 DRAWING III**
(6 class hrs/wk 4 cr) Sp
Emphasizes drawing natural forms, composition and form invention. Prerequisite: ART 132 Drawing II or instructor approval.

➤ **ART 154 BEGINNING CERAMICS**
(6 class hrs/wk 3 cr) F/W/Sp
Introduces 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. Note: Offered at the LBCC Benton Center, Corvallis.

➤ **ART 181 INTRODUCTION TO PAINTING**
(6 class hrs/wk 4 cr) F/Sp
Explores visual expression on a two-dimensional surface. Uses oil or acrylic paints for spatial development of color, shape and surface.

ART 198 INDEPENDENT STUDIES
(2-6 class hrs/wk 1-3 cr) F/W/Sp
A special studies class tailored to meet more advanced skill needs in discipline. Prerequisite: Previous studio experience; instructor approval.

ART 199 EUROPEAN SUMMER TOUR
(3 class hrs/3 cr) Su
Prepares students for a 28-day European study tour through seven, three-hour pre-tour sessions. Meets once per month over 6 1/2 months prior to departure. One post-tour follow-up session included. Focuses on important historic and cultural sites, along with pertinent travel information. Travel with the instructor to Europe following a scheduled itinerary. Experience first-hand important cultural sites.

➤ **ART 204, 205, 206 SURVEY OF ART HISTORY**
(3 class hrs/wk 3 cr) F/W/Sp
Studies the history of Western visual art and its significance and relationship to mankind. (Recommended, but not required, that courses be taken in sequence.) ART 204 Ancient Art (visual art from prehistory up to the Middle Ages); ART 205 Art of the Middle Ages, Renaissance and Baroque; ART 206 Eighteenth, Nineteenth and Twentieth Century Art.

➤ **ART 225 PAINTING: COMPUTER**
(6 class hrs/wk 4 cr) F
Introduces using the computer to simulate traditional tools and techniques for editing or creating original art. Prerequisites: ART 115 Basic Design I: Composition; ART 131 Drawing I; GA 3.151 Introduction to Electronic Imaging.

➤ **ART 234 FIGURE DRAWING**
(6 class hrs/wk 4 cr) Sp
Introduces drawing the nude figure. Emphasizes anatomy, form, unity and development. Prerequisite: ART 131 Drawing I or instructor approval.

➤ **ART 254 CERAMICS II**
(6 class hrs/wk 3 cr) F/W/Sp
Provides instruction in clay construction for the experienced student, with advanced throwing and handbuilding, glazing and firing techniques. Note: Offered at the LBCC Benton Center, Corvallis. Prerequisite: ART 154 Beginning Ceramics or instructor approval.

ART 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.

➤ **ART 281 PAINTING**
(6 class hrs/wk 4 cr) F/Sp
Continues the study of visual expression on 2-D surfaces of selected subjects using oil or acrylic medium. Prerequisite: ART 181 Introduction to Painting.

➤ **ART 294 INTRODUCTION TO WATERCOLOR**
(6 class hrs/wk 4 cr) W
An introductory class in the materials and techniques of watercolor painting. Covers a variety of topics, both representational and abstract.

➤ **ART 295 WATERCOLOR II**
(6 class hrs/wk 4 cr) W
Further exploration of the watercolor medium and its application to subject, form and composition.

AS..... Aerospace Studies

AS 111, 112, 113 AEROSPACE STUDIES I
(1 class hr/wk 1 cr) F/W/Sp
Covers doctrine, mission and organization of the U.S.A.; U.S. strategic offensive and defensive forces, their mission, function, and employment of weapons; civil defense; aerospace defense; missile defense; U.S. general purpose and aerospace support forces; mission, resources, and operation of tactical air forces, with special attention to limited war; review of Army, Navy and Marine Corps general purpose forces.

AS 211, 212, 213 AEROSPACE STUDIES II
(2 class hr/wk 2 cr) Sp
Covers the development of air power; changes in the nature of military conflict; development of air power into an element of national security; development of concepts and doctrine governing employment of air power; technology affecting growth and development of air power; changing mission of the defense establishment, with emphasis on the U.S. Air Force; air power as employed in military, non-military and strategic operations.

AT ..... Animal Technology

AT 147 LIVESTOCK SELECTION TECHNIQUES
(6 class hrs/wk 4 cr) F
Concentrates on techniques, selection and comparative judging of beef, sheep and swine and intensive work on developing oral reasons and terminology. Course designed for first-year students interested in competitive livestock judging. Members of this class are selected for the first step in competitive judging, including travel to collegiate contests.

AT 149 COMPETITIVE LIVESTOCK JUDGING
(4 class hrs/wk 3 cr) W
Provides an in-depth application of principles necessary for the successful comprehensive analysis of beef, sheep and swine. Prerequisite: Instructor approval.

AT 156 LIVESTOCK DISEASES I
(4 class hrs/wk 3 cr) W
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.

AT 157 LIVESTOCK DISEASES II
(4 class hrs/wk 3 cr) Sp
Covers the nature of non-infectious 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.

AT 163, 164 SCHOOLING THE HORSE I, II
(7 class hrs/wk 3 cr) W/Sp
Provides hands-on horse training experience. The student learns the fundamentals of horse training, including longeing, driving, bitting, riding, reining and backing. Equipment, safety and horse "psychology" also are taught. Prerequisite: Instructor approval.

AT 248 ADVANCED LIVESTOCK SELECTION
(6 class hrs/wk 4 cr) F
Advanced course in developing judging skills and techniques. Emphasizes 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: AT 147 Livestock Selection Techniques.

AT 263, 264 SCHOOLING THE HORSE III, IV
(7 class hrs/wk 3 cr) W/Sp
Advanced training techniques for horses are emphasized. Introduces reining, dressage and jumping. Prerequisites: AT 163, AT 164 Schooling the Horse I, II.

AT 277 HORSE BREEDING MANAGEMENT
(5 class hrs/wk 3 cr) W
Familiarizes students with all aspects of reproductive management of the horse. Reproductive physiology, estrus cycles, breeding management, mare and foal care, stallion handling and recordkeeping are covered. Labs expose students to breeding management practices on commercial horse ranches in the local community.

AU ... Automotive Technology

AU 3.295 POWER TRAIN SYSTEMS
(20 class hrs/wk 1-10 cr) F/W
Studies 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. Prerequisites: Placement Test scores for Reading Level I and MTH 20 Basic Mathematics or equivalent.

AU 3.296 STEERING, SUSPENSION AND BRAKING SYSTEMS
(20 class hrs/wk 1-10 cr) F/Sp
Covers 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. Prerequisites: Placement Test scores for Reading Level I and MTH 20 Basic Mathematics or equivalent.

AU 3.297 ELECTRICAL AND FUEL SYSTEMS
(20 class hrs/wk 1-10 cr) W/Sp
Introduces principles and terminology of fuel and carburetion systems and testing, servicing and repairing of electrical systems. Students work with techniques and overhaul procedures for carburetors, fuel injected gasoline engines, fuel pumps, fuel tanks, fuel gauges, fuel lines, fittings, charging systems, starting systems and other electrical components. Prerequisites: Placement Test scores for Reading Level I and MTH 20 Basic Mathematics or equivalent.

AU 3.298 AUTO TUNE-UP AND DIAGNOSIS
(20 class hrs/wk 1-10 cr) F
Problem-solving course designed to develop knowledge and skills in auto tune-up. Emphasizes selection and use of equipment, including electrical test equipment, scan tools, the oscilloscope, emission test equipment and the dynamometer, to find malfunctions and make necessary repairs for optimum engine performance. Prerequisite: Automotive Technology major with sophomore standing or instructor approval required.

AU 3.299 AUTOMOTIVE ENGINES
(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. To include ten hours of driveability. Prerequisite: Automotive Technology major with sophomore standing or instructor approval required.

AU 3.300 AUTOMATIC TRANSMISSIONS
(20 class hrs/wk 1-10 cr) Sp
Covers operating principles, testing and repair procedures of the automatic transmission. Directed toward developing ability to accurately analyze the performance factors or diagnose the malfunctions of these systems through the use of live units. To include ten hours of Driveability. Prerequisite: Automotive Technology major with sophomore standing or instructor approval required.

AU 3.301 AUTOMOTIVE SERVICE AND REPAIR PRACTICES
(20 class hrs/wk 1-10 cr) F/W/Sp
Provides advanced instruction and practice in diagnosing and servicing automotive problems; summarizes all the learning units in the auto technology two-year program. Emphasizes attitudes and philosophy of automotive employees who frequently must meet and deal with supervisory personnel and with the public. Experiences are provided to simulate the work of an auto technician. Prerequisite: Automotive Technology major or instructor approval required.

AU 3.303 MOBILE AIR CONDITIONING AND COMFORT SYSTEMS I
(5 class hrs/wk 3 cr) W
Theoretic principles of mobile heating and air conditioning systems with emphasis on design, function, adjustment, service and testing of components.

AU 3.304 MOBILE AIR CONDITIONING AND COMFORT SYSTEMS II
(5 class hrs/wk 3 cr) Sp
Presents theory and service practice in maintenance and repair of automotive comfort systems. Covers inspection, testing, repair and/or replacement of control units and computer control systems. Includes computer control systems.

AU 3.307 MECHANICAL PROCESSES I
(3 class hrs/wk 2 cr)
Required for Automotive and Heavy Equipment Mechanics/Diesel majors. Covers competencies and skills required for the first year. Covers safety, hand tools, power tools, precision measurement, metric measurement, fasteners, torque, electrical principles and meter usage.

AU 3.308 MECHANICAL PROCESSES II
(3 class hrs/wk 2 cr)
Required for Automotive and Heavy Equipment Mechanics/Diesel majors. Covers service manual usage; pulling, pushing and lifting devices; tubing, hoses and fittings; and bearings and lubrication.

AU 3.309 MECHANICAL PROCESSES III
(3 class hrs/wk 2 cr)
Required for Automotive and Heavy Equipment Mechanics/Diesel majors. Covers engine basics, gaskets, seals and sealants; hydraulic principles; and tool maintenance.

BA..... Business

BA 101 INTRODUCTION TO BUSINESS
(4 class hrs/wk 4 cr) F/W/Sp/Su
Survey course in business, emphasizing organization, operation and management. Orients students to the field of business and helps them determine their field of major concentration.

BA 110D DATA BASE
(4 class hrs/wk 2 cr) F/W/Sp/Su
Introductory course in using a data base software program. Note: Five-week class. Prerequisite: OA 121A Keyboarding I recommended.

◆ **BA 110H ADVANCED DOS AND HARD DISK MANAGEMENT**
(4 class hrs/wk 2 cr) F/W/Sp
Covers the use and management of the hard disk on IBM-compatible personal computer systems. Emphasizes the structuring of directories and use and creation of batch files. Note: Five-week class. Prerequisite: BA 110O Windows or equivalent knowledge.

BA 110O WINDOWS
(4 class hrs/wk 2 cr) F/W/Sp/Su
Designed to present the basics of the Windows environment. Includes systems hardware components; navigating in Windows; managing programs and files; transferring data between applications; managing printing, linking and embedding; and customizing the Windows environment. Note: Five-week class. Prerequisite: OA 121A Keyboarding I strongly recommended.

BA 110S SPREADSHEETS
(4 class hrs/wk 2 cr) F/W/Sp/Su
Introductory course on spreadsheet software. Note: Five-week class. Prerequisites: OA 121A Keyboarding I and OA 2.515 Business Math with Calculators recommended.

◆ **BA 131 BUSINESS PRODUCTIVITY SOFTWARE**
(2 class hrs/wk 2 cr) F/W/Sp/Su
Use of application software programs, primarily e-mail, word processing and spreadsheet modeling, as communication tools. Prerequisite: OA 121A Keyboarding I recommended.

BA 160 PURCHASING
(3 class hrs/wk 3 cr)
Describes the fundamentals of purchasing, including the purchasing function; purchasing policies, procedures and manuals; public relations and purchasing ethics; supply quality and sources; and store keeping and personnel.

BA 203 INTERNATIONAL BUSINESS
(3 class hrs/wk 3 cr) F
An in-depth review of the basic principles of international business, including the history, economics, environment, organization's monetary and exchange systems, marketing and the socioeconomic activities that exist in a rapidly developing world economy.

BA 206 PRINCIPLES OF MANAGEMENT
(3 class hrs/wk 3 cr) F/W/Sp/Su
Provides the foundation for later courses in administration, management philosophies and management science.

BA 207 LABOR / MANAGEMENT RELATIONS
(3 class hrs/wk 3 cr) F/W/Sp
Covers the relationship between worker and employer that arises with the exchange of effort for reward. A study of the role that unions play in this relationship, the rights of management and labor, negotiation techniques and methods of settling labor disputes, including use of mediation and arbitration.

BA 210S ADVANCED SPREADSHEETS
(4 class hrs/wk 2 cr) Sp
Covers advanced techniques for business applications using spreadsheets. The applications used are those expected in the business environment, including (but not limited to) trial balance, depreciation tables, sensitivity analysis and decision support problems, dynamic linking, embedded tables, and extensive use of macros and defined routines. Note: Five-week class. Prerequisite: BA 110S Spreadsheets.

BA 211 PRINCIPLES OF ACCOUNTING I
(3 class hrs/wk 3 cr) F
Presents 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 211A PRINCIPLES OF ACCOUNTING: FINANCIAL
(4 class hrs/wk 4 cr) W
Presents 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. Both sole proprietorship and partnerships are covered.

BA 212 PRINCIPLES OF ACCOUNTING II
(3 class hrs/wk 3 cr) W
Covers 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.

BA 213 PRINCIPLES OF ACCOUNTING III
(3 class hrs/wk 3 cr) Sp
Studies control accounting for departments and branches, cost accounting for manufacturing plants, capital budgeting techniques and their effect on business decisions and analysis of financial statements. Prerequisite: BA 212 Principles of Accounting II.

BA 213A PRINCIPLES OF ACCOUNTING: MANAGERIAL
(4 class hrs/wk 4 cr) Sp
Presents corporate accounting; managerial accounting, including accounting for manufacturing operations; job and process cost systems; capital budgeting techniques; and financial statement analysis. Prerequisite: BA 211A Principles of Accounting: Financial.

BA 215 SURVEY OF ACCOUNTING
(4 class hrs/wk 4 cr) F/W
Introduces financial accounting techniques, measuring and recording transactions, preparing financial statements, managerial decision making, and planning and control devices, such as budgeting, cost accounting, capital budgeting and break-even analysis. Prerequisite: MTH 65 Elementary Algebra.

BA 222 FINANCIAL MANAGEMENT
(3 class hrs/wk 3 cr) Sp
Covers topics dealing 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: BA 2.531 Practical Accounting II or BA 212 Principles of Accounting II.

BA 223 PRINCIPLES OF MARKETING
(3 class hrs/wk 3 cr) F/W/Sp/Su
Provides a general survey of the nature, significance and scope of marketing. Emphasizes customers (marketing analysis and strategy); business marketing decisions in promotion, distribution and pricing; and control of marketing programs.

BA 224 HUMAN RESOURCE MANAGEMENT
(3 class hrs/wk 3 cr) F
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.

BA 229 FINANCIAL PLANNING
(3 class hrs/wk 3 cr) F/Sp
Designed to aid the student to better understand his/her financial goals—an introduction to investments, budgets, real estate ownership, financial institutions, consumer's credit, insurance, stockmarket, mutual funds, and will and estate planning, with appropriate computer software applications.

BA 230 BUSINESS LAW
(4 class hrs/wk 4 cr) F/W/Sp
Introduces 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 238 PRINCIPLES OF SALESMANSHIP
(3 class hrs/wk 3 cr)
An introductory course on the principles of selling. Provides aspiring sales people and those involved in sales with the tools and insights needed to compete in the age of long-term, consultative-style selling.

BA 239 ADVERTISING
(3 class hrs/wk 3 cr) Sp
Explains 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)
Covers the skills needed to own a small business, the opportunities of small business in the U.S. and the rewards of owning a small business.

BA 271 INFORMATION TECHNOLOGY IN BUSINESS
(4 class hrs/wk 3 cr) F/W/Sp/Su
Uses information technology as a personal productivity tool within a business environment. Covers the integration of various software packages, such as word processors, data base management systems, spreadsheets, presentation graphics and on-line services. Prerequisite: BA 131 Business Productivity Software.

BA 275 BUSINESS QUANTITATIVE METHODS
(4 class hrs/wk 4 cr) F/W/Sp/Su
Presents statistical analysis and quantitative tools for applied problem solving and making sound business decisions. Special attention given to assembling statistical description, sampling, inference, regression, hypothesis testing, forecasting and decision theory. Prerequisite: MTH 245 Math for Biological/Management/Social Science.

BA 278 INTRODUCTION TO MANAGEMENT SCIENCE
(4 class hrs/wk 4 cr) F/W/Sp/Su
Applies mathematical and analytical techniques to business problems; linear programming, decision theory, simulation and forecasting, and inventory modeling. Prerequisites: BA 275 Business Quantitative Methods; MTH 241 Math for Biological/Management/Social Sciences.

BA 280B 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 285 BUSINESS RELATIONS IN A GLOBAL ECONOMY
(3 class hrs/wk 3 cr) F/W/Sp/Su
Examines culture and cultural diversity and their impact on organizations. Issues such as motivation, communication, value development, prejudice and discrimination are examined. Focuses on understanding one's own culture and gaining an appreciation for and understanding of other cultures.

BA 2.127 GOVERNMENTAL ACCOUNTING
(3 class hrs/wk 3 cr) F
Covers accounting theory and procedures for governmental and not-for-profit entities, including budgetary and expenditure control. Prerequisite: BA 2.531 Practical Accounting II or BA 212 Principles of Accounting II.

BA 2.132 TOTAL QUALITY MANAGEMENT
(3 class hrs/wk 3 cr) W
Introduces the methods of total quality management used in business and government. Topics include quantitative statistical methods, process control and current quality management processes. Prerequisite: MTH 65 Elementary Algebra.

BA 2.518 COMMERCIAL LAW
(3 class hrs/wk 3 cr) F/W
Introduces the 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.

BA 2.530 PRACTICAL ACCOUNTING I
(4 class hrs/wk 4 cr) F/W/Sp/Su
Covers the fundamental principles of double-entry accounting, general journals and ledgers, business forms, simple financial statements and the completion of the accounting cycle. Emphasizes cash receipts and payments, payroll accounting, purchases and sales.

BA 2.531 PRACTICAL ACCOUNTING II
(4 class hrs/wk 4 cr) W/Sp
Continues BA 2.530 Practical Accounting I, with an explanation of the accounting cycle to include special journals, ledgers and business forms, including the voucher system. Emphasizes accounting for a partnership. Prerequisite: BA 2.530 Practical Accounting I.

BA 2.532 PRACTICAL ACCOUNTING III
(4 class hrs/wk 4 cr) Sp
A third course in the Practical Accounting sequence, includes entries requiring analysis and interpretation, unearned and accrued items, depreciation of assets, manufacturing accounting and other managerial accounting procedures. Emphasizes accounting for a corporation. Prerequisite: BA 2.531 Practical Accounting II.

BA 2.534 COST ACCOUNTING
(3 class hrs/wk 3 cr) W
Relates theory to practical problems in analysis and control of material, labor and overhead costs in manufacturing. Emphasizes the job cost system. Prerequisite: BA 2.531 Practical Accounting II or BA 212 Principles of Accounting II.

BA 2.535 PAYROLL ACCOUNTING
(3 class hrs/wk 1 cr) F/W/Sp
Designed to reinforce and supplement payroll skills in both manual formats and computerized formats.

◆ **BA 2.569 FIRST COURSE IN COMPUTERS**
(2 class hrs/wk 2 cr) F/W/Sp/Su
Introduces students to the computer.

BA 2.595 PROFESSIONAL ACCOUNTING I
(3 class hrs/wk 3 cr) F
Provides an 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: BA 2.532 Practical Accounting III or BA 213 Principles of Accounting III or instructor approval.

BA 2.596 PROFESSIONAL ACCOUNTING II
(3 class hrs/wk 3 cr) W
Continues the Professional 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: BA 2.595 Professional Accounting I.

BA 2.597 PROFESSIONAL ACCOUNTING III
(3 class hrs/wk 3 cr) Sp
Continues the Professional Accounting sequence. Emphasizes fund flow analysis, financial ratios, preparing statements from incomplete data, correcting errors in prior year statements and price level changes. Prerequisite: BA 2.596 Professional Accounting II.

BA 2.684 COMPUTERIZED ACCOUNTING
(4 class hrs/wk 3 cr) F/W/Sp/Su
Provides hands-on computer experience in accounting applications, including general ledger, accounts receivable, accounts payable, payroll and financial statements. Emphasizes payroll accounting. Prerequisite: BA 2.530 Practical Accounting I or BA 211 Principles of Accounting I.

BI ..... Biology

- **BI 101, 102, 103 GENERAL BIOLOGY**
(5 class hrs/wk 4 cr) F/W/Sp/Su
Lab science courses designed for non-majors. May be taken in any order. BI 101, cells, physical and chemical properties of life, inheritance and evolution. BI 102, structure, function and behavior of plants and animals. BI 103, diversity of living things and interrelationships among living things and their environments. Different sections of each course emphasize different themes; students may choose the theme that interests them most: BI 101: History of Life, Principles of Biology, and Reproductive Strategies. BI 102: Plants and Animals, Nutrition and Health, Human Body and Principles of Biology. BI 103: Environmental Issues, Marine Biology, Oregon Ecology and Principles of Biology.

- **BI 164 NATURE PHOTOGRAPHY I**
(4 class hrs/wk 3 cr)
Covers camera functions and how they affect the photographic image, things of significance in nature and 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 is required. Flash unit, tripod and close-up ability recommended.

- **BI 211, 212, 213 BIOLOGY**
(5 class hrs/wk 4 cr) F/W/Sp
Introductory course intended for science majors: Botany, Zoology, Forestry, Microbiology, Fisheries and Wildlife, Agriculture, Pre-medical, Pre-dental, Pre-veterinary, Pre-pharmacy, Biology. BI 211: Cell structure and function; survey of major groups of organisms. BI 212: Cell metabolism, structure and function in plants and animals. BI 213: Genetics, evolution, ecology and behavior. Corequisite: CH 121, 122, 123 College Chemistry or CH 221, 222, 223 General Chemistry.

- **BI 214 CELL AND MOLECULAR BIOLOGY**
(3 class hrs/wk 3 cr) W
Basic concepts of prokaryotic and eukaryotic cell biology, with an emphasis upon cell structure and function at the molecular level.

- **BI 231, 232, 233 HUMAN ANATOMY AND PHYSIOLOGY**
(5 class hrs/wk 4 cr) F/W/Sp/Su
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 231: structure and function of the cell, basic biochemistry, tissues, integumentary system, skeletal system, and muscular and blood systems; BI 232: respiratory system, urinary system, fluid and electrolyte balance, cardiovascular and digestive systems; BI 233: lymphatic and immune systems, metabolism, endocrine system, nervous system, senses and reproductive system. Note: Must be taken in order. Prerequisites: MTH 65 Elementary Algebra; CH 121, CH 221 General Chemistry or CH 112 Chemistry for Health Occupations or equivalent or concurrent enrollment in any of these chemistry courses.

- **BI 234 MICROBIOLOGY**
(6 class hrs/wk 4 cr) F/W/Sp/Su
Introductory course; first in a series of three microbiology courses with laboratory. Covers all forms of microbial life, with emphasis on bacteria. Emphasizes application of microbiology to every day living. Medical, industrial, food and water microbiology, and sanitation are reviewed.

- **BI 235 ELEMENTARY MEDICAL MICROBIOLOGY**
(6 class hrs/wk 4 cr) W
Second in a series of three microbiology courses with laboratory. Surveys pathogenic bacteria and other pathogenic microorganisms. Covers characteristics of organisms, diseases they cause, their significance to human health and methods of control. The lab accompanying this course demonstrates morphology and growth characteristics of common pathogens and introduces diagnostic techniques.

- **BI 236 MOLECULAR BIOTECHNOLOGY**
(6 class hrs/wk 4 cr) Sp
Third in a series of three microbiology courses with laboratory. Laboratory course covering diagnostic immunology techniques such as precipitation reactions, agglutination reactions, complement fixation, immunofluorescence and enzyme-linked immunosorbent assay; the use of DNA probes with application to blot assays; amino acid sequencing; and the strategies and processes used in gene cloning, such as cloning vectors, screening, restriction enzymes and genomic libraries. Laboratory exercises allow students to practice techniques described in lecture.

- **BI 251 PRINCIPLES OF WILDLIFE CONSERVATION**
(3 class hrs/wk 3 cr) W
Introduces 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 252 WILDLIFE RESOURCES: BIRDS**
(5 class hrs/wk 3 cr) Sp
Introduces the biology of birds, with specific emphasis on the ecological and physiological adaptations of birds, flight, migration, bird behavior and identification, and natural history of the common birds of Oregon.

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.

BI 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. BI 4.220: general principles of anatomy and physiology of the head and the teeth; BI 4.221: anatomy and physiology of the head and teeth, embryonic development of the mouth and teeth, microbiology and pharmacology. Prerequisite: Admission to Dental Assistant Program.

CA ..... Culinary Arts

CA 8.309 PURCHASING FOR CHEFS
(4 class hrs/wk 2 cr) W
Teaches the fundamentals of developing and writing specifications for and dealing with purveyors. Also covers standard storeroom procedures.

CA 8.310, 8.311, 8.312 CULINARY ARTS PRACTICUM I, II, III
(24 class hrs/wk 7-8 cr) F/W/Sp
The Practicum classes I, II, and III provide a comprehensive hands-on sequence designed to develop, through practice, the basic skills and attitudes necessary for a successful career in Food Service. Stations include Baking, Pantry, Garde Manger, Soups and Sauces, Entree Cookery, Vegetable Cookery, Healthy and Natural Foods, and Dining Room. High professional standards and attitudes are stressed. These practicums are designed for the serious career-oriented individual. Prerequisite or Corequisite: CA 8.337 Stations and Tools; CA 8.336 Food Service Safety and Sanitation.

CA 8.321, 8.322, 8.323 ADVANCED COOKING MANAGEMENT I, II, III
(20 class hrs/wk 7 cr) F/W/Sp
From the fundamental skills attained in Practicum I, II & III, students refine and advance their culinary skill to include a la carte, front line cookery, advanced baking and pastry, advanced garde manger and dining room management skills. Students are directly involved in running a "working restaurant," giving them a realistic experience while honing work habits and awareness of production demands.

CA 8.336 FOOD SERVICE SAFETY AND SANITATION
(10 class hrs/wk 1 cr) F
Makes students aware of the hazards of poor sanitation and safety through lecture and assigned readings. They also are educated in proper personal hygiene, equipment handling and care of facilities. Note: One-week class.

CA 8.337 STATIONS, TOOLS AND CULINARY TECHNIQUES
(20 class hrs/wk 3 cr) F
A program orientation course providing students a thorough first exposure to the history of food service; identification and use of common ingredients; to professional work habits and attitudes; and to a basic understanding of equipment, knife handling techniques and culinary terms and methods. Note: Two-week class.

CA 8.341 SOUPS AND SAUCES
(10 class hrs/wk 3 cr) W
Provides study and practice in the art of classical and modern sauce and soup making from varied national and ethnic cuisines.

CA 8.345 SERVICE TECHNIQUES
(10 class hrs/wk 1 cr) F
Teaches the skills of dining room service by a combination of lecture, demonstrations and role playing. In addition, students learn the fundamentals of building customer relations.

CA 8.350, 8.351, 8.352, 8.353 BANQUETS AND BUFFET LAB A, B, C, D
(3 class hrs/wk 1-2 cr) F/W/Sp
Provides students the opportunity to participate in actual banquet and buffet functions, from small caterings to very large banquets. Set up, production load, banquet and catering plans, service techniques, organizational skills, costs and breakdown systems are presented.

CA 8.354 BANQUETS AND BUFFET LAB E
(3 class hrs/wk 1 cr) F
Enables students (especially those interested in catering) to acquire banquet experience in addition to the required A, B, C and D classes.

CA 8.355 BANQUET AND BUFFET PLANNING
(2 class hrs/wk 1 cr) Sp
To be taken in conjunction with CA 8.353 Banquet and Buffet Lab D. Students participate in the planning and execution of spring term banquets, food show and other special events.

CA 8.368 CREATING THE MENU
(2.5 class hrs/wk 2 cr) F
Covers history of the menu, styles of menus, consideration of nutrition, work load, flow of goods and sales.

CA 8.373 COSTING
(2.5 class hrs/wk 1 cr) W
Teaches theory and practice of determining food cost for restaurant and institutional cooking.

CA 8.409 MEATS
(6 class hrs/wk 3 cr) F
Covers fabricating primal and sub-primal cuts of beef, pork and lamb for profitable use in restaurants. Includes knife techniques, portion cutting, and safe and sanitary meat handling and storage. Proper cooking procedures and techniques also are presented. Handling and tasting of meat products is an integral and required part of this class.

CA 8.414 GARDE MANGER
(6 class hrs/wk 3 cr) Sp
Covers history of food presentation and charcuterie, as well as parts of cold kitchen, aspic work, appetizers and hors d'oeuvres. Utilization is covered by lecture, demonstration and practical application Note: Two-week class.

CA 8.418 BEVERAGE OPERATIONS AND SERVICES
(4 class hrs/wk 1 cr) F
Covers the art and science of beverage production, classifications, standards of identity, taste and characteristics, service and merchandising, costing and controls, standard glassware, sanitation, and federal and state ordinances.

CA 8.419 NUTRITION AND SPECIAL DIETS
(2 class hrs/wk 2 cr) F
Covers practical use of food and menus to assure a proper balance of both macro-nutrients (carbohydrates, fats, and proteins) and micronutrients. Vitamins and minerals discussed. Fiber needs and prevention of diet-related illness are covered.

CA 8.421 INTERNATIONAL CUISINE
(2 class hrs/wk 2 cr) Sp
Focuses on the spice ingredients and other flavor components that create differences in regional and national foods.

CEM..... Civil Engineering Technology

CEM 263 PLANE SURVEYING
(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: MTH 111 College Algebra or MTH 111T College Algebra: Technical.

CG ..... College Skills

CG 111 COLLEGE LEARNING AND STUDY SKILLS
(3 class hrs/wk 3 cr) F/W/Sp
Assists students in developing the academic strategies necessary for being successful in a community college or four-year college. Skills taught emphasize learning from lectures and printed material, organizing information, managing student responsibilities, preparing for and taking tests, and applying alternative learning strategies. Prerequisite: Appropriate reading competence as indicated by College Placement Test.

CH..... Chemistry

- **CH 111 INTRODUCTORY CHEMISTRY**
(5 class hrs/wk 4 cr) W
Introduces basic chemistry and laboratory skills. Designed for students with no previous chemistry background. Prerequisite: Students must have a working knowledge of elementary algebra.

- **CH 112 CHEMISTRY FOR HEALTH OCCUPATIONS**
(6 class hrs/wk 5 cr) F/W/Sp/Su
Introductory topics in inorganic, organic and biological chemistry specifically selected to prepare students entering Nursing, Emergency Medical Technician and related Health Occupations programs. Prerequisite: High school algebra, or equivalent, or MTH 60 Introduction to Algebra.

- **CH 113 TECHNICAL CHEMISTRY**
(5 class hrs/wk 4 cr) F
For general and technical students who require a basic knowledge of the principles of chemistry. Includes concepts of chemistry that are commonly utilized in fields such as agriculture, electronics and metallurgy. May serve as an introductory course for students who plan to take a chemistry sequence. Prerequisite: Students must have a working knowledge of elementary algebra.

● **CH 121, 122, 123 COLLEGE CHEMISTRY**
(7 class hrs/wk 5 cr) F/W/Sp
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, fisheries and wildlife, life sciences, education, general science and earth sciences. Note: Must be taken in sequence. Prerequisites to CH 121: MTH 65 Elementary Algebra or equivalent; high school physical science or equivalent. Prerequisites to CH 122: MTH 95 Intermediate Algebra and CH 121 College Chemistry. Prerequisite to CH 123: CH 122 College Chemistry.

● **CH 221, 222, 223 GENERAL CHEMISTRY**
(6 class hrs/wk 4 cr) F/W/Sp
A three-term sequence for science, engineering and health pre-professional students. Must be taken in order. Topics include atomic structure, chemical bonding, chemical equilibrium, rate of reaction, acids and bases, oxidation and reduction, nuclear chemistry and organic chemical compounds. Prerequisite to CH 221: high school chemistry or CH 112 Chemistry for Health Occupations or CH 113 Technical Chemistry. Corequisite to CH 221: MTH 111 College Algebra.

● **CH 241, 242, 243 ORGANIC CHEMISTRY**
(6 class hrs/wk 4 cr) F/W/Sp
A three-term sequence for science and health pre-professional students (such as pharmacy, medicine and veterinary). Must be taken in order. Topics include structural theory, nomenclature, stereochemistry, reactions and synthesis of organic chemical compounds. Reaction mechanisms are emphasized. Prerequisite: One year of General or College Chemistry.

CH 244 QUANTITATIVE ANALYSIS
(8 class hrs/wk 4 cr) Sp
Service course for students in the biological sciences, physical sciences or health professional programs. Includes theoretical and practical aspects of gravimetric, volumetric and instrumental methods of chemical analysis. Prerequisite: One year of General or College Chemistry.

CH 280 CWE CHEMISTRY
(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su
An instructional program to give students practical experience through 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.

CJ ..... Criminal Justice

■ **CJ 100 SURVEY OF CRIMINAL JUSTICE SYSTEMS**
(3 class hrs/wk 3 cr) F/Sp
Surveys the nature of crime and criminal responsibility, the criminal justice process, and the careers available in the criminal justice system.

■ **CJ 101 INTRODUCTION TO CRIMINOLOGY**
(3 class hrs/wk 3 cr) W/Su
Introduces major types of criminal behavior, role careers of offenders, factors that contribute to the production of criminality or delinquency, changes of the law in crime control and treatment processes.

■ **CJ 110 INTRODUCTION TO LAW ENFORCEMENT**
(3 class hrs/wk 3 cr) F/Sp
Explores theories, philosophies and concepts related to role expectations of line enforcement officers. Emphasizes patrol, traffic and public service responsibilities and their relationship to the administration of justice systems.

■ **CJ 120 INTRODUCTION TO THE JUDICIAL PROCESS**
(3 class hrs/wk 3 cr) W
Surveys the process of justice 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) F/W/Sp
Examines the 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
Introduces the use of parole and probation as a means of controlling development. Covers contemporary functioning of parole and probation agencies.

CJ 198 RESEARCH TOPICS
(1 class hr/wk 1 cr) F/W/Sp
Examines in-depth a selected criminal justice topic. Develops skills in independent research. Corequisite: WR 123 English Composition: Research Paper.

■ **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) F/Sp/Su
Explores and analyzes violence and aggression from biological, psychological and sociological perspectives. Includes topics such as: homicide, suicide, rape, assault, mob violence, terrorism, violence within the family and related phenomenon, which are presented from a human relations perspective.

CJ 210 INTRODUCTION TO CRIMINAL INVESTIGATION
(3 class hrs/wk 3 cr) W
Introduces the fundamentals of criminal investigation theory and history, from the crime scene to the courtroom. Emphasizes techniques appropriate to specific crimes.

■ **CJ 220 INTRODUCTION TO SUBSTANTIVE LAW**
(3 class hrs/wk 3 cr) F/Sp
Surveys the historical development and philosophy of law and constitutional provisions; the definition and classification of crimes and their application to the system of administration of justice; and the 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 agencies.

CJ 233 COMMUNITY-BASED CORRECTIONS
(3 class hrs/wk 3 cr) Sp
Explores philosophy and programs of juvenile and adult probation supervision, after-case parole, half-way homes, work- and educational-release furlough, as well as executive clemency and interstate compact practices. Examines the dilemma of surveillance — custody/control factors vs. supervision/treatment.

CJ 280A CWE CORRECTIONS
(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 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 280B CWE LAW ENFORCEMENT
(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 law enforcement. 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.

CR..... Collision Repair

CR 3.511 AUTO COLLISION BASICS
(20 class hrs/wk 12 cr) F
Teaches minor collision damage repair, including pulling out, shrinking and sheet metal corrections.

CR 3.512 AUTO COLLISION PROCEDURES
(20 class hrs/wk 12 cr) W
Covers procedures for color and application, alignment of front sheet metal, and alignment of doors and trunks. Also includes removing and reinstalling windshields and proper sealing of windshield types. Other procedures taught include repairing different types of fiberglass, repairing plastic, and welding of plastic. Prerequisite: 3.511 Auto Collision Basics or instructor approval.

CR 3.513 SHOP PROCEDURES
(20 class hrs/wk 12 cr) Sp
Covers spot repair, blending and clear coating, and color matching fundamentals. Introduces frame and unit body repair, suspension and designs, and vehicle anchoring (pulling and pushing). Prerequisite: CR 3.512 Auto Collision Procedures or instructor approval.

CR 3.514 AUTO BODY ELECTRICAL RECONSTRUCTION
(30 class hrs/wk 2 cr) Sp
Thirty-hour course for Auto Body Repair majors to supplement instruction in trouble shooting theory and reconstructive repair skills as applied to automotive direct current electrical systems. Note: Five-week class.

CS..... Computer Science

CS 133B INTRODUCTION TO BASIC
(4 class hrs/wk 3 cr)
Introduces algorithms and basic programming concepts in high-level computer language—BASIC.

◆ **CS 133V BEGINNING PROGRAMMING: VISUAL BASIC**
(5 class hrs/wk 4 cr)
Provides an introduction to problem analysis and programming to solve computation problems for those with little or no previous programming experience. The language used is Visual BASIC. Prerequisite: BA 131 Business Productivity Software or equivalent computer experience.

CS 145 HARDWARE/SOFTWARE SELECTION AND SUPPORT
(3 class hrs/wk 3 cr) Sp
Systematically presents evaluation criteria for selection of microcomputer hardware, software, service and support, including assessment of needs, compatibility of hardware and software, and reliability of dealership support.

◆ **CS 161 INTRODUCTION TO COMPUTER SCIENCE I (C++)**
(5 class hrs/wk 4 cr) F/W/Sp
Presents a history and overview of fundamental concepts of computer science. Includes problem-solving concepts, verification and validation, representation of numbers, machine representation of data, sources of error and algorithm development. Introduces the C++ programming language. Prerequisites: CS 133V Beginning Programming: Visual BASIC or other programming course; MTH 95 Intermediate Algebra or equivalent.

◆ **CS 162 INTRODUCTION TO COMPUTER SCIENCE II (C++)**
(5 class hrs/wk 4 cr) W/Sp
Covers software engineering principles, basic data structures and abstract data types (arrays, strings, stacks, queues, trees). Introduces analysis of algorithms, sorting and searching. Uses the C++ programming language. Prerequisite: CS 161 Introduction to Computer Science I.

CS 199 SPECIAL STUDIES: CONSULTING
(4 class hrs/wk 2 cr)
Provides an opportunity to gain experience consulting with end-users in a setting such as a campus computer lab. Consulting experiences include troubleshooting and problem-solving skills similar to those used in many business and software environments. Designed for Computer User Support majors in their second year of course work. Prerequisite: Instructor approval.

CS 225 END-USER COMPUTING SUPPORT
(4 class hrs/wk 4 cr)
Prepares the student for training and supporting end-users in a variety of organizational settings. Topics include the end-user support function in an organization, techniques for developing and delivering training modules and techniques for providing ongoing technical support to end-users. Emphasizes solving problems with users (debugging, troubleshooting and interaction with users). Prerequisite: CS 244 Systems Analysis and Design.

CS 226 ADVANCED COMPUTER USER SUPPORT
(4 class hrs/wk 4 cr)
A continuation of CS 225 End-user Computing Support. Focuses on coordination and management of end-user computing facilities, help desks, etc. The scope of projects is larger than the CS 225 projects. Prerequisite: CS 225 End-user Computing Support.

CS 233V ADVANCED PROGRAMMING: VISUAL BASIC
(5 class hrs/wk 4 cr)
Presents advanced ideas of numerical computation, object-oriented programming and problem analysis using the Visual BASIC language. Prerequisite: CS 133V Beginning Programming: Visual BASIC.

CS 244 SYSTEMS ANALYSIS AND DESIGN
(5 class hrs/wk 4 cr) F
A practice-oriented course with examples, applications and proven techniques that demonstrate systems analysis and design. Actual organization and business settings are used to show how systems concepts can apply to many different types of enterprises. Prerequisite: CS 145 Hardware/Software Selection and Support or instructor approval.

CS 261 DATA STRUCTURES
(5 class hrs/wk 4 cr) Sp
Includes the topics of complexity analysis, approximation methods, trees, graphs, file processing, binary search trees, hashing and storage management. Prerequisite: CS 162 Introduction to Computer Science II.

◆ **CS 275 DATA BASE SYSTEMS: SQL AND ORACLE**
(5 class hrs/wk 4 cr) W
Introduces the design, purpose and maintenance of a data base system. Topics covered are the entity-relationship model, relational systems, data definition, data manipulation, query language (SQL) and the Oracle and Paradox data base management environments. Prerequisite: CS 161 Introduction to Computer Science I.

◆ **CS 279 NETWORK MANAGEMENT (NOVELL)**
(3 class hrs/wk 3 cr) F
Through the use of lectures, reading and access with supervisor privileges to a Local Area Network system running Novell's operating system, students learn to maintain a network. Covers printers, users and the installation of software packages. Prerequisite: BA 110H Advanced DOS and Hard Disk Management or instructor approval.

CS 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.

CS 282 EXPERT SYSTEMS
(5 class hrs/wk 4 cr)
Introduces the programming environment of expert systems. Students learn the concepts of knowledge bases and knowledge engineering. Lab work provides hands-on experience using an expert system shell and engineering prototype systems. Prerequisites: CS 244 Systems Analysis and Design and a programming language (CS 133 Beginning Programming: Visual Basic or CS 161 Introduction to Computer Science I (C++).

CS 2.589 READING AND CONFERENCE: DATA PROCESSING
(1-20 class hrs/wk 1-10 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.

CSS ..... Crop Science

CSS 105 SOILS AND MAN
(3 class hrs/wk 3 cr) Sp
Soil resources in relation to environmental planning and sound ecological principles of land use. Includes examples and case studies involving soil problems and limitations in land use, pollution control and ecological aspects of production. One field trip. Student teams make presentation regarding land-use issues based on soil survey data.

CSS 200 PRINCIPLES OF CROP SCIENCE
(5 class hrs/wk 4 cr) Sp
Course includes the fundamental principles, concepts and illustrative facts concerning seedbed preparation, planting, fertilizing, irrigation, harvesting, storage, processing and marketing of cultivated crops. It also includes pest management, crop rotations, quality control and crop improvement. The lecture is designed to provide the student with background knowledge of common agricultural crops. The lab experience gives students practical applications in plant structure and growth; crop, weed, insect and disease identification; and the various cultural practices.

CSS 210 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, irrigations and renovation. Note: This is a professional/technical course that may not be accepted by four-year institutions.

D ..... Dance

D 185, 186, 187 BEGINNING BALLET
(1 class hr/wk 1 cr) F/W/Sp
Introduces the basic concepts of body alignment, terminology and movement sequences. Corequisite: D 192 Dance Lab.

D 192 DANCE LAB
(2 class hrs/wk 1 cr)
Lab for D 185, 186, 187 Beginning Ballet. Note: May be repeated for up to six credits.

D 285, 286, 287 INTERMEDIATE BALLET
(1 class hr/wk 1 cr) F/W/Sp
Continues the work on basic concepts of body alignment, terminology and movement sequences. Corequisite: D 292 Dance Lab.

D 292 DANCE LAB
(2 class hrs/wk 1 cr)
Lab for D 285, 286, 287 Intermediate Ballet. Note: May be repeated for up to six credits.

DA..... Dental Assistant

DA 5.453 DENTAL PATHOLOGY
(2 class hrs/wk 2 cr) Sp
Studies common pathological diseases, injured and normal tissue, and developmental anomalies. Prerequisite: BI 4.220, 4.221 Integrated Basic Science I, II.

DA 5.461 DENTAL RADIOLOGY I
(3 class hrs/wk 2 cr) F
The first of a three-term sequence introducing the principles and hazards of radiation, including safety factors, processing of film, operation of x-ray equipment and anatomical landmarks.

DA 5.462 DENTAL RADIOLOGY II
(3 class hrs/wk 2 cr) W
Continues and reviews DA 5.461 Dental Radiology I. Introduces x-ray techniques and patient considerations, emphasizing production of x-rays using manikins and patients. Prerequisite: DA 5.461 Dental Radiology I.

DA 5.463 DENTAL RADIOLOGY III
(2 class hrs/wk 1 cr) Sp
Provides a concentrated clinical application of dental radiographic procedures. Prerequisite: DA 5.462 Dental Radiology II.

DA 5.484 DENTAL MATERIALS I
(4 class hrs/wk 3 cr) W
Includes an introduction to the physical and biological characteristics of dental materials, structure and properties of dental materials and categories of dental materials. Dental cements and dental restorative materials are covered.

DA 5.485 DENTAL MATERIALS II
(4 class hrs/wk 3 cr) Sp
Continues DA 5.484 Dental Materials I, covering materials used in prosthodontic and laboratory procedures such as impression materials, plaster materials and waxes. Prerequisite: DA 5.484 Dental Materials I.

DA 5.488 EXPANDED DUTIES I
(3 class hrs/wk 2 cr) W
Introduces expanded duties of dental assisting, as delegated by the Oregon State Board of Dental Examiners, and provides practical application in the laboratory.

DA 5.489 EXPANDED DUTIES II
(3 class hrs/wk 2 cr) Sp
Continues Expanded Duties I (DA 5.488), covering the remaining expanded functions with emphasis on laboratory and practical application in the clinic. Prerequisite: DA 5.488 Expanded Duties I.

DA 5.491 DENTAL OFFICE RECORDS
(1 class hr/wk 1 cr) F
Introduces dental office records, patient reception, appointment scheduling, record maintenance, financial arrangements, computer use in dental offices, coordination and supply control, and OSHA guidelines.

DA 5.492 OFFICE EMERGENCIES
(1 class hr/wk 1 cr) Sp
Provides familiarization with various emergencies and treatment, including drugs. Emphasizes the responsibility of the dental office team to be prepared for emergencies.

DA 5.494 CLINICAL PRACTICE I
(7.5 class hrs/wk 4 cr) F
First course of a three-term sequence that introduces the student to basic dental assisting tasks, including sterilization and disinfection, patient reception, anesthesia, suctioning and charting. Student begins experience in the campus dental clinic.

DA 5.495 CLINICAL PRACTICE II
(6.5 class hrs/wk 4 cr) W
Second course in three-term sequence. Familiarizes students with basic dental assistant tasks, restorative procedures and instrumentation. The student gains more advanced clinical experience in the campus dental clinic. Prerequisite: DA 5.494 Clinical Practice I.

DA 5.496 CLINICAL PRACTICE III
(6.5 class hrs/wk 4 cr) Sp
Third course in three-term sequence. Continues emphasis on 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: DA 5.495 Clinical Practice II.

DA 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 pre-clinical sessions for actively applying principles of dental health education.

DA 5.498 DENTAL HEALTH EDUCATION II
(1 class hr/wk 1 cr) W
Second course in three-term sequence. Involves the student with community projects within the school system and 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) are included. Prerequisite: DA 5.497 Dental Health Education I.

DA 5.499 DENTAL HEALTH EDUCATION III
(1 class hr/wk 1 cr) Sp
Third 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 DA 5.497 Dental Health Education I and DA 5.498 Dental Health Education II are applied in the campus clinic. Prerequisite: DA 5.498 Dental Health Education II.

DA 5.501 DENTAL INFECTION CONTROL
(1 class hrs/wk 1 cr) F
Introduces the principles of dental infection control. Covers basic requirements for OSHA's Bloodborne Pathogens Standard, Hazard Communication Standard and certain other General Safety Standards in the dental office environment.

DA 5.500 ORAL ANATOMY AND HISTOLOGY
(2 class hrs/wk 2 cr) F
Covers anatomy and histology of the teeth and their supporting structures and the function of oral structures.

DA 5.510 OFFICE PRACTICUM
(27 class hrs/wk 8 cr) Su
Provides the dental assisting student with work experience closely paralleling the field of study. Emphasizes building skills in various dental assisting procedures.

DA 5.515 OFFICE PRACTICUM SEMINAR
(1 class hr/wk 1 cr) Su
A series of seminars in which students share work-related experiences with the instructor and fellow students. Students also receive information pertaining to employability skills, basic planning, basic economics and resume preparation. Course includes overall review of the Dental Assistant Program.

EC..... Economics

■ **EC 115 OUTLINE OF ECONOMICS**
(4 class hrs/wk 4 cr) F/W/Sp
Emphasizes major economic activities such as supply and demand, fiscal policies of the United States, Federal Reserve functions, unemployment and international trade.

■ **EC 201 PRINCIPLES OF ECONOMICS I**
(3 class hrs/wk 3 cr) F
Introduces American capitalism, national income accounting, employment theory and fiscal policy.

■ **EC201A INTRODUCTION TO MICROECONOMICS**
(4 class hrs/wk 4 cr)
Introduces microeconomic principles, including the study of price theory, economic scarcity, consumer behavior, production costs, the theory of the firm, market structure and income distribution. Other selected topics may include market failure, international economics and public finance.

■ **EC 202 PRINCIPLES OF ECONOMICS II**
(3 class hrs/wk 3 cr) W
Introduces monetary policy, economics of the firm and resource allocation. Prerequisite: EC 201 Principles of Economics I.

■ **EC 202A INTRODUCTION TO MACROECONOMICS**
(4 class hrs/wk 4 cr)
Introduces macroeconomic principles including the study of the theories of output determination, consumption, investment, inflation, unemployment, and fiscal and monetary policy. Other selected topics may include the study of the international balance of payments, growth and development, and urban and regional problems.

■ **EC 203 PRINCIPLES OF ECONOMICS III**
(3 class hrs/wk 3 cr) Sp
Introduces current economic problems, international economics and the world economy. Prerequisite: EC 202 Principles of Economics II.

■ **EC 215 ECONOMIC DEVELOPMENT IN THE U.S.**
(3 class hrs/wk 3 cr) F/W/Sp
Provides historical study of U.S. 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) F
Presents first, detailed look at the theory and policy of manpower economics, 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 U.S. ECONOMIC ISSUES**
(3 class hrs/wk 3 cr) Sp
Applies economic principles to selected issues affecting the U.S. economy, including poverty, pollution and urbanization. Prerequisite: Instructor approval.

ED..... Education

ED 101 OBSERVATION AND GUIDANCE
(5 class hrs/wk 3 cr)
An active participation class focusing on methods of observing and interacting with children in a classroom setting. Students work with children individually and in small groups. Section numbers indicate the school setting: preschool, elementary or secondary.

ED 102 PRACTICUM
(5 class hrs/wk 3 cr)
Experience is gained by working with children in a supervised educational setting. Students increase their knowledge of child development and learning environments, begin planning and implementing curricula, and develop skills in guidance and discipline. Section numbers indicate the school setting: preschool, elementary or secondary. The preschool practicum includes planned interactions with parents and may take place in a parent-child cooperative. Prerequisite: ED 101 Observation and Guidance.

ED 103 ADVANCED PRACTICUM
(10-17 class hrs/wk 6 cr)
Field experience in a classroom setting that closely parallels duties regularly assigned to instructional assistants on a school team. Allows students to apply in-depth knowledge, methods and skills gained from education courses. Section numbers indicate the school setting: preschool, elementary or secondary. The preschool practicum includes one to two full-day work experiences each week. The course may be completed in one term for 6 credits (ED 103) or in two terms for 3 credits each (ED 103A and 103B)

ED 123 TUTOR AND INSTRUCTIONAL PRACTICES
(2 class hrs/wk 1 cr) F/W/Sp
Introduces student tutors to effective tutoring strategies. Uses a variety of instructional methodologies to inform student tutors about how students learn, how to conduct a 50-minute tutor session and how to work with a diverse student population. Prerequisite: Employment by LBCC tutorial program or permission of the Tutor Coordinator.

ED 152 CREATIVE ACTIVITIES/ DRAMATIC PLAY
(3 class hrs/wk 3 cr)
Focuses on understanding and implementing a developmental approach to creative activities for the young child. Involves hands-on experience with a wide variety of activities and mediums. Includes methods of preservation and evaluation. Emphasizes art, music and movement, and dramatic play.

ED 179 LITERATURE, SCIENCE, AND MATH
(3 class hrs/wk 3 cr)
Focuses on understanding and creating quality curricula in literature, science and math. Includes experiences with planning, implementing, and evaluating materials and activities.

ED 207 BEGINNING LEADERSHIP
(3 class hrs/wk 3 cr) F
Overview of leadership theory, styles and skills. Provides skill-building exercises, professional networking techniques, group process and team-work methods, basic communication techniques, prioritizing, goal setting and other basic information necessary for those anticipating leadership roles.

ED 208 COMMUNITY COLLEGE TUTORING
(1-5 class hrs/wk 1-3 cr) F/W/Sp/Su
Extends the learning of student tutors and others who provide academic support services to LBCC students. Course requirements may include direct instruction, practicum experience and a student-initiated project.

ED 209 LEADERSHIP PRACTICUM
(3 class hrs/wk 3 cr) W
Students explore and develop leadership potential by gaining an understanding of styles and aspects of leadership and leadership theory and practice. Provides structured opportunities for the individual to experience leadership roles.

ED 209A THEORY AND PRACTICUM
(5 class hrs/wk 3 cr) W
Experience is gained by working with preschool-aged children in a supervised laboratory setting. Students increase their knowledge of child development, curriculum planning, learning environments, and guidance and discipline. Skill development also includes observing children and planning developmentally appropriate activities. Prerequisites: HDFS 225 or PSY 235 Child Development; HDFS 248 Learning Experiences for Children.

ED 280C CWE: ELEMENTARY/ SECONDARY EDUCATION
(4-28 class hrs/wk 2-14 cr)
Structured field experience in an educational setting. Working with a master teacher, students learn current educational strategies and techniques. Students identify job performance objectives, work a specified number of hours during the term and attend a related CWE seminar. Credits are based on identified objectives and number of hours worked. This is a supervised work experience that must be approved by the CWE coordinator prior to enrolling in the class.

ED 280E CWE: ADVANCED LEADERSHIP
(3 class hrs/wk 3 cr) Sp
Readings in organizational, motivational and leadership theory. Includes structured field experience.

ED 282 WORKING WITH CHILDREN WITH SPECIAL NEEDS
(3 class hrs/wk 3 cr)
Overview of special education legislation and family, school and community roles in educating and supporting individuals with disabilities.

EE..... Electronics Engineering Technology

EE 6.320 FUNDAMENTALS OF ELECTRONICS
(6 class hrs/wk 4 cr) F
Introduces electricity and electronics, including basic concepts and theories relating to DC and AC electricity. Prerequisite: High school algebra and geometry or equivalent. Corequisite: MTH 111T College Algebra: Technical.

EE 6.321 DC/AC CIRCUIT ANALYSIS
(9 class hrs/wk 6 cr) W
Provides knowledge and use of network analysis techniques relating to DC and AC electricity. Basic skills in oscilloscope, function generator and power supply use also are acquired. Prerequisites: EE 6.320 Fundamentals of Electronics or instructor approval; MTH 111T College Algebra: Technical. Corequisite: MTH 112T College Trigonometry: Technical.

EE 6.322 BASIC SEMICONDUCTORS
(9 class hrs/wk 6 cr) Sp
Covers theory and application of electronic devices, such as semiconductor diodes and BJT/FET transistors. BJT and FET circuit biasing techniques and AC circuit analysis using hybrid parameter equivalents also are studied. Prerequisite: EE 6.321 DC/AC Circuit Analysis.

EE 6.323 ANALOG CIRCUITS
(9 class hrs/wk 6 cr) F
Introduces circuit theory and practical application of linear circuits with and without feedback, some composed of discrete components and some integrated circuits (OP Amps). Prerequisite: EE 6.322 Basic Semiconductors.

EE 6.324 INTEGRATED SYSTEMS I
(9 class hrs/wk 6 cr) W
An investigation of Oscillators, tuned Amps, power supplies, regulators, power control devices, switching power supply and operational amplifier industrial applications. This course and EE 6.325S Integrated Systems II provide an industrial measurement/control background for the electronics maintenance technician. Prerequisite: EE 6.323 Analog Circuits.

EE 6.325 INTEGRATED SYSTEMS II
(9 class hrs/wk 6 cr) Sp
Survey of electronic integrated systems and robotics, including transducers, signal conditioning, data recording and control loops. Prerequisite: EE 6.324 Integrated Systems I.

EE 6.328 PNEUMATICS FOR TECHNICIANS
(4 class hrs/wk 3 cr) Sp
Provides instruction in the theory, operation and application of pneumatics, diagnosis, service, maintenance and repair.

EE 6.329 PLC'S FOR TECHNICIANS
(6 class hrs/wk 4 cr)
Integrates logic controllers with Pneumatic Systems, Silicon Controlled Rectifier Drives and Variable frequency AC Drives. Also introduces Pneumatic System Design and Simulation using a windows software program.

EE 6.330 INDUSTRIAL ELECTRICITY
(4 class hrs/wk 3 cr) F/W/Sp
Introduces basic DC electrical theory, safety and meter use. Introduction to single-phase and three-phase concepts and measurements. Prepares the student for basic electrical troubleshooting required in other industrial trades. Prerequisite: MTH 65 Elementary Algebra.

EE 6.333 ELECTROMECHANICAL SYSTEMS
(6 class hrs/wk 4 cr)
First three weeks devoted to manually, mechanically, electromechanically and electronically operated switches, solenoids and relays. Next two weeks cover DC/AC motor drives. The remaining five weeks spent on study of and practice with computer-interfaced programmable logic controllers (Places), which in turn control electric motors and pneumatics.

EE 6.334 ELECTRICAL FABRICATION
(1-10 class hrs/wk 1-6 cr)
Prepares 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.

EE 6.336 TECHNICAL ELECTRICITY I
(4 class hrs/wk 3 cr) F/W/Sp
Introduces basic DC electrical theory, safety and meter use. Designed to prepare the student for basic electrical troubleshooting required in other industrial trades and EET program. Prerequisite: MTH 65 Elementary Algebra.

EE 6.338 MOTORS AND CONTROLS
(4 class hrs/wk 3 cr)
Covers the operational theory of DC and AC (single-phase and three-phase) rotating machines transformers, and DC and AC electronic industrial motor controls. Introduces PLC programming. Provides entry-level technical information required for electronics technicians and the electrical trades. Prerequisite or Corequisite: EE 6.322 Basic Semiconductors; MTH 112T Trigonometry: Technical.

EE 6.346 DIGITAL CIRCUITS I
(8 class hrs/wk 5 cr) F
Develops an understanding of number systems and digital codes through logic gates and combinational logic circuits. Investigates the use of Boolean Algebra and Karnaugh maps in simplifying logic circuits. Prerequisite: EE 6.322 Basic Semiconductors or instructor approval.

EE 6.347 DIGITAL CIRCUITS II
(8 class hrs/wk 5 cr) W
Covers flip-flops and sequential logic and their application to counters, shift registers, arithmetic circuits and, finally, to computing systems. Teaches how to use the logic analyzer and its usefulness in analyzing sequential circuits. Prerequisite: EE 6.346 Digital Circuits I or instructor approval.

EE 6.349 BASIC MICROPROCESSORS
(8 class hrs/wk 5 cr) Sp
Introductory class on microprocessors and microcomputers and their associated subsystems and software. Covers 68HC 11 single chip microprocessor, support systems, peripherals and mass storage devices. Prerequisite: EE 6.347 Digital Circuits II, Programming Language or instructor approval.

EE 6.370 TECHNICIAN COMPUTER PRACTICES
(5 class hrs/wk 4 cr) Sp
Introduces the theory and application of basic programming concepts in solving technical problems. C-Language is used to demonstrate programming structure, input and output, variables, functions, arrays, simple pointers, error-checking, control statements, stacks and number formats. The differences between high-level and low-level programming languages are demonstrated by embedding assembly language within C-programs. Students are given various technical assignments requiring proficiency in the above topics.

EE 6.380 EET MECHANICS SKILLS I
(4 class hrs/wk 3 cr)
Covers the basic mechanical skills required in the electromechanical industry. Topics include handtools, threaded fasteners, electronic soldering, packing, lubrication, gaskets, precision instruments, gears, belts, chains, couplings and seals.

EE 6.381 EET MECHANICS SKILLS II
(4 class hrs/wk 3 cr)
Covers the theory, operation and application of lubrication, bearings, seals and various mechanical drives. Diagnosis, service, maintenance and repair are taught.

EE 6.554 TECHNICAL FIELD PROJECTS
(3-9 class hrs/wk 1-3 cr)
Provides an in-depth study of particular aspects of electronics as determined by individual student's interests. Prerequisite: EE 6.322 Basic Semiconductors.

EG..... Engineering Graphics

◆ **EG 4.407 INTRODUCTION TO CAD**
(6 class hrs/wk 4 cr) F
A course for drafters, technicians and engineers in the application and functions of computer-aided drafting. Emphasizes hands-on operation of CAD systems. Prerequisite: Four college credits in drafting or instructor approval.

◆ **EG 4.411 DRAFTING I: CAD BASICS**
(6 class hrs/wk 4 cr) F
Presents fundamentals of technical drawing. Emphasizes line language, geometric construction, sketching and layout procedures. Includes multiview drawings, pictorials and section views. Fundamental drafting skills as well as introductory CAD skills are taught.

EG 4.421 DRAFTING II: APPLIED CAD
(6 class hrs/wk 4 cr) W
Covers methods of technical drawing utilizing ANSI standards to produce two-dimensional technical drawings. Introduces you to more advanced techniques in drafting using AutoCAD's drawing and editing commands. Prerequisite: EG 4.411 Drafting I: CAD Basics.

EG 4.423 ARCHITECTURAL DESIGN I
(6 class hrs/wk 4 cr) W
Introduces basic architectural drafting techniques and methods. Covers the principles of architectural design, layout and industry conventions. Includes architectural symbols and construction methods used in residential and light commercial buildings. Prerequisite: EG 4.411 Drafting I: CAD Basics.

EG 4.431 DRAFTING III: 3D CAD
(6 class hrs/wk 4 cr) Sp
Develops the skills necessary to create mechanical drawings. Includes principles of tool design, geometric dimensioning and tolerancing, surface finish specifications and CAD/CAM requirements. Prerequisite: EG 4.421 Drafting II: Applied CAD.

EG 4.433 PRODUCTION METHODS
(6 class hrs/wk 4 cr) Sp
Introduces technical drawing principles relating to processes used in the manufacturing and construction industries. Material specifications, production techniques and tooling for the materials processing, fabrication and forming industries are studied. Prerequisite: EG 4.403 Basic Print Reading or EG 4.411 Drafting I: CAD Basics.

EG 4.441 ADVANCED DRAFTING I: SURFACES
(6 class hrs/wk 4 cr) F
Graphic solutions to engineering and design problems are explored in this class. Covers descriptive geometry, auxiliary views, 3D projections, surface generation and other computer modeling techniques. Prerequisite: EG 4.431 Drafting III: 3D CAD.

EG 4.443 SCHEMATICS
(6 class hrs/wk 4 cr) F
Covers methods for drawing electrical, mechanical and plumbing schematic diagrams and pictorial layouts. Includes logic diagrams, electronic component symbols, printed circuit boards and schematics. Power distribution, piping, plumbing and HVAC drawing standards and practices also are studied. Prerequisite: EG 4.421 Drafting II: Applied CAD.

EG 4.451 ADVANCED DRAFTING II: SOLIDS
(6 class hrs/wk 4 cr) W
Covers mechanical design considerations for producing technical drawings for manufactured parts. Students learn boolean operations and their use in the creation of composite solid models. CIM data exchange files and formats also are explored. Prerequisite: EG 4.441 Advanced Drafting I: Surfaces.

EG 4.453 CUSTOMIZING CAD SYSTEMS
(6 class hrs/wk 4 cr) W
Emphasizes customization of CAD systems for productivity. Autolisp, menu customization, icon and toolbar editing as well as macros are covered. Teaches students the skills needed to customize a CAD program for productivity, regardless of the technical discipline. Prerequisite: EG 4.441 Advanced Drafting I: Surfaces.

EG 4.455 CIVIL DRAFTING I
(6 class hrs/wk 3 cr) W
Introduces drafting practices and problems related to civil engineering. Emphasizes land survey drawings, legal descriptions, mapping, platting and plan/profile drawings. Prerequisites: EG 4.421 Drafting II: Applied CAD; CEM 263 Plane Surveying.

EG 4.461 ADVANCED DRAFTING III: RENDERING
(6 class hrs/wk 4 cr) Sp
Explores use of the computer as a technical illustrating tool. Uses CAD shading, rendering and animation tools to produce realistic images used in presentations, conceptual design and technical illustration. Prerequisite: EG 4.451 Advanced Drafting II: Solids.

EG 4.463 ARCHITECTURAL DESIGN II
(6 class hrs/wk 4 cr) Sp
Presents the elements, principles and aesthetics of architectural design. Covers planning and creation of working drawings. Emphasizes construction plans, including energy efficiency, handicapped accessibility and ergonomic considerations. Prerequisite: EG 4.423 Architectural Design I.

EG 4.465 CIVIL DRAFTING II
(6 class hrs/wk 3 cr) Sp
Advanced course in drafting practices related to civil engineering. Emphasizes preparing drawings for steel and concrete structures. Includes discussions of construction practices for pipelines, dams, roads, bridges and other related structures. Prerequisite: EG 4.455 Civil Drafting I.

EM ..... Emergency Medical Technician

EM 5.801 INTRODUCTION TO EMERGENCY MEDICAL SERVICES
(3 class hrs/wk 3 cr)
Covers role and responsibilities of the emergency medical technician, scope of practice, moral issues, public vs. private ambulance services, emergency medical systems, medical/legal issues, multiple casualty incidents, hazardous materials awareness and stress management.

EM 5.820 EMERGENCY COMMUNICATION AND PATIENT TRANSPORTATION
(5 class hrs/wk 3 cr)
Covers ambulance operation, rules and regulations regarding ambulance licensing, inventory, maintenance and safety. Includes emergency response driving and route planning, MAP book orientation, communication systems, radio types, HEAR system and dispatch systems.

EM 5.825 EMT RESCUE
(6 class hrs/wk 3 cr)
Covers basic methodology and equipment used for emergency rescue. Topics covered include auto extrication, rapid extrication techniques, traffic safety, with a focus on traffic accidents.

EM 5.830 CRISIS INTERVENTION
(3 class hrs/wk 3 cr)
Covers methods of recognizing and managing symptoms of crisis. How to manage death in the field; the dying patient; and stress response of friends, family and the emergency worker. Critical incident stress debriefing is included.

EN ..... Developmental English

EN 1.133 THE WRITE COURSE
(4 class hrs/wk 4 cr) F/W/Sp/Su
Introduces the writing required for effective communication in course work and in the workplace. Reviews and teaches mechanics, grammar, sentence structure and a limited number of strategies used to convey information clearly and accurately. Focuses on sentences and basic paragraph writing. Meets in a variety of settings: classroom, workshop and computer classroom.

EN 1.157, 1.159 ACADEMIC ENGLISH: NON-NATIVE SPEAKERS
(4 class hrs/wk 3 cr) F/W/Sp
Class for non-native speakers of English. Integrates reading, writing, listening and speaking skills around contemporary issues. Focuses on vocabulary development, grammar structure, paragraph and essay organization. Meets particular needs of the language learner.

ENG ..... English

➤ **ENG 104 INTRODUCTION TO LITERATURE: FICTION**
(3 class hrs/wk 3 cr) F/W/Sp
Examines fiction through literary works, such as the novel and the short story. Studies fiction through the reading of significant short stories and novels, with an emphasis on interpretive analysis and the fiction writer's craft. Note: Need not be taken in sequence.

➤ **ENG 105 INTRODUCTION TO LITERATURE: DRAMA**
(3 class hrs/wk 3 cr) F/W/Sp
Introduces Western drama from its origin in ancient Greece to today's theatre, stressing conventions of drama as both a literary and performing art. Note: Need not be taken in sequence.

➤ **ENG 106 INTRODUCTION TO LITERATURE: POETRY**
(3 class hrs/wk 3 cr) F/W/Sp
Studies poetry drawn from American, English and world literature. Works are read in entirety when possible, with emphasis on elements such as structure, style, imagery, figurative language and musical devices. Note: Need not be taken in sequence.

➤ **ENG 107, 108, 109 LITERATURE OF THE WESTERN WORLD**
(3 class hrs/wk 3 cr)
Discusses masterpieces of Western literature from the ancient world to the present. ENG 107: The Classical Ages; ENG 108: The Middle Ages to the Age of Reason; ENG 109: 18th Century to the Present. Note: Need not be taken in sequence.

➤ **ENG 110 INTRODUCTION TO FILM STUDIES**
(3 class hrs/wk 3 cr)
Introduces students to the methods, criticism and theory of film. Students attend lectures and view films each week.

➤ **ENG 121 MYSTERY FICTION**
(3 class hrs/wk 3 cr) F
Explores the range and development of mystery fiction from pre-Poe to the present.

➤ **ENG 201, 202, 203 SHAKESPEARE**
(3 class hrs/wk 3 cr) F/W/Sp
Studies major plays of Shakespeare, including the structure, characterization, setting and imagery employed in selected comedies, tragedies, histories and poems. Note: Need not be taken in sequence.

➤ **ENG 204, 205, 206 SURVEY OF ENGLISH LITERATURE**
(3 class hrs/wk 3 cr) F/W/Sp
Studies representative works in English literature for their inherent worth and for their reflection of the times in which they were written. ENG 204: ballads through Donne; ENG 205: Defoe through the Romantics; ENG 206: Brontë through Golding. Note: Need not be taken in sequence.

➤ **ENG 207, 208, 209 LITERATURE OF THE NON-WESTERN WORLD**
(3 class hrs/wk 3 cr)
ENG 207: Literature of Asia, representative works of poetry, prose and drama; ENG 208: Literature of Africa, literary works of both tribal and colonial origin; ENG 209: Literature of the Americas (excluding the United States and Canada). Includes works of Hispanic, Native American and Afro-American origin pre-dating the Spanish Conquest through contemporary writers. Note: Need not be taken in sequence.

➤ **ENG 211 LITERATURE IN ATHLETICS**
(3 class hrs/wk 3 cr)
Studies the literature of sports and its reflection of our culture and world. Focuses on works of 20th century American writers. Special emphasis is placed on evolved myths of the athlete and of athletics.

➤ **ENG 221 INTRODUCTION TO CHILDREN'S LITERATURE**
(3 class hrs/wk 3 cr)
Surveys selected children's literature including stories, legends, poems and rhymes.

➤ **ENG 253, 254, 255 SURVEY OF AMERICAN LITERATURE**
(3 class hrs/wk 3 cr)
Presents intensive readings of significant U.S. authors representing major literary periods. ENG 253: Puritanism through Civil War; ENG 254: Transcendentalism through early Realism; ENG 255: Realism and Naturalism to the present. Provides an understanding of and appreciation for American culture as expressed in literature.

➤ **ENG 260 INTRODUCTION TO WOMEN WRITERS**
(3 class hrs/wk 3 cr)
Introduces major works of literature by women authors, exploring women's literary history through poetry, short stories, essays, plays, novels and letters.

➤ **ENG 261 INTRODUCTION TO SCIENCE FICTION**
(3 class hrs/wk 3 cr) Sp
Explores science fiction, fantasy and speculative futures through popular fiction. Discusses content, styles, techniques and conventions of the genre.

➤ **ENG 275 BIBLE AS LITERATURE**
(3 class hrs/wk 3 cr) W
Surveys selected Biblical readings that acquaint students with literary forms, styles and content of Biblical materials. Points out our literary and artistic indebtedness to the Biblical heritage.

ENGR ..... Engineering

ENGR 111 ENGINEERING ORIENTATION I
(5 class hrs/wk 4 cr) F
Covers engineering as a profession, historical development, ethics, curricula and engineering careers. Introduces problem analysis and solutions, data collection, accuracy and variability. Prerequisite or Corequisite: MTH 111 College Algebra.

ENGR 112 ENGINEERING ORIENTATION II
(5 class hrs/wk 4 cr) W
Introduces those skills necessary for success in the Professional Engineering Program. Concepts include the UNIX operating system, spreadsheets, data bases, math compilers and word processing. Prerequisite or Corequisite: MTH 112 College Trigonometry.

ENGR 201 ELECTRICAL FUNDAMENTALS
(5 class hrs/wk 4 cr) F
Covers fundamentals circuit analysis, including node and mesh analysis, superposition, and Thevenin and Norton's Theorem. Introduces op-amps, capacitors and inductors. Covers AC circuit analysis techniques. Prerequisite: MTH 251 Calculus.

ENGR 202 ELECTRICAL FUNDAMENTALS
(5 class hrs/wk 4 cr) W
Covers Fourier Series representation of periodic functions, Sinusoidal steady state and analysis of three-phase circuits; introduces mutual inductance and transformers; looks at resonant circuits. Continuation of op-amp circuits. Prerequisites: MTH 252 Calculus; ENGR 201 Electrical Fundamentals.

ENGR 203 ELECTRICAL FUNDAMENTALS
(5 class hrs/wk 4 cr) Sp
Covers transient circuit analysis - RL, RC, RLC. Introduces LaPlace Transform and its use in circuit analysis, the transfer function, Bode diagram and two port networks. Prerequisites: MTH 253 Calculus; ENGR 202 Electrical Fundamentals.

ENGR 211 STATICS
(4 class hrs/wk 4 cr) F
Introduces engineering statics, including the laws of mechanics, vector algebra, moments, force systems, equilibrium, trusses, beams, cables, friction, centroids, moments of inertia and virtual work. Prerequisite: MTH 251 Calculus.

ENGR 212 DYNAMICS
(4 class hrs/wk 4 cr) W
A study of the dynamics of rigid bodies, including the kinematics and kinetics of single particles and systems of particles, linear momentum, moments of momentum, relative motion, energy and impulse momentum. Prerequisites: ENGR 211 Statics; MTH 252 Calculus.

ENGR 213 STRENGTH OF MATERIALS
(4 class hrs/wk 4 cr) Sp
Introduces the mechanics of deformable bodies in equilibrium, treating the internal effects of external forces upon bodies and the interrelationships between stress and strain. Prerequisites: ENGR 211 Statics; MTH 252 Calculus.

ENGR 245 ENGINEERING GRAPHICS AND DESIGN
(6 class hrs/wk 4 cr) Sp
Includes two-dimensional and three-dimensional graphics, sketching, multiview projection, dimensioning, descriptive geometry, engineering design and an introduction to AutoCad®. Corequisite: MTH 111 College Algebra.

ENGR 271 DIGITAL LOGIC DESIGN
(6 class hrs/wk 4 cr) Sp
Provides an introduction to digital logic and state machine design. Covers logic design, including logic gates, gate minimization methods and design with standard medium scale integration (MSI) logic circuits. Includes basic memory elements (flip-flops) and their use in simple-state machines. Prerequisites: ENGR 201 Electrical Fundamentals; MTH 251 Calculus.

FA ..... Farrier Science

FA 8.200 FARRIER SCIENCE
(34.5 class hrs/wk 22 cr) F/W/Sp
Provides the basic knowledge and skills to enter the farrier, or horseshoeing, trade. Students acquire entry-level knowledge and skills in the areas of horse anatomy and physiology, hoof care, hoof disorders and diseases, use of hand tools, basic forging, regular horseshoeing and corrective shoeing. In addition, basic horse handling skills and methods of restraint are taught. Note: Fourteen-week class.

FN ..... Foods and Nutrition

FN 225 NUTRITION
(4 class hrs/wk 4 cr) F/W/Sp
Introduces nutrients, their functions, sources and effects of deficiency and toxicity. Examines current recommendations for Americans and topics of current interest. Includes digestion, metabolism and changing nutrient needs through the life cycle. Provides opportunity to evaluate personal dietary intake for three days. Note: A background in chemistry is recommended.

G ..... Geology

G 120 REGIONAL GEOLOGY
(3 class hrs/wk 3 cr)
An introduction to geology and the processes that have shaped Oregon's landscape. Includes volcanic activity, plate tectonics, erosion and deposition by river, glaciers and ocean. Field trip included to either the Cascades or the Coast.

GA ..... Graphic Arts

The prerequisites and corequisites for the Graphic Arts courses listed below are enforced for program majors. Non-Graphics Arts majors must contact an instructor to be considered for a class.

GA 3.150 INTRODUCTION TO PRINTING AND GRAPHIC ARTS
(4 class hrs/wk 3 cr)
Introduces the history, terminology and current state of the printing and graphic arts industry. Includes hands-on experiences in electronic prepress technology, reproduction photography, negative imposition, platemaking, press operation and bindery.

◆ **GA 3.151 INTRODUCTION TO ELECTRONIC IMAGING**
(3 class hrs/wk 3 cr)
Examines basic Macintosh concepts of opening, creating, saving, transferring, printing and organizing files. Develops skills utilizing current Apple System technology in order to create a solid computer-skills base on which to grow on. Examines word processing software and covers text entry and formatting; creating, saving and revising files; character, paragraph and document formatting; and editing and proofing tools and functions.

GA 3.152 ART AND COPY PREPARATION
(4 class hrs/wk 3 cr)
Studies the preparation of mechanical art for printing. Stresses terminology and practice of mechanical and electronic layout and paste-up techniques, including use of headlines, body copy, line cuts and halftones. Includes imposition, screened prints, screen tints, overlays and color preparation.

GA 3.153 ELECTRONIC ILLUSTRATION I
(3 class hrs/wk 3 cr)
Introduces the use of electronic illustration software for image creation. Develops control over lines, shapes and text. Explores tools and menus; creating and editing paths, points, segments and shapes; placing objects; transforming objects; and creating and manipulating text and layers. Prerequisite: GA 3.151 Introduction to Electronic Imaging.

GA 3.154 ELECTRONIC ILLUSTRATION II
(4 class hrs/wk 3 cr)
In-depth exploration of electronic illustration software for image creation. Continue to develop control over lines, shapes and text. Master the tools and menus; become proficient at creating and editing paths, points, segments, and shapes; placing objects; transforming objects; and creating and manipulating text and layers. Prerequisites: GA 3.153 Electronic Illustration I; GA 3.157 Electronic Image Manipulation I; GA 3.158 Electronic Prepress I. Corequisites: GA 3.159 Electronic Prepress II; GA 3.160 Electronic Page Layout II.

GA 3.156 ELECTRONIC PAGE LAYOUT I
(3 class hrs/wk 3 cr)
Explores the use of page layout software applications for electronic page composition. Documents are produced combining and manipulating text and other graphic elements on a computer. Emphasizes production of electronic mechanical files prepared to graphic arts industry standards. Prerequisite: GA 3.151 Introduction to Electronic Imaging.

GA 3.157 ELECTRONIC IMAGE MANIPULATION I
(4 class hrs/wk 3 cr)
Introduces image manipulation software. Investigates simple scanning techniques, line art, gray scale, and color scans; basic image manipulation using halftones and duotones, adjusting brightness and contrast levels of images; saving the image in various formats. Prerequisites: GA 3.150 Intro to Printing and Graphic Arts; GA 3.152 Art and Copy Preparation; GA 3.153 Electronic Illustration I; GA 3.156 Electronic Page Layout I; or instructor approval. Corequisite: GA 3.158 Electronic Prepress I.

GA 3.158 ELECTRONIC PREPRESS I
(3 class hrs/wk 3 cr)
Explores various processes needed for file preparation to service bureau specifications. Investigates methods to produce digital color proofs, plate-ready film, overlay and laminate proofs. Prerequisites: GA 3.150 Intro to Printing and Graphic Arts; GA 3.152 Art and Copy Preparation; GA 3.153 Electronic Illustration I. Corequisites: GA 3.156 Electronic Page Layout I; GA 3.157 Electronic Image Manipulation I or instructor approval.

GA 3.159 ELECTRONIC PREPRESS II
(6 class hrs/wk 4 cr)
In-depth exploration of processes for preparing files to service bureau specifications. Develops trapping using choke and spread techniques, overprinting and element linking functions for final assembly of electronic files adhering to industry printing process standards. Provides an understanding of standards needed by various printers using a variety of printing methods. Prerequisites: GA 3.157 Electronic Image Manipulation I; GA 3.158 Electronic Prepress I. Corequisites: GA 3.154 Electronic Illustration II; GA 3.160 Electronic Pagelayout II; or instructor approval.

GA 3.160 ELECTRONIC PAGE LAYOUT II
(4 class hrs/wk 3 cr)
A comprehensive exploration of electronic page layout software while using enhanced features such as formatting text, special effects, tiling and spot color, automatic text chain for long documents and auto picture import. Prerequisites: GA 3.156 Electronic Page Layout I; GA 3.157 Electronic Image Manipulation I; GA 3.158 Electronic Prepress I. Corequisites: GA 3.154 Electronic Illustration II; GA 3.159 Electronic Prepress II.

GA 3.161 ELECTRONIC IMAGE MANIPULATION II
(4 class hrs/wk 3 cr)
Continues exploration of image acquisition and photo manipulation software. Develops various scanning techniques to produce line art, gray scale and color scans. Develop skills necessary to merge high-quality photographs, perform image correction and high-resolution scanning, and prepare files. Prerequisites: GA 3.154 Electronic Illustration II; GA 3.157 Electronic Image Manipulation I; GA 3.159 Electronic Prepress II; GA 3.160 Electronic Page Layout II; or instructor approval. Corequisites: GA 3.162 Multimedia I; GA 3.164 Electronic Design Principles I.

GA 3.162 MULTIMEDIA I
(3 class hr/wk 3 cr)
Introduces multimedia. Explores software for creating interactive Hypercard stacks using sound, photographic images and quick time movie software. Develops page layouts from images created on a video camera and placed into files through appropriate software. Prerequisites: GA 3.154 Electronic Illustration II; GA 3.157 Electronic Image Manipulation I; GA 3.159 Electronic Prepress II; GA 3.160 Electronic Page Layout II; or instructor approval. Corequisites: GA 3.161 Electronic Image Manipulation II; GA 3.164 Electronic Design Principles I.

GA 3.163 MULTIMEDIA II
(4 class hrs/wk 3 cr)
Continues exploration of multimedia software for creating interactive Hypercard stacks using sound, photographic images and quick time movie software. Creates multimedia presentations, quick time movie productions, sound integration and 3-D modeling. Prerequisites: GA 3.161 Electronic Image Manipulation II; GA 3.162 Multimedia I, GA 3.164 Electronic Design Principles I; or instructor approval. Corequisites: GA 3.165 Electronic Design Principles II; GA 3.172 Electronic Project Management.

GA 3.164 ELECTRONIC DESIGN PRINCIPLES I
(6 class hrs/wk 4 cr)
Studies design principles for electronic imaging. Emphasizes application of previously learned skills. Further explores color principles and color models: RGB, CMYK, HSV, HSB, LAB. Students work with typographical control and import high-level graphics to produce magazine-quality files for output. Intended for second-year Electronic Imaging students. Prerequisites: GA 3.154 Electronic Illustration I; GA 3.157 Electronic Image Manipulation I; GA 3.159 Electronic Prepress II; GA 3.160 Electronic Page Layout II; or instructor approval. Corequisites: GA 3.161 Electronic Image Manipulation II; GA 3.162 Multimedia I.

GA 3.165 ELECTRONIC DESIGN PRINCIPLES II
(6 class hrs/wk 4 cr)
Studies advanced design principles for electronic imaging. Emphasizes application of previously learned skills. Uses techniques to produce professional-quality projects to industry standards of layout and design. When possible, students work with clients to produce live art. Intended for second-year Electronic Imaging students. Prerequisite: GA 3.164 Electronic Design Principles I or instructor approval. Corequisites: GA 3.163 Multimedia II; GA 3.172 Electronic Project Management.

GA 3.172 ELECTRONIC PROJECT MANAGEMENT
(6 class hrs/wk 4 cr)
Investigates the principles of electronic project management. Develops group projects to interact with service bureaus and the printing industry. Explores the procedures for developing an electronically created project from concept through the printing process. Stresses preparation of a portfolio of projects for presentation at employment interviews. Prerequisite: GA 3.164 Electronic Design Principles I or instructor approval. Corequisites: GA 3.163 Multimedia II; GA 3.165 Electronic Design Principles II.

GA 3.181 SPECIAL PROJECTS
(2-10 class hrs/wk 1-6 cr) F/W/Sp
In coordination with the instructor, the student selects projects that provide practical experience within the major field. Note: May be taken for a maximum of 6 credits. Prerequisite: Instructor approval.

GEOG..... Geography

■ **GEOG 121 PHYSICAL GEOGRAPHY**
(5 class hrs/wk 4 cr)
Provides liberal arts and non-science majors an introduction to the major physical subsystems of the planet earth. Topics studied include weather, climate, climate change, climate classifications, plate tectonics, volcanism, earthquakes, erosion/deposition, glaciers, coastal processes, oceans and marine ecology. Maps and map use are introduced as an embedded skill.

■ **GEOG 190 ENVIRONMENTAL STUDIES**
(3 class hrs/wk 3 cr)
Introduces representative problems in the relationship between humans and the environment. Emphasizes significant problems occurring in the Pacific Northwest; but others, typical of the United States as a whole, are included.

■ **GEOG 202, 203, 204 WORLD REGIONAL GEOGRAPHY**
(3 class hrs/wk 3 cr) F/W/Sp
Studies natural environments, cultural landscapes and human activities; emphasizes the influence of geographical conditions on human affairs. GEOG 202: Latin America/Caribbean; GEOG 203: Asia; GEOG 204: Africa/Middle East.

GEOG 280 CWE GEOGRAPHY
(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 geography. 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 ..... General Science

● **GS 104, 105 PHYSICAL SCIENCE**
(5 class hrs/wk 4 cr) F/W
Provides liberal-arts students and non-science majors a broad background in physical sciences. GS 104: fundamental principles of physics; GS 105: principles of chemistry. Note: May not be taken if six or more hours of college-level chemistry or physics have been completed. Students who plan to take a three-term general physical science lab course sequence must include GS 104 and GS 105 as part of that sequence. There is no restriction on the order in which the courses are taken. Prerequisite: Students must have a working knowledge of elementary algebra.

● **GS 106 PHYSICAL SCIENCE**
(5 class hrs/wk 4 cr) Sp
Provides liberal arts students and non-science majors a broad background in physical sciences. Topics include principles of nuclear energy, astronomy, meteorology and earth science. Field trips highlight the topics discussed. Note: Students who plan to take a three-term general physical science lab course sequence must include GS 104 and GS 105 as part of that sequence. There is no restriction on the order in which the courses are taken.

● **GS 107 ASTRONOMY**
(5 class hrs/wk 4 cr) F/Sp
Introduces rudiments of astronomy, including studies of the solar system, our galaxy and the universe. Laboratory exercises include independent observational activities. Note: Students who plan to take a three-term general physical science lab course sequence must include GS 104 and GS 105 as part of that sequence. There is no restriction on the order in which the courses are taken.

● **GS 108 OCEANOGRAPHY**
(5 class hrs/wk 4 cr) Sp
Introductory lab science course in oceanography that examines the four major categories of oceanographic study: geological, physical, chemical and biological. Emphasizes the geological and geophysical aspects of the sea floor; physical and chemical properties of sea water, waves, tides, ocean circulation and currents; marine ecosystems; and ocean utilization. Note: May substitute for GS 106 for students requiring a three-term sequence.

GS 121 PLANETS STARS AND GALAXIES
(3 class hrs/wk 3 cr) Sp
Learn the nature of the night-time sky. Surveys the worlds of our solar system, studies the life cycle of the stars and discusses the origin and fate of the universe. Lectures are integrated with star gazing, weather permitting.

GS 151 ENERGY IN SOCIETY
(3 class hrs/wk 3 cr) Sp
Surveys the nature, history and use of energy. Analyzes traditional and alternative energy sources and their scientific, technical, environmental and economic aspects.

GS 152 SCIENCE, TECHNOLOGY AND SOCIETY
(3 class hrs/wk 3 cr) F/W/Sp
Investigates the nature of scientific endeavors and analyzes specific science and technology issues that affect societies in the United States and globally.

GS 153 INTRODUCTION TO COSMOLOGY
(3 class hrs/wk 3 cr)
Journey to the beginning of time and discover the origin of our universe, its history and its future according to the Big Bang Theory of contemporary science.

GS 160 OBSERVATIONAL ASTRONOMY
(3 class hrs/wk 3 cr)
Learn to recognize constellations, identify planets, observe meteors and experience the many fascinating phenomena of the night sky. Observing techniques and fundamental astronomical concepts are taught. Course includes outdoor observations and possible field trip.

GS 170 FIELD ECOLOGY
(1-12 class hrs/wk 1-3 cr)
A variety of courses on the biology and ecology of the Northwest. Emphasizes field study of plants, animals, land, water and climate. Includes courses such as Alvord Desert Ecology, Cascade and Crater Lake Ecology, Coastal Ecology and Oregon Old Growth. Note: Most courses involve a weekend 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 GENERAL SCIENCE: SPECIAL STUDIES
(1-12 class hrs/wk 1-4 cr)
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 are 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.

GS 280B 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.

HD ..... Human Development

HD 100 COLLEGE SUCCESS
(1-4 class hrs/wk 3 cr) F/W
Focuses on personal development and behaviors that promote success in college. Topics include communication, creative thinking, test anxiety, stress management, goal setting, learning styles and time management.

HD 114 LIFE PLANNING
(2 class hrs/wk 2 cr)
Presents skills in self-awareness, role alternatives, goal setting, plan implementation and development of resources. Includes theory, self-assessment and practical application.

HD 116 HUMAN POTENTIAL
(2 class hrs/wk 2 cr)
Builds self-esteem through sharing and celebration of personal preferences.

HD 190 ASSERTIVENESS TRAINING
(1 class hr/wk 1 cr) F/W/Sp
Facilitates the learning of communication skills based on a foundation of respect for self, respect for others and respect from others.

HD 202 LIFE TRANSITIONS
(2-3 class/hrs/wk 2-3 cr)
Focuses on self-exploration and the process of analyzing predictable life transitions using the text *Transitions* by William Bridges.

HD 204 ELIMINATING SELF-DEFEATING BEHAVIOR
(3 class hrs/wk 3 cr)
Covers making choices that enhance quality of life, becoming aware of our self-defeating behavior, deciding whether to continue the behavior or change it, and discovering reasons and benefits for choosing this way.

HD 206 COPING SKILLS FOR STRESS
(2 class hrs/wk 2 cr) F/W/Sp
Provides information about causes and cures of stress from the point of view of self-talk and the power of our minds to reduce the impact of stress. The class is support oriented and is conducted as part lecture and part group process.

HD 208 CAREER/LIFE PLANNING
(3 class hrs/wk 3 cr) F/W/Sp
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.

HD 208A CAREER/LIFE PLANNING
(1-3 class hrs/wk 1-3 cr)
A variable-credit course that helps define careers and identify personal career/life goals.

HD 209 THE COMPLETE JOB FINDER
(1-3 class hrs/wk 1-3 cr)
Develops skills in systematic job search techniques, resume writing, application processes and interviewing.

HD 290 APPLIED ASSERTION
(2 class hrs/wk 2 cr)
Builds on the information and skills introduced in the basic class in assertiveness and focuses on facilitating the application of assertive concepts to the lifestyle of each individual.

HDFS..... Human Development and Family Studies

HDFS 199 CHILD AND FAMILY STUDIES: SPECIAL TOPICS
(3 class hrs/wk 3 cr)
Increases the student's knowledge about selected topics in the field of child and family studies. Topics reflect current issues, concerns and trends and are chosen to increase the student's knowledge in the areas of human development, interpersonal relationships, family dynamics and education.

HDFS 200 HUMAN SEXUALITY
(3 class hrs/wk 3 cr)
Studies the anatomical, physiological, psychological and sociological aspects of human sexuality throughout the life cycle. Topics of study include contraception, sexually transmitted diseases, pregnancy, childbirth, sexual response patterns, sexual expression, sexual attitudes, and sexual myths and fallacies. Information on contemporary issues is presented.

HDFS 201 INDIVIDUAL AND FAMILY DEVELOPMENT
(3 class hrs/wk 3 cr)
Studies individual and family development, dynamics and relationships across the lifespan. Emphasizes nature/nurture, continuity/discontinuity, and the interaction of the family with other systems.

HDFS 222 PARTNER AND FAMILY RELATIONSHIPS
(3 class hrs/wk 3 cr)
Focuses on interpersonal relationships in a changing society. Topics include interpersonal attraction, love, sexuality, expectations for partner relationships, communication, power, conflict, family styles and parenting.

HDFS 225 CHILD DEVELOPMENT
(3 class hrs/wk 3 cr)
Provides an introduction to basic issues and current research on child growth and development within a family context. Studies the stages of development from conception through adolescence.

HDFS 226 TIME TO GROW
(3 class hrs/wk 3 cr)
A telecourse that explores how and why children grow and develop the way they do. Covers the interplay of biological factors, individual personality, the family and other environmental factors that shape the growing child. Topics include prenatal through adolescent development.

HDFS 242 MANAGING ROLES ACROSS THE LIFESPAN
(1 class hr/wk 1 cr)
Presents information on balancing the demands of school, work and family. Covers work and family, handling stress, communication skills, goal setting and self-esteem.

HDFS 248 LEARNING EXPERIENCES FOR CHILDREN
(3 class hrs/wk 3 cr)
Focuses on understanding and creating quality curricula. Includes experiences with planning, implementing and evaluating materials and activities designed to foster the child's appreciation of literature and social relations. Emphasizes language development and experiences.

HDFS 257 FAMILY, SCHOOL AND COMMUNITY
(3 class hrs/wk 3 cr)
Designed to help future teachers and child care workers recognize and understand their unique position as resource coordinators for families. Students become familiar with community resources and various family support programs. Students develop skills in talking with parents and working with families.

HDFS 280 CWE CHILD DEVELOPMENT
(4-28 class hrs/wk 2-14 cr)
Provides practical experience in a child and/or family education and/or support program. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Credits are based on identified objectives and number of hours worked. This is a supervised work experience that must be approved by the CWE coordinator prior to enrolling in the class.

HDFS 285 PROFESSIONAL ISSUES IN CHILD AND FAMILY STUDIES
(3 class hrs/wk 3 cr)
Focuses on the legal and ethical issues in working with children and families, e.g. licensing, health and safety standards, adult:child ratios and child abuse reporting. Includes the role of professional organizations and advocacy training.

HE ..... Health

HE 112 EMERGENCY FIRST AID
(8 class hrs/wk 1 cr)
Covers basic first aid information in an attempt to prepare the student to properly administer the necessary immediate care to an injured or suddenly ill person. Note: Full day or two evening classes.

HE 125 OCCUPATIONAL SAFETY
(3 class hrs/wk 3 cr) F/W/Sp/Su
Introduces accident prevention by developing an awareness of safety practices relating to personnel, design, equipment and maintenance.

HE 151 DRUGS IN SOCIETY
(3 class hrs/wk 3 cr)
Designed to address pharmacology of popular drugs in our society. Also discusses contemporary issues involving the effects of drugs on both the individual and society.

HE 201 A LIVING LOOK AT DEATH
(3 class hrs/wk 3 cr)
Covers death as universal concern without universal perspectives. Through a variety of teaching techniques, students are assisted in better understanding this puzzling aspect of life. Focuses primarily on cultural perspectives.

HE 204 EXERCISE AND WEIGHT MANAGEMENT
(3 class hrs/wk 3 cr)
Provides students with scientifically based strategies for controlling and managing weight. By studying the interaction between nutrition, food intake and exercise, students understand how the fat thermostat is lowered. Exercise is the most critical factor in proper weight management; and students, in conjunction with lectures and classroom activities, participate in aerobic exercise during each class session. Students design and monitor their personal weight management and exercise program.

HE 205 DIET AND NUTRITION IN THE NINETIES
(3 class hrs/wk 3 cr)
Provides an in-depth look at the American diet. Students analyze their individual nutrition habits; develop a low-fat, low-sodium, low-sugar nutrition plan; and examine current consumer issues.

HE 207 STRESS MANAGEMENT
(3 class hrs/wk 3 cr)
Provides a clear understanding of the meaning of stress in everyday life. Students learn how they react and adjust to stressors. Relaxation techniques are taught and practiced.

HE 220 INTRODUCTION TO EPIDEMIOLOGY AND HEALTH DATA ANALYSIS
(3 class hrs/wk 3 cr)
Introductory course in epidemiology and statistics for students in health-related studies. Designed to provide preparatory background for taking subsequent courses in epidemiology and health data analysis offered by the Department of Public Health. Covers measure of disease frequency, analytical epidemiology, study designs, experimental design, descriptive statistics and inferential statistics, including z-test, t-test and chi-square.

HE 222 CONSUMER HEALTH ISSUES IN THE '90s
(3 class hrs/wk 3 cr)
Provides information on making intelligent consumer decisions. Explores individual choices, self care and treatment modalities.

HE 250 PERSONAL HEALTH
(3 class hrs/wk 3 cr) F/W/Sp/Su
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/Su
Provides first aid instruction and practice in skills that enable students to take care of themselves and to aid others in the event of an accident or illness.

HE 253 TRENDS IN AIDS AND SEXUALLY TRANSMITTED DISEASES
(3 class hrs/wk 3 cr)
Provides an understanding and knowledge of the etiology, epidemiology, prevention strategies, and future trends of AIDS and sexually transmitted diseases in our world today. The global, as well as domestic, impact of these diseases is studied. Special emphasis given to AIDS and STDs in the U.S., focusing on available treatments, health care costs, vaccine trials, as well as cultural, social, psychological, legal, economic and ethical issues.

HE 261 CARDIOPULMONARY RESUSCITATION (CPR)
(8 class hrs/wk 1 cr)
Covers basic life support as taught by the American Heart Association. Note: Full day or two evening classes.

HE 263 PSYCHOSOCIAL DIMENSIONS OF HEALTH
(3 class hrs/wk 3 cr)
Examines the social, psychological, cultural, attitudinal, behavioral and environmental factors that influence individual and public health. Provides an overview of psychosocial issues and their impact on health and illness.

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.

HE 298 WOMEN'S HEALTH ISSUES
(3 class hrs/wk 3 cr)
Examines contemporary women's health issues, including primary causes of morbidity and mortality in women, estrogen replacement therapy, clinical research affecting women, stress and depression, weight and global health concerns of women. Designed for both men and women interested in the topic of women's health.

HS.....Human Services

HS 207 ADULT CHILDREN OF DYSFUNCTIONAL FAMILIES
(2 class hrs/wk 2 cr)
Provides educational information and group activities to help students explore issues and concerns developed from being raised in a home or environment where dysfunction was present.

HST ..... History

■ **HST 101 HISTORY OF WESTERN CIVILIZATION**
(3 class hrs/wk 3 cr)
Surveys origins and development of western civilization from ancient times to the height of Medieval civilization. Emphasizes the important influences of Greece, Rome, India and China, as well as Byzantium and Islam to modern times.

■ **HST 102 HISTORY OF WESTERN CIVILIZATION**
(3 class hrs/wk 3 cr)
Surveys the origins and development of western civilization from Medieval times through the Renaissance and Enlightenment periods to the American and French Revolutions.

■ **HST 103 HISTORY OF WESTERN CIVILIZATION**
(3 class hrs/wk 3 cr)
Surveys the origins and development of western civilization from the dawn of the Industrial Revolution in the early 19th century through the struggle between totalitarianism and democracy in the 20th century to the collapse of communism at the start of the 21st century.

HST 150 SCIENCE AND CULTURE IN THE WESTERN TRADITION
(3 class hrs/wk 3 cr)
Surveys the history of western civilization from the perspective of developments in science and technology. Emphasizes the interaction between scientific developments and cultural developments.

■ **HST 157 HISTORY OF THE MIDDLE EAST AND AFRICA**
(3 class hrs/wk 3 cr)
Surveys the cultural, social, economic and political development in the Middle East and Africa.

■ **HST 158 HISTORY OF LATIN AMERICA**
(3 class hrs/wk 3 cr)
Surveys the cultural, social, economic and political development in Latin America.

■ **HST 159 HISTORY OF ASIA**
(3 class hrs/wk 3 cr)
Surveys the cultural, social, economic and political development in Asia. Emphasizes 20th century issues.

HST 198 RESEARCH TOPICS
(1 class hr/wk 1 cr)
Examines in-depth history topics for independent research. Corequisite: WR 123 English Composition: Research Paper.

■ **HST 201 HISTORY OF THE UNITED STATES**
(3 class hrs/wk 3 cr)
Studies the United States from pre-Columbian European and North American antecedents to colonization; colonial America; Revolutionary America; and Development of US. government, economy and society to 1830.

■ **HST 202 HISTORY OF THE UNITED STATES**
(3 class hrs/wk 3 cr)
Studies the United States from 1830-1900. Emphasizes sectionalism and national expansion, Civil War and Reconstruction; Industrialization and national economic and social transformation; and early U.S. international activism.

■ **HST 203 HISTORY OF THE UNITED STATES**
(3 class hrs/wk 3 cr)
Studies the United States in the 20th century; emphasizes U.S. rise to global hegemony; emergence of Liberal Capitalist System; American Radicalism; social reform movements, including civil rights, labor, women and Native Americans; the Cold War; and transformation of U.S. society.

HST 240 OREGON HISTORY
(3 class hrs/wk 3 cr)
Explores historical events and influences that impacted development of the local area.

HST 280 CWE HISTORY
(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 history. 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.

HSTS ... History of Science

HSTS 151 HISTORY OF SCIENCE
(3 class hrs/wk 3 cr) W
Surveys the history of science from earliest civilization to the present. Emphasizes the concepts of Galileo, Newton, Darwin and others and their impact on society.

HT ..... Horticulture

HT 8.102 CAREER EXPLORATION: HORTICULTURE
(1 class hr/wk 1 cr) W
Surveys career opportunities in horticulture. A report on a specific career position is required. Includes resume writing and job interview skills.

HT 8.132 ARBORICULTURE I
(4 class hrs/wk 3 cr) W
Introduces ornamental horticulture, including how to plant, train, prune, protect and repair trees. Note: Course is offered alternate years only. *Offered 1996-97.*

HT 8.133 ARBORICULTURE II
(4 class hrs/wk 3 cr) Sp
Covers how to identify and correct tree problems. Topics include non-parasitic injuries, insects, diseases, inspection and diagnosis, spraying and equipment, tree appraisal, tree removal and climbing. Note: Course is offered alternate years only. *Offered 1996-97.*

HT 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. *Offered 1995-96.*

HT 8.136 TURF MANAGEMENT II
(4 class hrs/wk 3 cr) Sp
Provides opportunity to adapt and apply principles and theories taught in HT 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. *Offered 1995-96.*

HT 8.137 PLANT PROPAGATION
(5 class hrs/wk 4 cr) Sp
Introduces the principles, methods, techniques and facilities used to propagate ornamentals. Techniques covered include seeding, grafting, cuttings, divisions and tissue culture. Lab activities utilize the LBCC Greenhouse. Students are responsible for the annual plant sale.

HT 8.139 ARBORICULTURE PRACTICUM
(4 class hrs/wk 3 cr) Sp
Practical field experience in climbing and tree work. Taught by certified arborists. Note: Limited enrollment. Prerequisite: Instructor approval.

HT 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. *Offered 1995-96.*

HT 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.

HT 8.168 PLANT IDENTIFICATION
(4 class hrs/wk 3 cr) Sp
Introduces 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.

HT 8.169 TREE IDENTIFICATION
(4 class hrs/wk 3 cr) F
Introduces trees and large woody shrubs used for landscaping purposes. Students 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. *Offered 1996-97.*

HTM.... Hospitality and Tourism Management

HTM 104 INTRODUCTION TO TOURISM
(3 class hrs/wk 3 cr) F
Provides an overview of the tourism industry, including infrastructure, planning, destination creation, marketing and career opportunities.

HTM 105 INTRODUCTION TO RESTAURANT OPERATIONS
(4 class hrs/wk 3 cr) W
Provides exposure to restaurant operations, including production, planning, menu planning, and both back-of-the-house and front-of-the-house activities. Includes classroom tools instruction and kitchen production in a laboratory setting.

HTM 106 INTRODUCTION TO HOTEL OPERATIONS
(3 class hrs/wk 3 cr) Sp
Provides an overview of the lodging industry, including planning, marketing, financing, human resource management, cost controls and career opportunities.

HUM..... Humanities

➤ **HUM 100 INTRODUCTION TO HUMANITIES**
(3 class hrs/wk 3 cr) F/W/Sp
Examines the connections among arts, ideas and human experiences through study and experience of selected works. Emphasizes arts and ideas as both reflections of and influences on social and cultural change. Attendance at out-of-class activities is required.

HV..... Heavy Equipment Mechanics/Diesel

HV 3.128 PNEUMATIC BRAKING AND FUEL INJECTION SYSTEM
(20 class hrs/wk 2-10 cr) F
Covers the theory, repair testing and calibration of diesel fuel pumps, governors and injectors. Nozzles testers, injector comparitors and fuel pump test benches are used in training. Also teaches the theory, repair and testing of pneumatic brakes and accessory systems. Students repair and test compressors, governors, valves and braking components.

HV 3.129 HEAVY EQUIPMENT/ DIESEL ENGINES
(20 class hrs/wk 1-10 cr) W
Covers operating principles, maintenance, repair and overhaul of various types and sizes of diesel engines. Includes both two-and four-stroke diesel engines, their component parts and related accessories, and standardized manufacturer's specifications. Prerequisite: Instructor approval required.

HV 3.130 HEAVY EQUIPMENT/ DIESEL TUNE-UP
(20 class hrs/wk 1-10 cr) Sp
Studies diesel tune-up and techniques for optimum engine performance, including diagnostic troubleshooting, load testing and engine break-in procedure through use of the dynamometer. Prerequisite: Instructor approval required.

HV 3.131 HEAVY EQUIPMENT SERVICE AND REPAIR
(20 class hrs/wk 1-10 cr) F/W/Sp
Emphasizes advanced instruction through practice and laboratory exercises in an open lab. Live projects are used, preparing students for job entry in the area of heavy equipment mechanics. Prerequisite: Instructor approval required.

HV 3.132 ADVANCED MOBILE HYDRAULICS
(3 class hrs/wk 2 cr) F
Covers advanced hydraulic theory along with service and repair of valves, pumps, motors and connectors. Systems design and modification are included.

HV 3.134 BASIC HYDRAULICS
(5 class hrs/wk 3 cr) W
Covers hydraulic theory along with pump, actuator application, and valve design and theory.

HV 3.295 POWER TRAIN SYSTEMS
(20 class hrs/wk 1-10 cr) F/W/Sp
Studies 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.

HV 3.296 STEERING, SUSPENSION AND BRAKING SYSTEMS
(20 class hrs/wk 1-10 cr) F/W/Sp
Covers fundamental principles of automotive suspension systems, with emphasis on frames, steering systems, alignment and wheel balancing. A comprehensive study of disc and drum braking systems and their components is included.

HV 3.297 ELECTRICAL AND FUEL SYSTEMS
(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 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: Placement Test scores for Reading Level I and MTH 20 Basic Mathematics or equivalent.

HV 3.303 MOBILE AIR CONDITIONING AND COMFORT SYSTEMS I
(5 class hrs/wk 3 cr)
Theoretic principles of mobile heating and air conditioning systems with emphasis on design, function, adjustment, service and testing of components.

HV 3.307 MECHANICAL PROCESSES I
(3 class hrs/wk 2 cr)
Required for Automotive and Heavy Equipment Mechanics/Diesel majors. Covers competencies and skills required for the first year. Covers safety, hand tools, power tools, precision measurement, metric measurement, fasteners, torque, electrical principles and meter usage.

HV 3.308 MECHANICAL PROCESSES II
(3 class hrs/wk 2 cr)
Required for Automotive and Heavy Equipment Mechanics/Diesel majors. Covers service manual usage; pulling, pushing and lifting devices; tubing, hoses and fittings; and bearings and lubrication.

HV 3.309 MECHANICAL PROCESSES III
(3 class hrs/wk 2 cr)
Required for Automotive and Heavy Equipment Mechanics/Diesel majors. Covers engine basics, gaskets, seals and sealants; hydraulic principles; and tool maintenance.

IN ..... Industrial Technical

IN 3.198 INDUSTRIAL TECHNICAL SEMINAR: LEADERSHIP
(1 class hr/wk 1 cr) F/W/Sp
Provides leadership development through the Industrial Technical Society. Members of Industrial Department organizations participate as officers at a divisional organization level. Opportunities for directing and organizing affairs of the Society, planning, budgeting, promoting, implementing and evaluating of ITS activities, including technical workshops and special technical projects.

IN 3.442I INDUSTRIAL TECHNICAL SOCIETY SEMINAR
(1 class hr/wk 1 cr) F/W/Sp
Seminar for students in various industrial and technical disciplines. Students participate in organizing activities such as technical seminars, workshops, field trips or construction and repair projects related to their program.

JN ..... Journalism

JN 134 INTRODUCTION TO PHOTOJOURNALISM
(4 class hrs/wk 3 cr) W
Introduces photojournalism techniques, including digital image handling, films, equipment, light and photographic reproduction. Also studies history of documentary photography. Students receive hands-on instruction in both conventional and electronic darkroom techniques. Includes lab work. Prerequisite: PHO 261 Introduction to Photography or instructor approval.

JN 215A JOURNALISM LAB
(2 class hrs/wk 1 cr) F/W/Sp
Offers supervised editorial work on the college's student newspaper (*The Commuter*) in reporting and editing. Provides training and experience with computerized word processing and desktop publishing. Note: Course serves as the lab for JN 216 News Reporting and Writing and JN 217 Feature Writing. Also may be taken independently from those courses. May be repeated for up to 6 credits.

JN 215B DESIGN AND PRODUCTION LAB
(4 class hrs/wk 2 cr) F/W/Sp
Offers supervised experience in newspaper page design, headline writing, computer pagination, digital imaging, photography, advertising and related newspaper production skills. Students apply skills in production lab for the college's student newspaper (*The Commuter*). Note: Serves as lab to JN 218 Copy Editing and Page Design. Also may be taken independently. May be repeated for up to 6 credits.

JN 216 NEWS REPORTING AND WRITING
(3 class hrs/wk 3 cr) F/W
Presents 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. Corequisite: JN 215A Journalism Lab.

JN 217 FEATURE WRITING
(3 class hrs/wk 3 cr) Sp
Studies journalistic writing with emphasis on backgrounding, depth reporting, interpretive writing and freelance writing -- from story development to marketing. Students submit articles for publication, most often in the student newspaper. Corequisite: JN 215A Journalism Lab.

JN 218 COPY EDITING AND PAGE DESIGN
(3 class hrs/wk 3 cr) Sp
Introduces the principles and practices of editing news and feature articles; writing headlines and captions; and designing pages with text, photographs and graphics. Includes electronic page layout techniques. Prerequisite: JN 216 News Reporting and Writing or instructor approval. Corequisite: JN 215B Design and Production Lab.

JN 224 MEDIA AND SOCIETY
(3 class hrs/wk 3 cr) F
Studies the history and development of communications and the mass media. Includes media impact on American and global culture, philosophies of information dissemination under various political structures, mass media's role in global politics and communication theory.

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.

MA ..... Manufacturing Technology

MA 3.390 MACHINE TOOL I
(3 class hrs/wk 2 cr) F/W/Sp
Instructs beginning students in the basic operation of the vertical mill and engine lathe. All tools and materials are furnished, with the exception of one 6-inch scale and approved safety glasses.

MA 3.391 MACHINE TOOL II
(3 class hrs/wk 2 cr) F/W/Sp
Continues the basic skills of operating the engine lathe. Students work on a series of exercises involving thread cutting, turning between centers, knurling, facing and other basic lathe operations. Prerequisite: MA 3.390 Machine Tool I.

MA 3.392 MACHINE TOOL III
(3 class hrs/wk 2 cr) F/W/Sp
Continues Machine Tool I and II. Students learn basic and intermediate operations on the vertical milling machine. Prerequisite: MA 3.391 Machine Tool II.

MA 3.393 MACHINE TOOL IV
(3 class hrs/wk 2 cr) F/W/Sp
Allows students to work on projects requiring milling machine and lathe operations and in which assembly of parts is required. Basic operation of the surface grinder is covered when the student project is finish-ground to specified tolerances. Prerequisite: MA 3.392 Machine Tool III.

MA 3.394 MACHINE TOOL V
(3 class hrs/wk 2 cr) F/W/Sp
Requires students to do more advanced milling machine and lathe operations, including indexing with the dividing head, holding parts with special fixtures, calculating dimensions using trigonometry and collet turning in the lathe. Prerequisite: MA 3.393 Machine Tool IV.

MA 3.395 MACHINE TOOL VI
(3 class hrs/wk 2 cr) F/W/Sp
Continues the project method of teaching basic and intermediate operations on the mill, lathe and grinder, along with their related holding fixtures and devices. Prerequisite: MA 3.394 Machine Tool V.

MA 3.396 OPERATIONS AND PROCESSES I
(3 class hrs/wk 3 cr) F
A theory and procedures class for basic machine tool operation. Emphasizing safe and correct operation of the drill press, lathe and mill. Covers layout, speeds and feeds, process planning and selection of tooling. Corequisite: MA 3.415 Machine Tool Skills Lab, MA 3.422 Manufacturing Lab I, IN 3.4421 I.T.S. Manufacturing.

MA 3.397 OPERATIONS AND PROCESSES II
(2 class hrs/wk 2 cr) W
Focuses on intermediate machine tool operation. The various machines with their capability, capacity and processes are discussed and illustrated. Prerequisites: MA 3.396 Operations and Processes I; MTH 20 Basic Math. Corequisite: MA 3.415 Machine Tool Skills Lab; MA 3.423 Manufacturing Lab II; IN 3.4421 I.T.S. Manufacturing.

MA 3.398 OPERATIONS AND PROCESSES III
(2 class hrs/wk 2 cr) Sp
Focuses on advanced machine tool operation and processes. Developing knowledge necessary to make machine and tool selection, to develop process plans and to create set-ups for multi-machine projects. Prerequisites: MA 3.497 Operations and Processes II; MTH 60 Introduction to Algebra. Corequisites: MA 3.415 Machine Tool Skills Lab; MA 3.424 Manufacturing Lab III; IN 3.4421 I.T.S. Manufacturing.

MA 3.399 PRECISION MEASUREMENT
(1 class hr/wk 1 cr) F
Provides instruction in the use of precision measuring equipment. Decimal fractions, degree of accuracy and selection of appropriate tools are covered. Students learn to use hand tools to inspect their own machine projects. Corequisite: MA 3.396 Operations and Processes I.

MA 3.400 MACHINE TOOL PROJECTS
(2-6 class hrs/wk 1 - 3 cr) F/W/Sp
An independent study course for Manufacturing Technology. Emphasizes student-generated, instructor-guided projects.

MA 3.401 OPERATIONS AND PROCESS IV
(4 class hrs/wk 4 cr) F
Emphasizes production, including setting of proper rates, selection of tooling, design of simple fixturing, and defining of process and sequence. Organizing, preparing and analyzing the final product are stressed as being essential to the success of the job-shop machinist. Prerequisite: MA 3.398 Operations and Processes III.

MA 3.402 OPERATIONS AND PROCESSES V
(4 class hrs/wk 4 cr) W
Presents advanced techniques for milling machines and precision grinding equipment. Explores the wide variety of milling accessories that suit this general machine tool for specialty jobs in the cutting of gears, splines, helices and cams. Precision grinding is demonstrated and explained along with the selection of proper abrasive wheels. Prerequisite: MA 3.401 Operations and Processes IV.

MA 3.404 OPERATIONS AND PROCESSES VI
(4 class hrs/wk 4 cr) Sp
Deals primarily with processes used in close tolerance, high-quality production and finishing. Grinding, lapping and honing for close fit are demonstrated. Heat-treatment for specific material requirements and surface finish treatments and coatings are explained. Non-cutting metal removal processes are presented and compared. Prerequisite: MA 3.402 Operations and Processes V.

◆ **MA 3.409 COMPUTER INTEGRATED MANUFACTURING I**
(2 class hrs/wk 2 cr) F
Provides training in the operation of a PC-based CAD system. Generation of two- and three-dimensional data bases using the CADKEY or similar system. Prerequisite: MA 3.421 Numerical Control: Lathe. Corequisite: MA 3.419 CNC Lab.

MA 3.410 COMPUTER INTEGRATED MANUFACTURING II
(2 class hrs/wk 2 cr) W
Uses the SmartCam or similar system hardware to produce 2-D cutting paths. These cut paths are post-processed and then run on the CNC mill and lathe. Prerequisite: MA 3.409 Computer Integrated Manufacturing I. Corequisite: MA 3.419 CNC Lab.

MA 3.411 COMPUTER INTEGRATED MANUFACTURING III
(2 class hrs/wk 2 cr) Sp
Uses a CAD-CAM system. Data bases generated in CADKEY or similar CAD program are downloaded into Smart CAM or similar CAM program to produce complex parts. Parts to be run on CNC mill and lathe. Prerequisite: MA 3.410 Computer Integrated Manufacturing II. Corequisite: MA 3.419 CNC Lab.

MA 3.415 MACHINE TOOL SKILLS LABORATORY
(3-6 class hrs/wk 0 cr) F/W/Sp
Provides the opportunity to gain and refine machining skills necessary to be a successful machinist. This lab is offered each term in conjunction with the Manufacturing Technology major classes.

MA 3.417 MACHINING GRAPHICS
(2 class hrs/wk 2 cr) F
Introduces graphic communication as used in the manufacturing environment. Students become familiar with the grammar and symbols of shop prints and learn to interpret prints of increasing complexity. Taught through a combination of lecture, demonstration and problem sheets.

MA 3.418 GEOMETRIC CONTROLS
(3 class hrs/wk 2 cr) Sp
Presents an overview of geometric dimensioning and tolerancing as used in modern industry. Focuses on practical and applied methods, with an emphasis on interpretation and use. Shows the power of GD&T in clarifying part-geometry and its use in everyday shop projects. Prerequisite: MA 3.417 Machining Graphics.

MA 3.419 CNC LAB
(2.5-12.5 class hrs/wk 1-5 cr) F/W/Sp
Laboratory class consisting of Computer Numerical Control skill projects. Uses the CNC mill and lathe to process parts programmed in the Computer Integrated Manufacturing sequence. Additional projects are defined and contracted between the student and the instructor. Note: Variable credit; may be repeated. Prerequisite: MA 3.421 Numerical Control: Lathe.

◆ **MA 3.420 NUMERICAL CONTROL: MILL**
(4 class hrs/wk 3 cr) W
Covers the ASCII/EIA, Hurco and Servo languages of CNC machine tool programming. Programs are written, coded and loaded into machine memory. Parts are drawn and cut from code on the CNC mill. Prerequisites: MA 3.417 Machining Graphics or equivalent; MA 3.396 Operations and Processes I; MTH 20 Basic Math. Corequisite: MTH 60 Introduction to Algebra.

◆ **MA 3.421 NUMERICAL CONTROL: LATHE**
(4 class hrs/wk 3 cr) Sp
Covers the more advanced programming and control of the CNC lathe. Lecture and projects designed to reveal the power and sophistication of higher level ISO language. FAPT graphic programming is introduced. Coding, set-up and operation of an industry-level CNC turning center. Prerequisite: MA 3.420 Numerical Control: Mill.

MA 3.422 MANUFACTURING LAB 1
(3-15 class hrs/wk 1-5 cr) F/W/Sp
A laboratory class consisting of focused skill projects. Emphasis on safe operation of machine tools in metal cutting. A specific number of projects is set for the term. Corequisites: IN 3.4421 I.T.S. Manufacturing; MA 3.415 Machine Tool Skills Lab; MA 3.417 Machining Graphics or equivalent; MA 3.496 Operations and Processes I.

MA 3.423 MANUFACTURING LAB II
(3-15 class hrs/wk 1-5 cr) F/W/Sp
Focused skill projects. Emphasizes safe operation while increasing speed and efficiency. Projects may require several set-ups. Specified project list. Prerequisites: MA 3.417 Machining Graphics or equivalent; MA 3.396 Operations and Processes I; MA 3.422 Manufacturing Lab I; MTH 20 Basic Math. Corequisites: IN 3.4421 I.T.S. Manufacturing; MA 3.415 Machine Tool Skills Lab; MA 3.497 Operations and Processes II.

MA 3.424 MANUFACTURING LAB III
(3-15 class hrs/wk 1-5 cr) F/W/Sp
Focused skill projects. Emphasizes safe and efficient machining of components for assemblies. May require the use of several machines and set-ups. Specified project list. Prerequisites: MA 3.423 Manufacturing Lab II; MA 3.397 Operations and Processes II; MTH 60 Introduction to Algebra. Corequisites: IN 3.4421 I.T.S. Manufacturing; MA 3.415 Machine Tool Skills Lab, MA 3.398 Operations and Processes III; MTH 61 Survey of Math Fundamentals; MTH 62 Occupational Trigonometry.

MA 3.425 MACHINERY'S HANDBOOK I
(2 class hrs/wk 2 cr) W
Involves students in active use of the Machinery's Handbook, a primary shop reference. The content, organization and utility are highlighted. Provides information for the machinist to use in lab projects. Prerequisite: MA 3.396 Operations and Processes I; MTH 20 Basic Math.

MA 3.426 MACHINERY'S HANDBOOK II
(2 class hrs/wk 2 cr) Sp
Advanced concepts from Machinery's Handbook. Data collection and problem solving are emphasized. Covers concepts used in advanced machine tool projects. Prerequisites: MA 3.397 Operations and Processes II; MTH 60 Introduction to Algebra; MA 3.425 Machinery's Handbook I.

MA 3.427 MANUFACTURING LAB IV
(2.8-14 class hrs/wk 1-5 cr) F/W/Sp
Laboratory class featuring assigned projects in advanced metal removal techniques, including use of the rotary table. Emphasizes industry-accepted production rates. Use of carbide tooling requires higher feeds and speeds, along with special attention to set-up rigidity and direction of cutting forces. Prerequisite: MA 3.424 Manufacturing Lab III.

MA 3.428 MANUFACTURING LAB V
(2.8-14 class hrs/wk 1-5 cr) F/W/Sp
Concentrates on projects involving use of several machine tools and special attachments. Projects require fabrication of simple tooling, fixtures and templates. Tracer lathe is used to produce irregular contours. Some projects require various heat-treating operations. Projects involve refined problem-solving skills. Prerequisite: MA 3.427 Manufacturing Lab IV.

MA 3.429 MANUFACTURING LAB VI
(2.8-14 class hrs/wk 1-5 cr) F/W/Sp
Provides supervised lab activities in the construction of high-precision workpieces with close-fitting reciprocating and rotating components. Surface and cylindrical grinders are used on heat-treated parts. Tool and cutter sharpening is featured. Prerequisite: MA 3.428 Manufacturing Lab V.

MA 4.130 MACHINE PROCESSES
(3 class hrs/wk 2 cr) F/W/Sp
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 and is designed for students with majors other than manufacturing technology.

ME ..... Metallurgy Technology

ME 3.444 WELDING METALLURGY I
(5 class hrs/wk 4 cr) Sp
Introduces the 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 are made to determine operator responsibility in completing joints in welded metals capable of matching or exceeding the strength and reliability of the base metals.

ME 3.445 WELDING METALLURGY II
(5 class hrs/wk 4 cr) W
Introduces the basic processes of welding fabrications, and investigates structural characteristics of metals related to quality, low-cost welded assemblies. Students examine welds made on low-, medium- and high-carbon steels; cast irons, high-strength, low-alloy steels; stainless steels; and non-ferrous alloys using a variety of weld methods.

ME 3.446 METALS INVESTIGATION AND EVALUATION
(3 class hrs/wk 2 cr) W
Provides an introduction to metallic structures and behavior of ferrous and non-ferrous alloys. How fusion welding and hard surfacing affect the metallic structure, the machining and the service life of the metal. Methods of improving the structure and increasing the serviceability of metal are included.

ME 3.447 METALLURGY FOR MECHANICS
(2 class hrs/wk 2 cr) W
Introduces metallic structure, including its composition and properties. Students are familiarized with methods of metal identification, effects of heat treatment on ferrous and non-ferrous metals, and effects of poor workmanship on service life or performance of metals.

ME 3.450 COMPUTER APPLICATIONS INDUSTRIAL TECHNOLOGY
(1 class hr/wk 1 cr)
Provides students with basic information about computer systems and terminology, with special reference made to hand-held programmable machines and their industrial applications.

ME 4.120 FUNDAMENTALS OF SPECIFICATIONS
(3 class hr/wk 3 cr) Sp
Acquaints students with preparing and interpreting manufacturing and fabrication specifications. Practical problems are assigned relating classwork to industry.

ME 4.122 STRENGTH OF MATERIALS
(3 class hrs/wk 3 cr) F
Introduces the mechanics of tension, compression, torsion and shear, involving the major factors of metals, time and force. Includes mechanical properties relating to service performance. Prerequisite: MTH 65 Elementary Algebra or instructor approval.

ME 4.161 MATERIALS TESTING I
(4 class hrs/wk 3 cr) F
Studies the properties of engineering materials. Covers the fundamental aspects of the behavior of engineering materials, including elastic and plastic deformation, fracture creep fatigue, impact, temperature effects and corrosion. Also includes destructive and nondestructive evaluation, elementary principles of measurement, methodology test equipment, instrumentation and analysis of data.

ME 4.162 MATERIALS TESTING II
(4 class hrs/wk 3 cr) W
Studies the properties of engineering materials. Includes elastic and plastic deformation, fracture, creep, fatigue, impact, temperature effects and corrosion, destructive and nondestructive evaluation, elementary principles of measurement, methodology test equipment, strain gauges and application, instrumentation, and data acquisition and analysis.

ME 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.

ME 6.270 METALLURGY READING AND CONFERENCE
(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.

ME 6.276 PHYSICAL METALLURGY
(6 class hrs/wk 4 cr) W
Studies concepts, structures, properties, heat treatment and methods of forming and evaluating metals and alloys. Prerequisite: ME 6.293 Introduction to Metallurgy or instructor approval.

ME 6.281 MAGNETIC PARTICLE TESTING AND PENETRANT TESTING: LEVEL I AND II
(5 class hrs/wk 3 cr) F
An introductory course in the theory and applied techniques of liquid penetrant and magnetic particle inspection. Training is provided on hazardous materials safety data sheets (MSDS). Students perform hands-on exercises with visible and fluorescent liquid penetrants and a variety of magnetic particle testing instrumentations. Course meets minimum training requirements as recommended by SNT-TC-IA practices for Level I and II certification.

ME 6.282 ULTRASONIC AND ELECTROMAGNETIC TESTING: LEVEL I
(5 class hrs/wk 3 cr) W
Introduces basic principles and provides hands-on time with calibration and application of contact immersion testing and application of electromagnetic instrumentations. Course meets minimum training requirements in ultrasonic and electromagnetic testing as recommended by SNT-TC-1A practices for Level I certification.

ME 6.283 RADIOGRAPHIC TESTING: LEVEL I
(5 class hrs/wk 3 cr) Sp
An introductory course in the theory and techniques of radiographic testing and inspection. Introduces safety practices and radiation types. Students perform hands-on exercises with x-ray equipment. Course meets minimum training requirements as recommended by SNT-TC-1A practices for Level I certification.

ME 6.284 RADIOGRAPHIC TESTING: LEVEL II
(6 class hrs/wk 4 cr) Sp
Reviews basic radiographic principles and introduces film quality techniques, radiographic evaluation and interpretation, and manufacturing processes with associated discontinuities. Course meets minimum training requirements as recommended by SNT-TC-1A practices for Level II certification.

ME 6.285 ULTRASONIC AND ELECTROMAGNETIC TESTING: LEVEL II
(6 class hrs/wk 4 cr) W
Reviews basic ultrasonic principles and introduces students to evaluation of base-material product forms, applicable codes and evaluations, and interpretation of information gained from a variety of instrumentations. Course meets requirements as recommended by SNT-TC-1A practices for Level II certification.

ME 6.290 CERTIFIED QUALITY TECHNICIAN PREPARATION
(3 class hrs/wk 3 cr)
Prepares individuals for the certified quality technician examination (CQT). Areas of instruction include quality management concepts, quality costs, inspection and testing methods, metrology and calibration, sampling principles, quality audit concepts, fundamental statistical methods, reliability and maintainability, human resources, mathematics and metric basics.

ME 6.293 INTRODUCTION TO METALLURGY
(6 class hrs/wk 4 cr) F
Explores basic metallurgical principles, including materials testing and evaluation, metallography and nondestructive testing. Students are familiarized with terminology of physical, mechanical and chemical properties and the effects of fabrication methods on these properties. Students are given opportunities to work in teams on several projects.

ME 6.294 PROCESS METALLURGY
(6 class hrs/wk 4 cr) Sp
Studies 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 113 Technical Chemistry or instructor approval.

ME 6.298 METALLOGRAPHY I
(4 class hrs/wk 3 cr) W
Covers understanding and use of metallurgical equipment, including technical concepts of specimen procurement, mounting, polishing, etching, visual examination, sketching of structural characteristics, photomacrography and photomicrography of ferrous and non-ferrous materials. Students receive training in handling of hazardous materials, the use of Material Safety Data Sheets (MSDS) and effects of hazardous materials on the environment.

ME 6.299 METALLOGRAPHY II
(4 class hrs/wk 3 cr) Sp
Introduces use of metallurgical equipment, including specimen procurement, mounting, polishing, etching, visual examination, sketching of structural characteristics, photomacrography and photomicrography of ferrous and non-ferrous materials.

MP ..... Musical Performance

MP 101/201 SYMPHONIC BAND
(2 class hrs/wk 1 cr)) W/Sp
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a symphonic band. Note: Each class may be repeated for credit. Prerequisite: Instructor approval.

MP 102 CONCERT BAND
(3 class hrs/wk 1 cr) F/W/Sp
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a concert band. Note: Class may be repeated for credit. Prerequisite: Instructor approval.

MP 103/203 MARCHING BAND
(3 class hrs/wk 1 cr) F
Provides opportunity for participation in a marching band in conjunction with the Oregon State University Department of Music. This performance group of more than 160 musicians performs for home football games as well as one trip each year to an off-campus game. Note: Each class may be repeated for credit. Prerequisite: Instructor approval.

MP 115/215 COMMUNITY CHORALE
(2 class hrs/wk 1 cr) F/W/Sp
Provides performance-oriented class for major choral works. Note: Each class may be repeated for credit.

MP 122/222 CONCERT CHOIR
(3 class hrs/wk 2 cr) F/W/Sp
Uses vocal music to present different problems and styles. Note: Each class may be repeated for credit.

MP 131/231 CHAMBER CHOIR
(3 class hrs/wk 1-2 cr) F/W/Sp
Small, select vocal group that studies and performs early to contemporary literature. Audition required. Note: Each class may be repeated for credit. Prerequisite: Instructor approval.

MP 141/241 SYMPHONY ORCHESTRA
(3 class hrs/wk 1 cr) F/W/Sp
In conjunction with the Oregon State University Department of Music, provides opportunity for participation in a symphony orchestra. This large ensemble of 65-80 players performs orchestra repertoire from the 18th, 19th and 20th centuries. Note: Each class may be repeated for credit. Prerequisite: Instructor approval.

MP 151/251 REHEARSAL AND PERFORMANCE
(3-15 class hrs/wk 1-3 cr)
Offers credit for music rehearsal directly related to Performing Arts Department performance. Note: Class may be repeated for credit. Prerequisite: Instructor approval.

MP 171/271 INDIVIDUAL LESSONS: PIANO
(1 class hr/wk 1 cr) F/W/Sp
Provides individual instruction in piano. Note: Requires additional tutorial fee. Each class may be taken three times for credit. Prerequisite: Instructor approval.

MP 174/274 INDIVIDUAL LESSONS: VOICE
(1 class hr/wk 1 cr) F/W/Sp
Provides individual instruction in voice. Note: Requires additional tutorial fee. Each class may be taken three times for credit. Prerequisite: Instructor approval.

MP 181/281 INDIVIDUAL LESSONS: FLUTE
(1 class hr/wk 1 cr) F/W/Sp
Provides individual instruction in flute. Note: Requires additional tutorial fee. Each class may be taken three times for credit. Prerequisite: Instructor approval.

MP 183/283 INDIVIDUAL LESSONS: CLARINET
(1 class hr/wk 1 cr) F/W/Sp
Provides individual instruction in clarinet. Note: Requires additional tutorial fee. Each class may be taken three times for credit. Prerequisite: Instructor approval.

MP 184/284 INDIVIDUAL LESSONS: SAXOPHONE
(1 class hr/wk 1 cr) F/W/Sp
Provides individual instruction in saxophone. Note: Requires additional tutorial fee. Each class may be taken three times for credit. Prerequisite: Instructor approval.

MP 186/286 INDIVIDUAL LESSONS: TRUMPET
(1 class hr/wk 1 cr) F/W/Sp
Provides individual instruction in trumpet. Note: Requires additional tutorial fee. Each class may be taken three times for credit. Prerequisite: Instructor approval.

MTH ..... Math

Note: Many math courses require a calculator of some type. Please see your instructor to determine the type of calculator that is appropriate for your course.

MTH 20 BASIC MATHEMATICS
(4 class hrs/wk 4 cr) F/W/Sp/Su
Provides a thorough review of arithmetic, including fundamental operations with whole numbers, fractions, decimals, percentages, geometry and measurement. Provides a basis for MTH 60 Introduction to Algebra. Note: A minimum competency level is required to pass this course.

MTH 60 INTRODUCTION TO ALGEBRA
(4 class hrs/wk 4 cr) F/W/Sp/Su
First course in algebra for students who have no previous algebra experience or who need a thorough review. Assumes no familiarity with algebra. Introduces basic operations with integers, exponents, algebraic expressions, linear equations and inequalities, graphing, dimensional analysis, scientific notation, ratio and proportion, realistic percent problems and other problems that lend themselves to one-variable solutions. Problem solving is emphasized throughout the course. Note: A minimum competency level is required to pass this course. Prerequisite: MTH 20 Basic Mathematics or equivalent.

● **MTH 61 SURVEY OF MATHEMATICAL FUNDAMENTALS**
(3 class hrs/wk 3 cr) F/W/Sp/Su
Survey course for the Associate of Applied Science degree. Includes applications of basic algebra, ratio and proportion, charts, tables, graphs, data analysis and problem solving, and provides an introduction to practical geometry. Emphasis is on applications. Note: A minimum competency level is required to pass this course. Prerequisite: MTH 60 Introduction to Algebra or equivalent.

● **MTH 62 OCCUPATIONAL TRIGONOMETRY**
(1 class hr/wk 1 cr) Sp
Provides an introduction to right triangle trigonometry and its applications. Occupational formulas and applications are used. Note: A minimum competency level is required to pass this class. Prerequisite: MTH 61 Survey of Mathematical Fundamentals or instructor approval.

● **MTH 63 INDUSTRIAL SHOP MATH**
(1 class hr/wk 1 cr) W
A math course designed to acquaint the students with measuring tools in the industrial shop and the types of computations and problem-solving methods frequently needed in industrial settings. Prerequisite: MTH 60 Introduction to Algebra or equivalent.

● **MTH 64 BUSINESS APPLICATIONS OF MATH FUNDAMENTALS**
(2 class hr/wk 1 cr) Sp
Covers the mathematics of finance, including simple interest and compound interest as applied to bank loans, installment buying, credit purchases and annuities. Note: Five-week class. Prerequisite: MTH 61 Survey of Mathematical Fundamentals or instructor approval.

● **MTH 65 ELEMENTARY ALGEBRA**
(4 class hrs/wk 4 cr) F/W/Sp/Su
A non-traditional course in algebra with some geometry and statistics for the student who has familiarity with beginning algebra concepts (See MTH 60 Introduction to Algebra.) Includes solution of systems of linear equations; graphing of linear functions, quadratics and other functions; quadratic formula; and realistic applications using one and two variables. Introduces geometry concepts that lend themselves to algebraic solutions with or without radicals. Includes study of mean, median, mode; reading and interpreting graphs; and use of linear and exponential models to predict future events. Applications are realistic with some data to be collected by students. Problem solving is emphasized throughout the course. Note: Students use a graphing calculator. A minimum competency level is required to pass this course. Prerequisite: MTH 60 Introduction to Algebra or equivalent.

● **MTH 95 INTERMEDIATE ALGEBRA**
(4 class hrs/wk 4 cr) F/W/Sp/Su
A non-traditional course in algebra that includes some geometry and statistics. For the student who has familiarity with elementary algebra and basic geometrical and statistical concepts (see MTH 65). Covers absolute value, inverse, exponential, logarithmic, square root and cube root functions; polynomials, factoring; and rational expressions. Emphasizes functions and their graphs, and includes solving quadratics and higher degree equations by factoring, complex numbers and statistics. Applications are realistic with some data collected by students. Problem solving is emphasized throughout the course. Note: Students use a graphing calculator. A minimum competency level is required to pass this course. Prerequisite: MTH 65 Elementary Algebra or equivalent.

● **MTH 97 PRACTICAL GEOMETRY**
(4 class hrs/wk 4 cr) F/W/Sp/Su
Presents applied, informal geometry for students who did not take geometry in high school or who need a thorough review. Includes problem solving, geometric shapes, angle measure, perimeter, area and volume, congruence and similarity, circles, basic constructions and an introduction to right triangle trigonometry. Prerequisite: MTH 95 Intermediate Algebra or equivalent.

● **MTH 105 INTRODUCTION TO CONTEMPORARY MATHEMATICS**
(4 class hrs/wk 4 cr) F/W/Sp
A survey course in mathematics for students in the liberal arts and other non-science majors. Topics are selected from areas such as management science, statistics, social choice, the geometry of size and shape, and art. Stresses the application of mathematics to the problems of contemporary society and the critical role these applications play in economic, political and personal life. Prerequisite: MTH 95 Intermediate Algebra and MTH 97 Practical Geometry or equivalent.

● **MTH 111 COLLEGE ALGEBRA**
(5 class hrs/wk 5 cr) F/W/Sp/Su
Explores relations and linear, quadratic, exponential, polynomial, rational and logarithmic functions. Includes theory of equations, matrices and determinants, and introduces sequences and series. Prerequisite: MTH 95 Intermediate Algebra and MTH 97 Practical Geometry or equivalent.

● **MTH 111T COLLEGE ALGEBRA: TECHNICAL**
(5 class hrs/wk 5 cr) F
Mathematics for students in technical programs that emphasize solving applied, technical problems. Begins with an introduction to trigonometry and vectors to provide the basic background needed for physics, which many students take concurrently. Additional topics include variation, systems of equations, determinants, quadratic equations, logarithmic and exponential functions, complex numbers, basic statistics and higher-order polynomial equations. Prerequisites: MTH 95 Intermediate Algebra and MTH 97 Practical Geometry or equivalent.

● **MTH 112 TRIGONOMETRY**
(5 class hrs/wk 5 cr) F/W/Sp/Su
Introduces trigonometric functions, trigonometric identities, inverse trigonometric functions, trigonometric equations, right triangle trigonometry, complex numbers and polar coordinates. Includes parametric equations, vectors, 3-D geometry and conic sections. Prerequisite: MTH 111 College Algebra and MTH 97 Practical Geometry or equivalent.

● **MTH 112T TRIGONOMETRY: TECHNICAL**
(5 class hrs/wk 5 cr) W
Mathematics for students in technical programs that emphasize solving applied, technical problems. Includes graphs of the trigonometric functions; oblique triangles; trigonometric identities and equations; complex numbers; equations in polar coordinates; statistics; and binary, octal, hexadecimal and other number bases. Prerequisite: MTH 111T College Algebra: Technical or equivalent.

● **MTH 116 CALCULUS PREPARATION**
(5 class hrs/wk 5 cr) F/W/Sp
Survey course of material needed for calculus. Topics include elementary functions, conic sections, polar coordinates, the geometry of 2-space and 3-space, vectors in 2-space and 3-space, and sequences and series. Prerequisites: MTH 111 College Algebra; MTH 112 Trigonometry or equivalent.

● **MTH 150 INTRODUCTION TO STATISTICS**
(4 class hrs/wk 4 cr) W
An introductory statistics course that explores statistical processes, stressing data-centered topics and the collection and description of data. Introduces basic concepts of data description and analysis, samples and surveys, probability and distributions, confidence levels and significance tests, and statistical inference. Examples and problems focus on practical applications, statistical methods and problem solving. Prerequisite: MTH 95 Intermediate Algebra or equivalent.

● **MTH 159 PROBLEM SOLVING**
(2 class hrs/wk 2 cr) F/W
Helps students develop general problem-solving techniques applicable to many problem situations. Strategies discussed include recognizing patterns, working backward, using a variable, and guess and test. Practice in applying strategies is provided through a variety of problems drawn from logic, geometry, probability and quantitative data analysis. Prerequisite: MTH 65 Elementary Algebra or equivalent.

MTH 199 MATHEMATICS: SPECIAL STUDIES
(1 class hr/wk 1 cr)
Presents selected topics in mathematics.

● **MTH 211 FUNDAMENTALS OF MATHEMATICS I**
(4 class hrs/wk 4 cr) F
First course in the mathematics sequence for prospective elementary and middle school teachers. This sequence develops the understanding of basic mathematical concepts necessary to teach mathematics at levels K - 8. Topics include problem solving, whole numbers, algorithms for computation, numeration systems, number theory and fractions. Prerequisite: MTH 95 Intermediate Algebra or equivalent.

● **MTH 212 FUNDAMENTALS OF MATHEMATICS II**
(4 class hrs/wk 4 cr) W
Second course in the mathematics sequence for prospective elementary and middle school teachers. Topics include decimals, percent, ratio and proportion, integers, real numbers, basic statistics and probability. Prerequisite: MTH 211 Fundamentals of Mathematics I.

● **MTH 213 FUNDAMENTALS OF MATHEMATICS III**
(4 class hrs/wk 4 cr) Sp
Third course in the mathematics sequence for prospective elementary and middle school teachers. Covers basic geometry. Topics include shapes and their properties; symmetry; angle measure; measurement of length, area and volume; congruence and similarity; Pythagorean Theorem; and coordinate geometry. Prerequisites: MTH 97 Practical Geometry or equivalent; MTH 212 Fundamentals of Mathematics II or instructor approval.

● **MTH 231 ELEMENTS OF DISCRETE MATHEMATICS**
(4 class hrs/wk 4 cr) W
Covers elementary logic, mathematical induction, functions and sequences, finite and infinite sets, counting techniques, basic matrix algebra, relations, graphs and trees. Prerequisite: MTH 251 Calculus.

● **MTH 232 ELEMENTS OF DISCRETE MATHEMATICS**
(4 class hrs/wk 4 cr) Sp
Covers basic matrix linear algebra, combinatorics, graph theory and algorithms. Prerequisite: MTH 231 Elements of Discrete Mathematics.

● **MTH 241 MATH FOR BIOLOGICAL/ MANAGEMENT/SOCIAL SCIENCES**
(4 class hrs/wk 4 cr) F/W/Sp
Presents intuitive development of the calculus of polynomial, exponential and logarithmic functions, and extrema theory and applications. Prerequisite: MTH 111 College Algebra.

● **MTH 245 MATH FOR BIOLOGICAL/ MANAGEMENT/SOCIAL SCIENCES**
(4 class hrs/wk 4 cr) F/W/Sp
A survey course of discrete mathematics for non-physical science majors. Topics include systems of inequalities, linear programming and the simplex method, probability and probability distributions, and an introduction to descriptive statistics. Prerequisite: MTH 111 College Algebra.

● **MTH 251 CALCULUS**
(5 class hrs/wk 5 cr) F/W/Sp/Su
First course in the calculus sequence for students of mathematics, science and engineering. Includes differentiation, extrema, optimization problems, the definite integral, the fundamental theorem of calculus, numerical integration and area under a curve. Prerequisite: MTH 112 Trigonometry or MTH 116 Calculus Preparation or equivalent.

● **MTH 252 CALCULUS**
(5 class hrs/wk 5 cr) F/W/Sp
Second course in the traditional calculus sequence for students of mathematics, science and engineering. Includes the calculus of logarithmic and exponential functions and applications to finding volumes, work, fluid pressure, centroids, arc length and surface area. Techniques of integration and improper integrals also are included. Prerequisite: MTH 251 Calculus.

● **MTH 253 CALCULUS**
(4 class hrs/wk 4 cr) F/W/Sp
Third course in traditional calculus sequence for students of mathematics, science and engineering. Includes infinite series, parametric equations, polar coordinates, calculus of 2-space and 3-space vectors and an introduction to functions of several variables. Prerequisite: MTH 252 Calculus.

● **MTH 254 CALCULUS**
(4 class hrs/wk 4 cr) F/W/Sp
Fourth course in traditional calculus sequence for students of mathematics, science and engineering. Includes vector-valued functions, functions of several variables and multiple integration. Prerequisite: MTH 253 Calculus.

● **MTH 255 VECTOR CALCULUS**
(4 class hrs/wk 4 cr) W
An intermediate treatment of multivariate calculus with a vector approach. Provides the mathematical skills for courses in advanced calculus, fluid mechanics and electromagnetic theory. Prerequisite: MTH 254 Calculus.

● **MTH 256 APPLIED DIFFERENTIAL EQUATIONS**
(4 class hrs/wk 4 cr) Sp
Beginning course in differential equations for students majoring in mathematics, sciences or engineering. Covers ordinary differential equations, series solutions and Laplace transforms. Prerequisite: MTH 253 Calculus.

● **MTH 265 STATISTICS FOR SCIENTISTS AND ENGINEERS**
(4 class hrs/wk 4 cr) W
Covers 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: MTH 252 Calculus.

MTH 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.

MTH 1.301 PROBLEM SOLVING WITH THE TI-81 CALCULATOR
(20 class hrs 1 cr) F/W/Sp
This self-paced course develops the student's ability to use the TI-81 graphics calculator to solve mathematical problems. The course covers performing basic calculations, using the editing features and the memory of the calculator, graphing on the calculator, using the statistics menu, entering programs into the calculator and writing simple programs. Pre- or Corequisite: MTH 65 Elementary Algebra.

MTH 1.302 PROBLEM SOLVING WITH THE TI-82 CALCULATOR
(20 class hrs 1 cr) F/W/Sp
This self-paced course develops the student's ability to use the TI-82 graphics calculator to solve mathematical problems. The course covers performing basic calculations, using the editing features and the memory of the calculator, graphing on the calculator, using the statistics menu, entering programs into the calculator and writing simple programs. Pre- or Corequisite: MTH 65 Elementary Algebra.

MUS .....Music

➤ **MUS 101 MUSIC FUNDAMENTALS**
(3 class hrs/wk 3 cr) F/W/Sp
Studies fundamentals of music: music reading, simple chord structures, use of harmony for voice and instruments.

➤ **MUS 105 INTRODUCTION TO ROCK MUSIC**
(3 class hrs/wk 3 cr)
Examines the relationship between rock music and society. Emphasizes the musical and lyrical significance of rock music as contemporary social commentary.

MUS 131/132 GROUP PIANO I, II
(2 class hrs/wk 2 cr)
Provides classroom instruction for the beginning piano student. Note: Must be taken in sequence. Prerequisite to MUS 132: MUS 131 Group Piano I.

MUS 134/135 GROUP VOICE I, II
(2 class hrs/wk 2 cr)
Provides classroom instruction for the beginning voice student. Note: Must be taken in sequence. Prerequisite to MUS 135: MUS 134 Group Voice I.

➤**MUS 161 MUSIC APPRECIATION**
(3 class hrs/wk 3 cr) F/W/Sp
Studies music through the elements or language of music, musical forms and the history of music.

➤**MUS 205 INTRODUCTION TO JAZZ**
(3 class hrs/wk 3 cr)
Provides a listener's approach to the development of jazz through its various styles and its place in Afro-American and 20th Century socio-political history.

MUS 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.

NU..... Nursing Assistant

NU 5.406 NURSING ASSISTANT
(30 hrs/wk 7 cr) F/W/Sp/Su
The Nursing Assistant course is 120 hours fulfilling the Oregon State Board of Nursing requirements (70 hours of classroom/skills laboratory instruction and 50 hours of clinical experience). Includes instruction in basic bedside nursing skills, basic restorative services, mental health and social service needs, personal care skills and patient rights. Provides the knowledge and skills necessary to care for convalescing patients in long-term care facilities. Note: Selected immunizations and reading test required. Prerequisite: Instructor approval.

NUR..... Nursing

NUR 101 NURSING I
(13 class hrs/wk 6 cr) F
Introduces the nursing roles as provider and manager of care and member of the profession. A systems approach is used to teach the nursing process, beginning theory and nursing skills. Emphasizes communication, nursing process, gerontology, medical asepsis and safety. Fundamental nursing skills are practiced in the campus skills lab before providing nursing care in the long-term care clinical setting. Prerequisite: Admission to the Nursing Program.

NUR 102 NURSING II
(15 class hrs/wk 8 cr) W
Integrates fundamental principles from NUR 101 and builds on an understanding of the nursing roles as provider and manager of care and member of the profession. Emphasizes patient needs in an acute and long-term care settings. Patient/family teaching, discharge planning and pathophysiology are introduced in the nursing care plans. Systems studied include perioperative, respiratory, cardiovascular, endocrine, biopsychosocial (mental health) and gastrointestinal. Nursing skills from NUR 101 and NUR 121 are practiced and more skills are added. Prerequisite: NUR 101 Nursing I.

NUR 103 NURSING III
(17 class hrs/wk 9 cr) Sp
Principles from NUR 101 and NUR 102 provide the framework for continued study of nursing. The nursing process is used to focus on patients with stressors related to the following systems: reproductive (normal maternity/the newborn), the hospitalized child and family, respiratory (including fluid and electrolytes), cardiovascular and sensory (ear, eye, nose and throat). Prerequisite: NUR 102 Nursing II.

NUR 110 NURSING TRANSITIONS
(1 class hr/wk 1 cr) F
Designed to offer incoming freshmen an opportunity to receive help and support needed while entering the nursing program. Provides a variety of topics on stress management, study skills and review of curriculum content. Provides a support group through informal discussions and opportunity for problem solving.

NUR 121 NURSING SKILLS: DRUG ADMINISTRATION
(2 class hrs/wk 2 cr) F
Provides an introduction to the study of drugs. Emphasizes general topics of drug administration, such as drug metabolism, drug interactions, adverse drug reactions and the administration of parenteral and non-parenteral drugs. Special consideration in administering drugs to the aged and to children are discussed. Students learn to use drug information resources, study one prototype drug in each major classification and demonstrate proficiency in specified skills of drug administration.

NUR 122 CONTEMPORARY NURSING I
(1 class hr/wk 1 cr) Sp
Defines the nursing role 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 a practitioner. Reciprocal influences between society and nursing are identified as they relate to biological, sociological, psychological and therapeutic settings. Current issues, trends and practices in nursing are identified. Prerequisite: Instructor approval required.

NUR 201 NURSING IV
(20 class hrs/wk 10 cr) F
Emphasizes the nurse as provider of care, manager of care and member of the profession in the acute- and long-term care setting. Covers the care of patients at all developmental stages with complex stressors affecting multibody systems. Psychiatric nursing interventions are observed in acute care sites and in community settings. Nursing process is used to focus on patients who have interruptions of the nervous, cardio-vascular, psychosocial, musculoskeletal, renal and immune systems as well as altered cell growth. Integration of freshman nursing procedures, as well as catheterization of the urinary system and multiple intravenous therapy skills, are practiced throughout the quarter. Prerequisite: Instructor approval required.

NUR 202 NURSING V
(20 class hrs/wk 10 cr) W
Analyzes the nurse as provider of care, member of the profession and manager of care in acute and long-term care settings. The nursing process is used to study patients with interruptions of cellular functions and the respiratory, gastrointestinal and reproductive systems. Manager concepts for nursing care presented. Nursing skills presented include complex IV therapy, stoma care, trach care, management of chest tubes and mechanical ventilation. Prerequisite: Instructor approval required.

NUR 203 NURSING VI
(20 class hrs/wk 10 cr) Sp
Integrates and evaluates the role of the nurse as provider of care, member of the profession and manager of care in the acute care and long-term care setting. Students are responsible for managing three to four or more patients. Psychiatric interventions are observed at acute care sites as well as in community settings. Students care for patients of all developmental stages with multiple complex stressors involving trauma. Systems studies include the neurological, reproductive, renal, endocrine and cardiovascular. Students integrate and practice all previously learned skills. Prerequisite: Instructor approval required.

NUR 215 HEALTH AND PHYSICAL ASSESSMENT
(4 class hrs/wk 3 cr)
Provides the fundamental knowledge and technical skills necessary to obtain complete health histories and physical assessments from patients of all age groups in a variety of clinical settings. Prerequisite: NUR 103 or licensed nurse (LPN, RN).

NUR 222 CONTEMPORARY NURSING II
(1 class hrs/wk 1 cr) W
Continuation of NUR 122. Introduces students to and enables discussion of ethical, legal and professional responsibilities in relation to employment, licensure, professional organizations and changing trends in health care. Includes job search skills. Prerequisite: Instructor approval.

OA ..... Business Technology

◆ **OA 121A KEYBOARDING I**
(5 class hrs/wk 1-2 cr) F/W/Sp/Su
Provides basic typing skills for those with no previous instruction or those needing a review of basic techniques. Covers basic techniques of the touch system on alphabetic and numeric keys with a brief introduction to WordPerfect. Students use computer terminals. Individualized instruction; students may advance at their own rate. Note: Five-week class.

OA 123A TYPING SKILL BUILDING
(5 class hrs/wk 2 cr) F/W/Sp/Su
A computerized typing skill-building program that diagnoses a student's current keyboarding problems, prescribes appropriate practice materials and develops the student's overall keyboarding skills. Note: Five-week class. Prerequisite: OA 121A Keyboarding I or equivalent.

OA 123B ADVANCED TYPING SKILL BUILDING
(5 class hrs/wk 2 cr) F/W/Sp/Su
A computerized typing skill-building program that further develops student's keyboarding skills through diagnosis of current keyboarding problems and specialized practice. Note: Five-week class. Prerequisite: OA 123A Typing Skill Building.

OA 124 TYPING: SPEED AND ACCURACY DEVELOPMENT
(5 class hrs/wk 3 cr) F/W/Sp
A computerized typing skill-building program that diagnoses keyboarding problems, prescribes appropriate practice drills, develops overall keyboarding skills and evaluates skill development progress. Note: Ten-week class. Prerequisite: OA 121A Keyboarding I or equivalent.

◆ **OA 201 WORDPERFECT 6.1 FOR BUSINESS**
(6 class hrs/wk 3 cr) F/W/Sp/Su
In-depth course where students learn to create and revise a variety of business documents using the commands and features of WordPerfect 6.1 for Windows. Prerequisite: OA 121A Keyboarding I or equivalent (touch typing at 25 wpm or higher).

◆ **OA 201A FORMATTING AND WORDPERFECT 5.1**
(6 class hrs/wk 2 cr) F/W/Sp/Su
Introductory class in using WordPerfect 5.1 software while learning basic document formatting for business memos, letters, simple tables and reports. Students learn fundamental operation of a personal computer and printer and basics of WordPerfect 5.1 word processing software. Prerequisite: OA 121A Keyboarding I or equivalent (touch typing at 25 wpm or higher).

◆ **OA 201B BEGINNING WORDPERFECT WITH WINDOWS**
(6 class hrs/wk 2 cr) F/W/Sp/Su
Covers how to produce and edit documents using WordPerfect for Windows. Students work with scroll bars, menu bars, dialogue boxes and icons. Note: Five-week class. Prerequisite: OA 121A Keyboarding I or equivalent.

◆ **OA 202 MS WORD 6.0 FOR BUSINESS**
(6 class hrs/wk 3 cr) F/W/Sp/Su
In-depth course where students learn to create and revise a variety of business documents using the commands and features of MS Word 6.0 for Windows. Students work with toolbar, menu, dialog boxes, and icons to create, format, save, edit and print business letters, memos, tables, résumés and reports. Prerequisite: OA 121A Keyboarding I or equivalent (touch typing at 25 wpm or higher).

◆ **OA 202A BEGINNING MS WORD WITH WINDOWS**
(6 class hrs/wk 2 cr) F/W/Sp/Su
Covers basics of using Microsoft Word with Windows software for word processing. Students work with toolbars, mouse, dialogue boxes and icons to create, format, save, edit and print business letters, memorandums, tables, resumes and reports. Word features include autotext, find and replace, format painter, speller and grammar checker, merging letters and making mailing labels. Prerequisite: OA 121A Keyboarding I or equivalent.

◆ **OA 203 ADVANCED WORD PROCESSING**
(6 class hrs/wk 3 cr) F/W/Sp
Explores advanced functions of the popular word processing packages for the Windows environment. Using a project approach and hands-on learning, students learn how to apply concepts and software functionality to job-related projects. Prerequisite: Successful completion of OA 201 WordPerfect 6.1 for Business or OA 202 MS Word 6.0 for Business.

OA 2.500 BUSINESS ORIENTATION
(1 class hr/wk 1 cr) F
Introduces various career opportunities in the business field through films, speakers and field trips.

OA 2.513 DATA ENTRY SKILL BUILDING
(5 class hrs/wk 2 cr) F/W/Sp/Su
Develops speed and accuracy using the top-row numbers and 10-key numeric pad to enter typical business applications, such as payroll, account receivables, inventory, etc. Note: Five-week class. Prerequisite: OA 121A Keyboarding I or minimum 25 wpm by touch.

OA 2.515 BUSINESS MATH WITH CALCULATORS
(2-4 class hrs/wk 1-2 cr) F/W/Sp/Su
Provides the opportunity to learn operation of the electronic calculator. This knowledge is applied to business mathematics in areas such as payroll, banking invoices, simple interest, compound interest, etc. Students advance at their own rate. Prerequisite: MTH 20 Basic Mathematics or equivalent.

OA 2.515C ELECTRONIC CALCULATOR
(2-4 class hrs/wk 1 cr) F/W/Sp/Su
Provides the opportunity to operate the electronic calculator. Note: Five -week class. Prerequisite: MTH 20 Basic Mathematics or equivalent.

OA 2.515M BUSINESS MATH WITH CALCULATORS: MEDICAL
(2-4 class hrs/wk 1-2 cr) F/W/Sp/Su
Provides the opportunity to operate the electronic calculator. This knowledge is applicable in medical areas such as measurements, metrics, income/payroll, medical dosages (intake and output) and vital signs. Students advance at their own rate. Prerequisite: MTH 20 Basic Mathematics or equivalent.

OA 2.524 MEDICAL TRANSCRIPTION I
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Introduces the transcription of medical terminology in word lists and paragraphs, as well as preparation of basic medical forms. Covers the typing of radiology, history, physical and pathology reports. Prerequisites: OA 2.527 Transcribing Machines I; AH 5.630 Medical Terminology; OA 2.656M Information Processing Practicum: Medical Reports.

OA 2.525 MEDICAL TRANSCRIPTION II
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Further develops student's skill in preparing medical forms and records from dictated material. Covers the typing of operation, discharge summary and autopsy reports. Prerequisites: AH 5.633 Medical Terminology II; OA 2.524 Medical Transcription I.

OA 2.527 TRANSCRIBING MACHINES I
(5 class hrs/wk 3 cr) F/W/Sp/Su
Provides the opportunity to develop an entry-level job skill on the transcribing machine. Prerequisites: OA 2.588 Editing Skills for Information Processing with a minimum of a "C" grade; OA 201A Formatting and WordPerfect 5.1.

OA 2.528 TRANSCRIBING MACHINES II
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Develops further the student's skill on the transcribing machine. Includes projects from a variety of business situations. Prerequisite: OA 2.527 Transcribing Machines I.

OA 2.529 APPLIED MEDICAL TRANSCRIPTION
(10 class hrs/wk 1-5 cr) F/W/Sp/Su
Introduces transcription of medical terminology in word lists and paragraphs, followed by preparation of medical forms and records from dictated material. Covers the typing of radiology, pathology, history and physical, operation, discharge summary and autopsy reports. Prerequisites: AH 5.633 Medical Terminology II; OA 2.527 Transcribing Machines I; OA 2.656M Information Processing Practicum: Medical Reports.

OA 2.551 OFFICE COMMUNICATIONS
(6 class hrs/wk 3 cr) F/W/Sp
Prepares students to handle both the written and the verbal communication needs of a typical office. Prerequisite: OA 2.588 Editing Skills for Information Processing with a minimum of a "C" grade; OA 201A Formatting and WordPerfect 5.1. Corequisite: OA 201 WordPerfect 6.1 for Business or OA 202 MS Word 6.0 for Business or approved substitution.

OA 2.557 ADVANCED BUSINESS MATH APPLICATIONS
(4 class hrs/wk 1 cr) F/W/Sp/Su
Reviews the operation of the 10-key electronic calculator. Covers advanced business math applications such as calculating interest, maintaining bank records, and computing markup and markdown. Note: Five-week class. Prerequisite: MTH 61 Survey of Mathematical Fundamentals or equivalent.

OA 2.565 CODING AND INSURANCE PROCEDURES
(3 class hrs/wk 3 cr) W/Sp
An introductory program designed for the beginning coder and the practical application of the varying aspects of medical insurance. Designed to include lecture, practice sessions and application of CPT coding, ICD-9-CM coding, medical insurance forms and billing utilizing student workbook and special speakers. Prerequisite: AH 5.630 Medical Terminology I.

OA 2.579 INTEGRATED SOFTWARE APPLICATIONS
(4 class hrs/wk 3 cr) F/Sp
Integrates word processing, spreadsheets and data base software to produce business reports and documents for business applications. Prerequisites: BA 110D Data Base; BA 110S Spreadsheets; OA 201A Formatting and WordPerfect 5.1; OA 201 WordPerfect 6.1 for Business or OA 202 MS Word 6.0 for Business.

OA 2.588 EDITING SKILLS FOR INFORMATION PROCESSING
(3 class hrs/wk 3 cr) F/W/Sp/Su
Helps students improve their written communication skills. Editing and proofreading procedures are emphasized. Additional work provided in the areas of punctuation, capitalization, numbers, abbreviations and word mastery. Prerequisites: EN 1.133 The Write Course or equivalent and OA 121A Keyboarding I.

OA 2.590 READING AND CONFERENCE: 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.

OA 2.610 OFFICE PROCEDURES
(6 class hrs/wk 3 cr) Sp
Focuses on the electronic office and how to be successful in a diverse office environment. Emphasizes personal qualities and skills needed by office personnel as a foundation for a career in business. Prerequisite: OA 201 WordPerfect 6.1 for Business or OA 202 MS Word 6.0 for Business or approved substitution; OA 2.588 Editing Skills for Information Processing. Corequisite: OA 2.551 Office Communications.

OA 2.613 ON-THE-JOB TRAINING FOR OFFICE PROFESSIONALS
(3-40 class hrs/wk 1-14 cr) F/W/Sp/Su
Provides supervised employment in a secretarial field, primarily for second-year students to gain practical experience related to the student's major field of interest. Prerequisite: 2.0 GPA; Business Division approval.

OA 2.616 JOB SUCCESS SKILLS
(1 class hr/wk 1 cr) Sp
Covers techniques for marketing "your skills" to a prospective employer. Topics include employability traits, job research techniques, resume writing, job applications, employment tests, cover letter, mock interview, and professional dress and grooming.

OA 2.647 HIGH PERFORMANCE OFFICE
(3 class hrs/wk 3 cr) F
Includes competencies and responsibilities of the worker for self-management, team building and problem solving. Topics include personal values, business ethics, management leadership styles, effective communication techniques, common personnel problems, office ergonomics and more. Prerequisite: OA 201A Formatting and WordPerfect 5.1. Corequisites: OA 2.551 Office Communications; OA 203 Advanced Word Processing.

OA 2.652 FILING
(4 class hrs/wk 1 cr) F/W/Sp/Su
Introduces basic principles and information for efficient performance in managing and using records in the office. Note: Five-week class.

OA 2.653 AUTOMATED BUSINESS SYSTEMS
(3 class hrs/wk 3 cr) W/Sp
Provides students with an overview of the automated systems, including microcomputers, software, hardware, data communication systems and connectivity, that they might encounter in business occupations.

OA 2.656 INFORMATION PROCESSING PRACTICUM
(4 class hrs/wk 3 cr) Sp
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 that handles business typing tasks involving decision making, prioritizing, organizing work efficiently and meeting deadlines. Prerequisites: BA 110D Data Base; BA 110S Spreadsheets; OA 2.527 Transcribing Machines I; OA 203 Advanced Word Processing.

OA 2.656L INFORMATION PROCESSING PRACTICUM: LEGAL
(5 class hrs/wk 2 cr) W
Self-directed course designed to give the students practical hands-on microcomputer experience. Students assume they are employed in a legal office and are responsible for organizing their work efficiently, prioritizing, making formatting decisions and meeting deadlines. Note: Five-week class. Prerequisites: OA 2.527 Transcribing Machines I; OA 203 Advanced Word Processing.

OA 2.656M INFORMATION PROCESSING PRACTICUM: MEDICAL REPORTS
(4 class hrs/wk 3 cr) W/Sp
Develops medical transcription skills with written and computer exercises. Student is required to prepare typical documents that are encountered in the medical environment. Prerequisites: AH 5.630 Medical Terminology I; OA 201A Formatting and WordPerfect 5.1 or OA 201 WordPerfect 6.1 for Business or OA 202 MS Word 6.0 for Business; OA 2.588 Editing Skills for Information Processing with a minimum "C" grade.

OA 2.662 LEGAL TRANSCRIPTION
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Stresses the ability of students to take instruction via the dictaphone and to type legal documents verbatim. Prerequisites: OA 2.527 Transcribing Machines I; OA 2.675 Legal Office Procedures and Terminology I; OA 201A Formatting and WordPerfect 5.1.

OA 2.670 MEDICAL OFFICE PROCEDURES
(6 class hrs/wk 3 cr) Sp/F
Stresses the specifics of working in a medical office, including insurance, medical records, administrative office procedures, receptionist techniques and communications. Prerequisites: OA 201A Formatting and WordPerfect 5.1 or OA 201 WordPerfect 6.1 for Business or OA 202 MS Word 6.0 for Business; WR 115 Introduction to Writing or OA 2.588 Editing Skills for Information Processing with a minimum of a "C" grade.

OA 2.671 MEDICAL LAW AND ETHICS
(2 class hrs/wk 2 cr) W
Includes licensing, confidentiality, legal relationship of physician and patient, and legal and ethical responsibilities of medical personnel.

OA 2.673 COMPUTERIZED MEDICAL ACCOUNTS RECEIVABLE
(3 class hrs/wk 3 cr) W/Sp
Provides hands-on experience with Medical Manager, a computerized medical software package that includes accounts receivable, scheduling, word processing and insurance billing.

OA 2.675 LEGAL TERMINOLOGY AND OFFICE PROCEDURES I
(3 class hrs/wk 3 cr) W
Covers the basic elements of working in a legal office. Following topics are presented: ethics, human relations, receptionist's duties, telephone, mail, filing/finding, time management, work simplification, law office accounting, general legal terminology and supplies. Prerequisite: OA 121A Keyboarding I or equivalent.

OA 2.676 LEGAL TERMINOLOGY AND OFFICE PROCEDURES II
(6 class hrs/wk 3 cr) Sp
Information concerning real property, probate, bankruptcies and business entities is learned and projects are typed. Prerequisites: OA 2.588 Editing Skills for Information Processing; OA 201A Formatting and WordPerfect 5.1.

OA 2.677 LEGAL TERMINOLOGY AND OFFICE PROCEDURES III
(6 class hrs/wk 3 cr) F
Helps students understand the litigation process—both civil and criminal. Students type the pleadings to support the litigation. Appeals are discussed, as well as Latin and medical terms used in the legal field. Prerequisite: OA 2.676 Legal Terminology and Office Procedures II.

OA 2.682 DESKTOP PUBLISHING
(4 class hrs/wk 3 cr) W/Sp
Extends traditional word processing to encompass the use of page-layout of documents for the office. Students work with presentation software and PageMaker. Includes designing forms. Prerequisite: OA 201 WordPerfect 6.1 for Business or OA 202 MS Word 6.0 for Business.

OA 2.683 COMPUTERIZED RECORDS MANAGEMENT
(4 class hrs/wk 3 cr) F/W
Covers ARMA simplified filing rules, both manually and electronically using PC-File. Develops basic knowledge of records management systems. Prerequisites: OA 121A Keyboarding I; OA 2.652 Filing.

PE..... Physical Education

PE 131 INTRODUCTION TO HEALTH AND PHYSICAL EDUCATION
(3 class hrs/wk 3 cr) W
Surveys professional opportunities in the area of Health and Physical Education. A basic philosophy of physical education and health is provided as well as objectives. Qualifications of a variety of related occupations are discussed. This is a required course for all Physical Education and Health majors.

PE 180B 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 180C BASKETBALL SKILLS: WOMEN
(3 class hrs/wk 1 cr)
Provides opportunity for refinement and improvement of fundamental skills. Intercollegiate activity.

PE 180G ADVANCED VOLLEYBALL: WOMEN
(3 class hrs/wk 1 cr) F
Prepares students for competition at the intercollegiate level. Emphasizes the development of skills for competitive play. Prerequisite: Instructor approval.

PE 1851 BEGINNING VOLLEYBALL
(3 class hrs/wk 1 cr) F/W/Sp
Introduces the skills and techniques basic to volleyball, including different offensive and defensive forms of team play, strategies, etiquette and rules of the game.

PE 1851 INTERMEDIATE VOLLEYBALL
(3 class hrs/wk 1 cr) F/W/Sp
Emphasizes increasing a player's abilities within a team situation. Designed for the player who has mastered beginning volleyball skills.

PE 1851 ADVANCED VOLLEYBALL
(3 class hrs/wk 1 cr) F/W/Sp
Increases skill levels and mental strategies, with emphasis on increasing a player's abilities within a team situation.

PE 1852 WALK FOR HEALTH
(3 class hrs/wk 1 cr) F/W/Sp
Emphasizes aerobic activity with a balance of stretching and strengthening activities. Instruction focuses on fitness walking mechanics, physiological effects of cardiovascular activity and important equipment.

PE 1855 RELAXATION AND MASSAGE
(3 class hrs/wk 1 cr) F/W/Sp
Provides individual skill practice in relaxation techniques that produce a physiological response to stress relief.

PE 1856 SKIING
(8 class hrs/wk 1 cr) W
Provides opportunity for students to have on-slope instruction at local ski facility by ski instructors. Note: Eight-week class.

PE 1856 SKI CONDITIONING
(3 class hrs/wk 1 cr) F
Improves personal fitness specifically for downhill and cross country skiing. Instruction in aerobic fitness, strength and flexibility exercises are included.

PE 1857 INTERMEDIATE BASKETBALL
(3 class hrs/wk 1 cr) F/W/Sp
Emphasizes basketball conditioning, skill development and game situations. Features game format.

PE 1857 ADVANCED BASKETBALL
(3 class hrs/wk 1 cr) F/W/Sp
Provides the recreational player additional opportunity for skill development. Features game format.

PE 1858 PERSONAL PROTECTION
(3 class hrs/wk 1 cr)
Introduces students to preventive measures relating to personal defense. Discussions cover burglary prevention, rape prevention and "smarts" in relation to personal actions. Includes basic moves allowing a female or male to attempt to defend themselves if forced to do so.

PE 1859 EARLY BIRD FITNESS
(3 class hrs/wk 1 cr)
Development of total body fitness, incorporating muscular strength, aerobic conditioning, flexibility, nutrition and exercises that help reduce body fat and provide toning, strength and stress release.

PE 185A AEROBIC WEIGHT TRAINING
(3 class hrs/wk 1 cr) F/W/Sp/Su
Provides a structured and uplifting circuit training activity to improve overall fitness levels.

PE 185B BEGINNING WATER AEROBICS
(3 class hrs/wk 1 cr) F/W/Sp
Designed to develop total body tone, strengthening and firming of stomach, legs, hips, thighs, arms and upper body. Exercises include stretching and flexibility, cardiovascular warm-up and muscle toning.

PE 185B INTERMEDIATE WATER AEROBICS
(3 class hrs/wk 1 cr) F/W/Sp
Designed to improve cardiovascular fitness through an individual water workout program.

PE 185C BEGINNING SWIMMING
(3 class hrs/wk 1 cr)
Covers basic water skills and safety while in or about the water.

PE 185C INTERMEDIATE SWIMMING
(3 class hrs/wk 1 cr)
Provides instruction and practice in individual water skills and safety while in, on or about the water. Includes the elements of good swimming.

PE 185C ADVANCED SWIMMING
(3 class hrs/wk 1 cr)
Provides instruction and practice in skills to increase endurance and versatility in the water.

PE 185F BEGINNING BOWLING
(3 class hrs/wk 1 cr) W
Stresses bowling fundamentals. Provides basic foundation from which students may progress to advanced bowling skills.

PE 185F INTERMEDIATE BOWLING
(3 class hrs/wk 1 cr) W
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 185F ADVANCED BOWLING
(3 class hrs/wk 1 cr) W
Continues the emphasis on increasing the student's bowling skills and techniques. Rules and courtesies of the game as well as social and recreational value to the student are stressed.

PE 185G BODY CONDITIONING
(3 class hrs/wk 1 cr) F/W/Sp
Provides instruction and practice in exercises that condition the body. Develops a level of strength, flexibility and endurance that enables students to maintain an erect carriage, complete their work, participate in active recreation and possess a reserve of energy.

PE 185H BODY TONING
(3 class hrs/wk 1 cr) F/W/Sp
Provides instruction to develop total body tone, including strengthening and firming of stomach, legs, hips, thighs, arms and upper body.

PE 185I COUNTRY DANCE
(3 class hrs/wk 1 cr)
Introduces students to a variety of country dances, including sequenced "line" dances, as well as various steps and rhythms. The Texas Two-Step, the Waltz and several other dances are featured along with various dance techniques. Students are expected to dance.

PE 185J BEGINNING AEROBIC DANCE
(3 class hrs/wk 1 cr)
Provides an exercise program choreographed to music and designed to tone, trim and firm all body muscle groups as it strengthens and conditions the cardiovascular system.

PE 185J INTERMEDIATE AEROBIC DANCE
(3 class hrs/wk 1 cr)
Provides an exercise program choreographed to music and designed to tone, trim and firm all body muscle groups as it strengthens and conditions the cardiovascular system.

PE 185 K BEGINNING STEP AEROBICS
(3 class hrs/wk 1 cr) F/W/Sp
Introduces students to stepping techniques, including proper and safe movement on and off the bench. Students increase their skill level to enter step classes offered at any level. Students also build on all stepping techniques, including "adding-on" to patterns and transitioning into new combinations.

PE 185 K INTERMEDIATE STEP AEROBICS
(3 class hrs/wk 1 cr) F/W/Sp
Designed to meet the needs of experienced step aerobic participants. Students learn to execute more advanced combinations, plus improve their fitness level by learning power moves designed to increase the intensity level of their workout.

PE 185M BEGINNING GOLF
(3 class hrs/wk 1 cr) F
Introduces the mental and physical needs involved in golf, including grip, stance, swing techniques, rules, strategy and etiquette.

PE 185M INTERMEDIATE GOLF
(3 class hrs/wk 1 cr) W/Sp
Provides a more detailed presentation of golf techniques and strategy to improve and correct basic swing errors.

PE 185M ADVANCED GOLF
(3 class hrs/wk 1 cr) W/Sp
Provides a detailed presentation of golf technique and strategy to improve and correct basic swing errors. Also includes on-course play.

PE 185N FUNKERCISE
(3 class hrs/wk 1 cr)
Designed for the advanced aerobics student. Contains combination of Step and Power aerobics with a little body toning and some Funk-style movement.

PE 185O BEGINNING ROAD RUNNING
(3 class hrs/wk 1 cr)
Provides preparatory information for individuals of any skill level who are interested in beginning to participate in fun runs or road runs. Helps individuals with training programs and provides practical experience in dealing with situations that may be encountered during a run.

PE 185O INTERMEDIATE ROAD RUNNING
(3 class hrs/wk 1 cr)
Continues PE 185O for individuals with road running experience who are interested in improving their fitness and performance. Students can participate in group runs; long, slow distance runs; and interval workouts. Bolsters lactate threshold, VO2 max and running economy.

PE 185P JOGGING
(3 class hrs/wk 1 cr) F/Sp
Provides instruction and practice in jogging to increase maximum amount of oxygen that the body can process in a given time.

PE 185P TRIATHLON
(3 class hrs/wk 1 cr) Sp
Provides instruction in basic strategies, knowledge and fitness training needed for successful triathlon competition. Training includes road running, biking and swimming.

PE 185Q BEGINNING KARATE
(2-3 class hrs/wk 1 cr) F/W/Sp
Introduces basic Tae Kwon Do (Korean Karate). Includes blocks, kicks, punches, forms and some freestyle. Emphasizes establishing and maintaining good body condition.

PE 185Q INTERMEDIATE KARATE
(3 class hrs/wk 1 cr) F/W/Sp
Teaches Karate skills in blocking, kicking, punches and forms. Emphasizes body condition and physical fitness.
Prerequisite: Basic skills acquired in TAE Kwon Do or Beginning Karate course, or instructor approval.

PE 185R TAI CHI CHUAN
(3 class hrs/wk 1 cr)
Introduces students to Tai Chi Chuan, the national exercise of the People's Republic of China. Students learn warm ups and the 119 movements of the Wutan Style. Students also learn the history, philosophy, practical application and health benefits of Tai Chi Chuan.

PE 185S BEGINNING SCUBA
(4 class hrs/wk 2 cr)
Provides instruction in the use of self-contained underwater breathing apparatus (SCUBA). Includes five academic (classroom) modules, five confined water (pool) modules and four open-water dives to certify students as a PADI Open Water Scuba Diver.

PE 185W SOFTBALL
(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 185Y BEGINNING TENNIS
(3 class hrs/wk 1 cr) F/Sp
Provides 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 185Y INTERMEDIATE TENNIS
(3 class hrs/wk 1 cr) F/Sp
Covers advanced tennis strategies and skills.

PE 185Y ADVANCED TENNIS
(3 class hrs/wk 1 cr) F/Sp
Prepares students for competition, emphasizing development of skills for competitive play.

PE 185Z ADVANCED TRACK
(3 class hrs/wk 1 cr) W/Sp
Provides individualized practice in and concentration on developing skills and techniques in selected track and field events.

PE 185Z TRACK SKILLS
(3 class hrs/wk 1 cr) F/W/Sp
Provides individualized practice in and concentration on developing skills and techniques in selected track and field events.

PE 185Z TRACK CONDITIONING
(3 class hrs/wk 1 cr) F/W/Sp
Provides physical training and skill development for competitive track and field.

PE 190A BASEBALL CONDITIONING
(3 class hrs/wk 1 cr) W
Emphasizes physical conditioning that develops strength and agility for better efficiency in baseball skills.

PE 190B BASEBALL SKILLS: HITTING AND PITCHING
(3 class hrs/wk 1 cr) F/W/Sp
Enables student to refine basic baseball skills in hitting, fielding and throwing. Team offensive and defensive strategies and alignments also are covered.

PE 190C BEGINNING BASEBALL
(3 class hrs/wk 1 cr) F/W/Sp
Introduces fundamental baseball skills.

PE 190D ADVANCED BASEBALL
(3 class hrs/wk 1 cr) Sp
Prepares students for intercollegiate competition in baseball.

PE 190H ADVANCED BASKETBALL
(3 class hrs/wk 1 cr) F/W/Sp
Prepares the student for competition at the intercollegiate level. Note: Requires five meetings a week plus participation in 30 games. Prerequisite: Instructor approval.

PE 190J BASKETBALL CONDITIONING
(3 class hrs/wk 1 cr) F
Prepares the student for competition at the intercollegiate level.

PE 190K BASKETBALL SKILLS
(3 class hrs/wk 1 cr) F
Prepares students for competing at the intercollegiate level. Continues improvement on conditioning, plus development of on-court skills.
Prerequisite: Instructor approval.

PE 190L FLAG FOOTBALL
(3 class hrs/wk 1 cr) F/Sp
Develops the skills fundamental to flag football. Note: Organization of class depends upon skill level.

PE 194A PROFESSIONAL ACTIVITIES: BASKETBALL/ VOLLEYBALL
(4-6 class hrs/wk 2 cr) W
Basketball: Provides technical information for prospective basketball instructors. Presents classroom techniques and teaching strategies in the area of basketball.
Volleyball: Provides technical information on how to perform individual skills, offensive and defensive styles, and strategies of play and practical experience for prospective teachers of physical education.

PE 194C PROFESSIONAL ACTIVITIES: GOLF/TENNIS
(4-6 class hrs/wk 2 cr) Sp
Golf: Provides prospective physical education teachers with a framework for golf instruction. Includes lecture, skill development, strategies and course play.
Tennis: Provides prospective physical education instructors a working knowledge of tennis fundamentals and strategies. Combines both lecture and on-court activities.

PE 194E PROFESSIONAL ACTIVITIES: SWIMMING
(4-6 class hrs/wk 2 cr) F
Provides prospective physical education instructors knowledge and skills to teach, effectively and safely, basic swimming skills. Includes lecture and in-water skill instruction.

PE 194F PROFESSIONAL ACTIVITIES: TRACK
(4-6 class hrs/wk 2 cr) F
Provides prospective physical education teachers a 12-week class that includes technical information and learn-by-doing activities for all track and field events.

PE 194H PROFESSIONAL ACTIVITIES: WEIGHT TRAINING/ AEROBIC FITNESS
(4-6 class hrs/wk 2 cr) W
Weight Training: Provides technical and in-depth information for students seeking a future in teaching weight training. Includes lecture on and participation in weight training.
Aerobic Fitness: Provides prospective physical education instructors with the knowledge and skills to teach effectively various forms of aerobic fitness. Emphasizes areas such as aerobic dance, step aerobics and water aerobics. Includes lecture and aerobic activity.

PE 194J PROFESSIONAL ACTIVITIES: RACQUET GAMES
(4-6 class hrs/wk 2 cr) W
Provides technical and in-depth information for students seeking a future in teaching indoor racquet activities.

PE 194K DEFENSIVE TACTICS
(3 class hrs/wk 2 cr)
Comprehensive plan of instruction in legal responsibilities, use of force, defensive and offensive defense tactics and correct search procedures. Students are required to participate in both lecture and lab exercises.

PE 207 SPORTS OFFICIATING
(3 class hrs/wk 2 cr)
Studies the organization and techniques of officiating sports. Comprehensive instruction in rules, officiating technique, scoring and practice experience.

PE 231 LIFETIME WELLNESS
(3 class hrs/wk 3 cr) F/W/Sp/Su
Evaluates the present status of the student's total wellness level. Provides an exercise prescription and information on nutrition, stress management and psychological health. Prepares the student to enter the worksite as a healthy individual and to maintain this wellness level.

PE 232 BACKPACKING: MAP AND COMPASS SKILLS
(3 class hrs/wk 3 cr)
Prepares the individual for safe, challenging and enjoyable wilderness trips. Emphasizes physical conditioning, equipment, clothing, food, safety and the use of map and compass.

PE 280A 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 280B 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 LIFEGUARD TRAINING
(6 class hrs/wk 2 cr) F/Sp
Provides the necessary minimum skills training for a person to qualify to serve as a non-surf guard. Note: Six-week class.

PE 292 WATER SAFETY INSTRUCTION
(6 class hrs/wk 2 cr) F/Sp
Trains individuals to teach all the basic swimming and water safety classes of the American Red Cross. Note: Six-week class.

PE 299 CARE AND PREVENTION OF ATHLETIC INJURIES
(3 class hrs/wk 3 cr)
Studies techniques for preventing and treating high-incidence injuries in physical education and sports activities. Gives special attention to injuries common to school-age population. For those interested in coaching, athletic training and physical therapy.

PH..... Physics

● **PH 201, 202, 203 GENERAL PHYSICS**
◆ (7 class hrs/wk 5 cr) F/W/Sp
College-level course for students planning to transfer to a four-year college or university. PH 201, motion, forces, momentum, energy, fluids; PH 202, heat, vibrations, wave motion, sound, electricity; PH 203, magnetism, optics, atomic and nuclear physics, special relativity. Note: Must be taken in sequence. Calculator with trigonometric, logarithmic and scientific notation functions required. Experience with computer spreadsheet and word processing software is helpful but not required. Prerequisites to PH 201: MTH 111 College Algebra; MTH 112 Trigonometry. Prerequisite to PH 202: PH 201 General Physics. Prerequisites to PH 203: PH 201, 202 General Physics.

● **PH 211, 212, 213 GENERAL**
◆ **PHYSICS WITH CALCULUS**
(7 class hrs/wk 5 cr) F/W/Sp
Presents calculus-based principles of physics for students in science and engineering. PH 211, linear motion, forces, momentum, energy, rotational motion, angular momentum, fluid mechanics; PH 212, harmonic motion, waves, sound, thermodynamics, static and direct current electricity; PH 213, alternating current electricity, magnetism, induced emf, inductance, LC oscillations, LRC circuit, Maxwell's equations, electromagnetic waves, light, optics, diffraction. Note: Must be taken in sequence. Calculator with trigonometric, logarithmic, scientific notation and linear regression functions required. Experience with computer spreadsheet and word processing software is helpful but not required. Prerequisite to PH 211: MTH 252 Calculus; Corequisite to PH 211: MTH 253 Calculus. Prerequisites to PH 212: PH 211 General Physics; MTH 253 Calculus. Prerequisites to PH 213: PH 211, PH 212 General Physics; MTH 253 Calculus.

PH 4.310 INTRODUCTORY PHYSICS
(3 class hrs/wk 3 cr) F
Provides an introductory-level course for vocational students and others who require knowledge of basic physics principles. Topics include mechanics, heat, electricity, magnetism, light and sound. Prerequisite: A working knowledge of elementary algebra is recommended.

PHL..... Philosophy

PHL 198 INDEPENDENT STUDIES
(1 class hr/wk 1 cr)
Offers selected philosophy topics for independent research. Prerequisite: Instructor approval.

➤ **PHL 201 INTRODUCTION TO PHILOSOPHY**
(3 class hrs/wk 3 cr)
Introduces the philosophical task, the major areas of philosophical speculation and the role critical thinking plays in everyday life.

➤ **PHL 202 ELEMENTARY ETHICS**
(3 class hrs/wk 3 cr)
Develops the idea of humans as moral agents and considers critically various interpretations of the ideals and standards of moral conduct.

➤ **PHL 215 HISTORY OF WESTERN PHILOSOPHY**
(3 class hrs/wk 3 cr) Sp
Studies Western philosophy from the ancient Greeks to the 20th century.

PHL 298 INDEPENDENT STUDY: LOGIC
(1 class hr/wk 1 cr)
Offers individual study of patterns of logic, rules of inference through formalized logical language and techniques of deductive and predicate logic.

PHO..... Photography

PHO 198 INDEPENDENT STUDIES
(2-6 class hrs/wk 1-3 cr) F/W/Sp
Offers individual instruction in advanced problems relevant to the student's interest and needs. Prerequisite: Instructor approval.

PHO 261 INTRODUCTION TO PHOTOGRAPHY
(4 class hrs/wk 3 cr) F/Sp
Introduces principles of photography, including exposure, camera handling, natural and artificial lighting, composition, developing and printing black-and-white, history and current applications. Limited number of cameras available for checkout. Lab work included.

PHO 262 INTERMEDIATE PHOTOGRAPHY
(4 class hrs/wk 3 cr) Sp
Studies advanced black-and-white darkroom techniques with fibre papers, including archival processing; fine printing controls; use of toners, bleaches and intensifiers; mounting and presentation methods; the Zone System of exposure; and other fine art photography techniques. Lab work included. Prerequisite: PHO 261 Introduction to Photography or instructor approval.

PHO 263 COLOR PHOTOGRAPHY
(4 class hrs/wk 3 cr) Sp
Introduces color theory and practice, including exposure and processing of color negative and positive films, printing from negatives and slides, color balance and composition, and alternative processes. Lab work included. Prerequisite: PHO 261 Introduction to Photography or instructor approval.

PS..... Political Science

■ **PS 104 PROBLEMS IN AMERICAN POLITICS**
(3 class hrs/wk 3 cr)
Explores current policy issues in American politics, which may range from international to national to local topics. Examples include unemployment, military affairs, civil rights and education.

PS 198 RESEARCH TOPICS
(1 class hr/wk 1 cr)
Examines in-depth selected political science topics for independent research. Corequisite: WR 123 English Composition.

■ **PS 201 AMERICAN GOVERNMENT: POLITICAL PROCESSES**
(3 class hrs/wk 3 cr)
Studies the development of American national government, the character and foundations of American political thought and the developing relationship between democracy and capitalism.

■ **PS 202 AMERICAN GOVERNMENT: INSTITUTIONS**
(3 class hrs/wk 3 cr)
Examines approaches to social, economic and environmental problems and political process through which policies are developed. Emphasis on how Congress, president and Supreme Court function as elements of public policy process.

■ **PS 203 AMERICAN GOVERNMENT: STATE AND LOCAL**
(3 class hrs/wk 3 cr)
Studies state and local politics and political institutions and the relationship of citizens to them. Examines the meaning and operation of American Federalism, the character of local political culture (Jacksonian and Progressive), and what historical and contemporary factors shape it. Special emphasis on current Oregon issues and conflicts. Note: Course is offered alternate years only.

■ **PS 205 INTERNATIONAL RELATIONS**
(3 class hrs/wk 3 cr)
Focuses on current world politics. Examines 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 206 COMPARATIVE EUROPEAN GOVERNMENTS**
(3 class hrs/wk 3 cr)
Focuses on current European issues. Introduces the foundations and processes of governmental policy making in European nations; examined within a historical and comparative framework. Note: Course is offered alternate years only.

■ **PS 207 INTRODUCTION TO POLITICAL SCIENCE**
(3 class hrs/wk 3 cr)
Introduces theories, concepts and research methods appropriate to understanding how conflicts among people are resolved. Emphasizes political analysis, including comparative study of political behavior and institutions. Note: Course is offered alternate years only.

■ **PS 220 U.S. FOREIGN POLICY**
(3 class hrs/wk 3 cr)
Analyzes selected U.S. foreign policy problems and experiences through case studies. Places foreign policy in the perspective of history and the context of international political, economic and strategic issues. Explores the diversity of perceptions about U.S. foreign relations. Note: Course is offered alternate years only.

■ **PS 252 CONSTITUTIONAL LAW**
(3 class hrs/wk 3 cr) W
Studies basic principles of the U.S. Constitution with emphasis on leading Supreme Court cases and the Bill of Rights.

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.

PSY..... Psychology

■ **PSY 101 PSYCHOLOGY AND HUMAN RELATIONS**
(3 class hrs/wk 3 cr) F/W
Focuses on the practical application of psychology to relations with people in everyday situations. Topics include self-concept, social perception, emotions, needs, values, healthy relationships, interpersonal communications, conflict and behavioral change.

PSY 198 INDEPENDENT STUDIES: RESEARCH TOPICS
(1 class hr/wk 1 cr)
Provides in-depth examination of a selected psychological topic to develop skills in independent research. Intended primarily for the psychology major. Prerequisite: WR 123 English Composition. Corequisite: PSY 203 General Psychology to be taken prior to or concurrently with PSY 198.

■ **PSY 200 PSYCHOLOGY AS A NATURAL SCIENCE**
(4 class hrs/wk 4 cr)
Surveys the theories and principles of the psychology of individual development. Includes discussion of the scientific method, history of psychology, biological bases of behavior, sensation, perception, consciousness, motivation, emotion, cognitive development, learning, memory and intelligence.

■ **PSY 203 GENERAL PSYCHOLOGY**
(3 class hrs/wk 3 cr)
Describes individual differences and methods of measurements. Discusses personality theory, conflict and stress, and abnormal and social psychology. PSY 203 is being offered to serve students who have completed PSY 201 and PSY 202 and plan to complete the sequence. PSY 203 will only be offered Fall Term 1996. All new students should begin in PSY 200 or PSY 205.

■ **PSY 205 PSYCHOLOGY AS A SOCIAL SCIENCE**
(4 class hrs/wk 4 cr)
Surveys theories and principles of social psychology. Includes discussion of psychosocial development, gender development, personality, stress, psychopathology and psychotherapy, attitudes and social behavior.

■ **PSY 215 INTRODUCTION TO DEVELOPMENTAL PSYCHOLOGY**
(3 class hrs/wk 3 cr)
Outlines cause of psychological/physical development from conception to death. Emphasizes how and why human beings change (or remain the same) from their beginnings to their last years of life.

■ **PSY 231 HUMAN SEXUALITY**
(3 class hrs/wk 3 cr)
Discusses the biological, social and psychological aspects of human sexual functioning. Emphasizes sexual response patterns, sexual attitudes, sexual myths and fallacies.

■ **PSY 235 HUMAN DEVELOPMENT: CHILD**
(3 class hrs/wk 3 cr)
Discusses theoretical perspectives and social, physiological and psychological forces that impact on the stages of development from conception to puberty.

■ **PSY 236 HUMAN DEVELOPMENT: ADULT**
(3 class hrs/wk 3 cr)
Introduces human development through theoretical perspectives and social, physiological and psychological forces that impact on the stages of development from adolescence to old age.

■ **PSY 237 HUMAN DEVELOPMENT: AGING**
(3 class hrs/wk 3 cr)
Emphasizes adult development from a multi-disciplinary perspective, focusing on issues and transitions of later life. Includes biological/psychological aging, health issues, patterns of successful aging, grandparenthood and kinship relations.

PSY 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.

R ..... Religion

➤ **R 101 INTRODUCTION TO RELIGIOUS STUDIES**
(3 class hrs/wk 3 cr)
Examines the nature of religion as experienced historically and globally. Explores the nature of religious experience and the divine; the compatibility of science and religion; and the nature of religious language, myth and symbol.

➤ **R 102 RELIGIONS OF WESTERN WORLD**
(3 class hrs/wk 3 cr)
Investigates religion in the Western World. Includes discussion of Judaism, Christianity and Islam. Focuses on how the outward forms of religious expression integrate with other cultural traditions.

➤ **R 103 RELIGIONS OF EASTERN WORLD**
(3 class hrs/wk 3 cr)
Investigates religion in the Eastern World. Includes discussion of Hinduism, Buddhism and Taoism. Focuses on how the outward forms of religious expression integrate with other cultural traditions.

R 198 INDEPENDENT STUDIES: RESEARCH TOPICS
(1-3 class hrs/wk 1-3 cr)
Offers selected topics of study in religion with individual research and/or field study. Corequisite: WR 123 English Composition.

➤ **R 211 THE OLD TESTAMENT: HISTORICAL BACKGROUND**
(3 class hrs/wk 3 cr)
Describes the history and culture of the Hebrew people, including conditions affecting the production of the Old Testament.

➤ **R 212 THE NEW TESTAMENT: HISTORICAL BACKGROUND**
(3 class hrs/wk 3 cr)
Discusses the historical developments of the New Testament, including development of Christianity and its significance in human experience.

RD..... Reading

RD 103 COLLEGE READING
(3 class hrs/wk 3 cr) F/W/Sp/Su
Develops skills for students with average reading skills who need to improve their efficiency to cope successfully with college reading materials. Improves comprehension, builds vocabulary and increases reading speed. Note: A minimum competency is required to pass this course. Prerequisite: Placement is made by test results.

RD 120 CRITICAL READING AND THINKING
(3 class hrs/week 3 cr) F/W/Sp
Develops higher level reading skills for students who want to develop the more advanced reading and critical thinking skills. Improves analytical and inferential comprehension skills and critical thinking, builds vocabulary and increases reading rate. Note: A minimum competency is required to pass this course. Prerequisite: Placement is made by test results.

RD 1.175 READING IMPROVEMENT I
(3 class hrs/wk 3 cr) F/W/Sp/Su
Develops fundamental reading skills for students who experience severe difficulty when attempting to read college textbooks. Improves comprehension, builds vocabulary and increases reading speed. Note: A minimum competency is required to pass this course. Prerequisite: Placement is based on test results.

RD 1.176 READING IMPROVEMENT II
(3 class hrs/wk 3 cr) F/W/Sp/Su
Develops fundamental reading skills for students who have considerable difficulty when attempting to read college textbooks. Improves comprehension, builds vocabulary and increases reading speed. Note: A minimum competency is required to pass this course. Prerequisite: Placement is based on test results.

RH..... Refrigeration, Heating and Air Conditioning

RH 3.527 ALTERNATIVE ENERGY SOURCES
(3 class hrs/wk 3 cr) F
Introduces students to traditional energy usage, energy conservation and the supplemental role alternative sources play today and in the future. Energy sources, such as nuclear, hydroelectric, solar, wind and biomass, are evaluated for their potential use.

RH 3.542 RHAC GRAPHICS
(2 class hrs/wk 2 cr) Sp
Covers job-related skills in interpreting trade drawings and plans for installing and servicing commercial installations and domestic appliances.

RH 3.552 TRADE AND ELECTRICAL COMPONENTS I
(4 class hrs/wk 3 cr) F
Basic course emphasizing specific trade applications of electricity and electrical components for refrigeration, heating and air conditioning. Safety, basic function and application of individual components and equipment are covered.

RH 3.553 TRADE AND ELECTRICAL COMPONENTS II
(4 class hrs/wk 3 cr) W
Continues the application of the various components used in refrigeration, heating and air conditioning. Lab classes include wiring required circuits and extensive use of test meters.

RH 3.580 INTRODUCTION TO REFRIGERATION/HEATING/AIR CONDITIONING
(9 class hrs/wk 6 cr) F
Covers the history of refrigeration; types of jobs available; safety, theory and terminology; soldering and brazing skills; tools; and basic operations within the industry.

RH 3.583 PRINCIPLES OF REFRIGERATION
(9 class hrs/wk 6 cr) W
Includes refrigeration system component operations and assembling, evacuation and charging techniques. Domestic refrigeration equipment repair and testing also are emphasized.

RH 3.584 SHEET METAL BASICS
(6 class hrs/wk 4 cr) W
Introduces sheet metal design and layout of fittings. Students master the use of hand tools and machine forming to construct fittings for HVAC installation.

RH 3.585 PRINCIPLES OF HEATING
(9 class hrs/wk 6 cr) Sp
Helps students gain experience, through lecture and related laboratory projects, in the latest technology in installing, maintaining, troubleshooting and repairing heating systems.

RH 3.587 OPERATION PRINCIPLES OF AIR CONDITIONING
(9 class hrs/wk 6 cr) W
Introduces the uses of conditioned air and psychometrics in the air conditioning industries. Principles of air movement, total body comfort, air distribution systems, heating and cooling load calculations, and air balancing are covered.

RH 3.588 PNEUMATIC CONTROLS
(6 class hrs/wk 4 cr) F
Covers the design, application, terminology and maintenance of pneumatic control systems and components. Specialized pneumatic control tools and theory relating to the heating, ventilating and air conditioning trade are stressed.

RH 3.589 DIAGNOSIS, SERVICE AND REPAIR
(9 class hrs/wk 6 cr) F
Covers the domestic and commercial applications in refrigeration, heating and air conditioning systems. Customer relations, related paperwork and electrical troubleshooting skills also are emphasized.

RH 3.590 CONTROL APPLICATION
(6 class hrs/wk 4 cr) W
Examines the installation and operation of refrigerant controls and electrical controls used in the refrigeration and air conditioning industry. Practical application of electrical control circuitry is covered.

RH 3.591 COMMERCIAL AND INDUSTRIAL REFRIGERATION
(9 class hrs/wk 6 cr) Sp
Introduces commercial and industrial refrigeration systems and control circuits through lecture, lab and field trips. Absorption and centrifugal chiller theory is covered. Electrical and mechanical troubleshooting is emphasized.

RH 3.592 SYSTEMS DESIGN
(6 class hrs/wk 4 cr) Sp
Covers designing, choosing equipment, drawing and installing various heating systems, including load calculations and pipe sizing.

SD..... Supervisory Management

SD 101 SUPERVISION: FUNDAMENTALS
(3 class hrs/wk 3 cr) F
Introduces students to current management theory in the areas of motivation, leadership, organization, planning and decision making. Also examines the skills necessary to be an effective supervisor and encourages students to evaluate their own leadership potential. In addition, the course looks at the changing focus of supervision within a diverse workplace.

SD 101A BECOMING A SUPERVISOR
(3 class hrs/wk 1 cr) F/Su
A course for men and women who hope to acquire, will soon acquire or have recently acquired supervisory responsibilities. Discusses skills and abilities needed to be an effective supervisor as well as common problems experienced by new supervisors. Students explore ways to enhance their chances of being promoted to the supervisory level of management. Note: Three-week class.

SD 101B SUPERVISION: HUMAN BEHAVIOR
(3 class hrs/wk 1 cr) F/Su
Discusses the "why" behind human behavior. Focuses on individual differences, attitude development, motivation and managing the difficult employee. Note: Three-week class.

SD 101C SUPERVISION: EFFECTIVE LEADERSHIP
(3 class hrs/wk 1 cr) F/Su
Helps students develop their leadership potential. Explains "what the experts say" about leadership. Also covers key components of leadership: delegation, decision making and problem solving. Note: Three-week class.

SD 102 SUPERVISION: TECHNIQUES
(3 class hrs/wk 3 cr) W
Gives students an introduction and an opportunity to practice skills that are needed to be an effective supervisor. Covers stress and time management and legal issues, including harassment and workplace drug abuse. Explores methods of improving productivity through team building and Total Quality Management (TQM).

SD 102A SUPERVISION: STRESS/ TIME MANAGEMENT
(3 class hrs/wk 1 cr) W
Explores the relationship of conflict, stress and time management as they apply to the role of supervision. Stress reduction and effective time management techniques are discussed. Also explores ways to avoid job burnout. Note: Three-week class.

SD 102B SUPERVISION: LEGAL ISSUES
(3 class hrs/wk 1 cr) W
Covers the law as it relates to sexual harassment, discrimination and affirmative action, drug and alcohol abuse, and compliance with the Americans with Disabilities Act. Students also learn tactics for dealing with these issues in an effective, yet legal, manner. Note: Three-week class.

SD 102C SUPERVISION: IMPROVING PRODUCTIVITY
(3 class hrs/wk 1 cr) W
Studies methods for improving employee productivity. Discussion and case studies of new management techniques, such as participative management, self-managed work groups and Total Quality Management (TQM), are discussed. Note: Three-week class.

SD 103 SUPERVISION: COMMUNICATIONS
(3 class hrs/wk 3 cr) Sp
Increases the student's awareness of the role communication plays in effective supervision. Non-verbal and verbal communications are examined. In addition, the communication skills for conducting employee appraisals, job interviews and employee training, disciplining and coaching are explored.

SD 103A SUPERVISION: EFFECTIVE COMMUNICATION
(3 class hrs/wk 1 cr) Sp
Provides an increased awareness of the role communication plays in effective supervision. Listening, non-verbal and verbal communications skills are examined. Note: Three-week class.

SD 103B SUPERVISION: INTERVIEWING/TRAINING
(3 class hrs/wk 1 cr) Sp
Helps supervisors develop skillful interviewing and training techniques. Two areas of interviewing are stressed — job interviews and employee appraisal interviews. Effective methods of training and directing personnel are explored. Note: Three-week class.

SD 103C SUPERVISION: COACH/ DISCIPLINE
(3 class hrs/wk 1 cr) Sp
Teaches effective coaching and disciplining skills. Emphasizes the skills required for the supervisor of today to meet the challenges of tomorrow. Note: Three-week class.

SD 104 SUPERVISION: APPLIED COMMUNICATIONS
(3 class hrs/wk 3 cr) F
Helps supervisors develop skills in making oral business presentations, conducting productive meetings and writing effective letters and reports.

SD 104A SUPERVISION: WRITTEN COMMUNICATION
(3 class hrs/wk 1 cr) F
Presents techniques for writing effective good news, bad news and persuasive letters. Explores techniques for writing effective business reports. Note: Three-week class.

SD 104B SUPERVISION: CONDUCTING A MEETING
(3 class hrs/wk 1 cr) F
Covers the skills necessary to conduct effective meetings, including planning the agenda, facilitating a productive meeting and follow-up. Note: Three-week class.

SD 104C SUPERVISION: BUSINESS PRESENTATION
(3 class hrs/wk 1 cr) F
Assists supervisors in effective oral business presentations. The effective use of visual aids and presentation techniques are explored. Note: Three-week class.

SD 280 CWE SUPERVISION
(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 supervisory 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.

SOC..... Sociology

SOC 198 RESEARCH TOPICS
(1 class hr/wk 1 cr)
Requires an 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 English Composition.

■ **SOC 204 GENERAL SOCIOLOGY**
(3 class hrs/wk 3 cr)
Introduces the sociological perspective: the components of society and social organization, culture, socialization and stratification.

■ **SOC 205 GENERAL SOCIOLOGY**
(3 class hrs/wk 3 cr) F/W/Sp
Applies sociological perspectives to the study of social change and trends in family, religion, education, economics and politics.

■ **SOC 206 GENERAL SOCIOLOGY**
(3 class hrs/wk 3 cr)
Surveys social issues and movements. Stresses application of basic concepts to contemporary problems in group life.

■ **SOC 211 SOCIOLOGY OF DEVIANCE AND SOCIAL CONTROL**
(3 class hrs/wk 3 cr)
Three parallel intents have determined the contents and organization of this course: to present a comprehensive coverage of the major sociological theories of deviance; to show how these different perspectives might be brought together to obtain a more complete understanding of deviance causation; and to emphasize that the social processes that produce and maintain deviance are essentially the same ones that produce and maintain conformity.

■ **SOC 222 MARRIAGE RELATIONSHIPS**
(3 class hrs/wk 3 cr) F/W/Sp
Examines intimate relationships, courtship, marriage and family patterns -- old, new and unconventional. Focuses on how relationships are built, maintained, changed and terminated. Prerequisite: SOC 204 General Sociology or instructor approval.

SOC 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.

SP..... Speech

SP 111 FUNDAMENTALS OF SPEECH
(3 class hr/wk 3 cr) F/W/Sp/Su
Provides opportunities to prepare and present original speeches with emphasis on content, organization, audience adaptation, delivery and language.

SP 112 INTRODUCTION TO PERSUASION
(3 class hrs/wk 3 cr)
Studies concepts and principles of persuasion through persuasive public speaking. Introduces the nature and logic of reasoning, propositions, issues, evidence and rational discourse in influencing attitudes or behavior. Also introduces speaker credibility, audience motivation, and use of language and delivery in persuasion.

SP 199 SPECIAL STUDIES IN SPEECH
(3-9 class hrs/wk 1-3 cr)
Offers individual and special studies arranged with an instructor. Note: May be repeated for a maximum of 9 credits.

SP 218 INTERPERSONAL COMMUNICATION
(3 class hrs/wk 3 cr) F/W/Sp/Su
Builds skills and understanding in one-to-one communication. Covers self-concept, verbal and non-verbal communication, emotional listening, conflict, relationships and self-disclosure.

SP 219 SMALL GROUP COMMUNICATION
(3 class hrs/wk 3 cr)
Investigates interaction at the small-group level. Many interesting aspects of group communication are experienced and explored. Both the process and dynamics of groups will be important, as well as group tasks and outcomes. Small-group communication is viewed from historical, sociological and cultural perspectives. Students gain insight as to the critical role groups and group communication plays in the structure and functioning of civilization.

SP 229 ORAL INTERPRETATION OF LITERATURE
(3 class hrs/wk 3 cr)
Offers instruction and practice in the oral presentation of various types of written literature, including poetry and prose.

SP 237 COMMUNICATION AND GENDER
(3 class hrs/wk 3 cr)
Investigates the impact of gender on communication, specifically looking at issues of conflict, decision making, leadership, non-verbal messages, language, power and interpersonal relationships.

SP 280 CWE SPEECH
(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 speech. 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.

SP 1.103 OCCUPATIONAL SPEECH COMMUNICATION
(3 class hrs/wk 3 cr)
Emphasizes practical verbal communication skills for professional/technical students. Includes job search skills, practice in personal and workplace communication, and conflict resolution strategies.

SPN ..... Spanish

SPN 101, 102, 103 FIRST-YEAR SPANISH I, II, III
(4 class hrs/wk 4 cr) F/W/Sp
Introduces Spanish, stressing speaking, reading and 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.

SPN 111, 112, 113 BEGINNING SPANISH COMMUNICATION
(3 class hrs/wk 3 cr) W/Sp
Introduces the language and culture of Latin America and Spain through oral communication. Includes practice in idiomatic usage, vocabulary and aural comprehension.

➤ **SPN 201, 202, 203 SECOND-YEAR SPANISH I, II, III**
(4 class hrs/wk 4 cr) F/W/Sp
Presents 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: SPN 103 First-Year Spanish or three years high school Spanish equivalent or instructor approval.

SPN 280 CWE SPANISH
(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 Spanish. 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.

SS..... Study Skills

SS 1.125 STUDY SKILLS
(3 class hr/wk 3 cr) F/W/Sp/Su
Provides students the study skills needed to be successful students. Time management, listening and notetaking, reading and studying textbooks, using the library, preparing for examinations and taking examinations are among skills taught. These skills are taught in combination with understanding attitude, motivation and student behavior. Prerequisite: Appropriate reading competence as indicated by college placement test.

SS 1.134 STUDY SKILLS: VOCATIONAL
(2-6 class hrs/wk 0-3 cr) F/W/Sp
Provides individualized instruction to develop specific skills in various vocational programs. The instruction is supplemental to the regular course offerings and does not substitute for that instruction. Diagnosis of deficiencies and interests of students determine level of instruction.

SS 1.150 TECHNIQUES OF STUDYING
(1-3 class hrs/wk 1-3 cr) F/W/Sp
Develops reading comprehension, vocabulary and study skills for students in designated programs. Emphasizes the materials used in the particular program.

SS 1.180 LECTURE READINESS/ STUDY PREPARATION
(6 class hrs .25 cr) F/W/Sp
Self-paced pre-notetaking mini-course. Prepares students for effective notetaking by providing an overview of concentration and pre-lecture preparation skills. Includes self-analysis of skills and problem solving for different classroom lecture situations.

SS 1.181 TAKING LECTURE NOTES
(15 class hrs .75 cr) F/W/Sp
Self-paced mini-course. Covers learning about effective listening techniques, outlining skills, and the Cornell method of notetaking and studying. Application activities reinforce concepts in each area.

SS 1.182 STUDYING NOTES/ MAPPING
(6 class hrs .25 cr) F/W/Sp
Self-paced mini-course. Introduces students to a variety of mapping models and their use. Presents reviewing and recitation strategies to improve retention of information from the student's notes. Explanation of skills and application practice are included.

SS 1.183A HOW TO READ A TEXTBOOK: PART 1
(10 class hrs .5 credit) F/W/Sp/Su
Self-paced mini-course. Subjects covered include reading for main ideas and learning organizational patterns. Students learn to determine the main idea of a paragraph by learning the differences between a topic sentence and a main idea. Students also are exposed to four major types of organizational patterns used by textbook authors. Students become better able to remember and understand textbook material.

SS 1.183B HOW TO READ A TEXTBOOK: PART 2
(10 class hrs .5 cr) F/W/Sp/Su
Self-paced mini-course. Prepares students to take textbook notes, including answering questions, outlining, mapping, underlining and highlighting. Students also learn to review for short-term and long-term memory.

SS 1.183C HOW TO READ A TEXTBOOK: PART 3/ PSYCHOLOGY/SOCIOLOGY
(10 class hrs .5 cr) F/W/Sp/Su
Self-paced mini-course. Prepares students to begin reading textbooks more efficiently. Students learn to utilize aids and instructions provided by the author. Students also learn to establish a meaningful purpose for reading a textbook and to preview effectively for textbook content. Students practice skills through psychology or sociology texts.

SS 1.183D HOW TO READ A TEXTBOOK: PART 3/NURSING
(12 class hrs .5 cr) F/W/Sp/Su
Self-paced mini-course. Prepares students to read textbooks more efficiently. Students learn to utilize aids and instructions provided by the author. Students also learn to preview and to establish a purpose for reading the textbook. Students practice skills through use of the nursing text.

SS 1.183E HOW TO READ A TEXTBOOK: PART 3/CULINARY ARTS
(10 class hrs .5 cr) F/W/Sp/Su
Self-paced mini-course. Prepares students to read textbooks more efficiently. Students learn to utilize aids and instructions provided by the author. Students also learn to preview and to establish a purpose for reading the textbook. Students practice skills through use of the culinary arts text.

SS 1.184 TEST ANXIETY REDUCTION
(6 class hrs 0 cr) F/W/Sp
Self-paced mini-course. Assists students in understanding the nature of test anxiety and provides practice in relaxation and desensitization techniques. Students also learn methods of tension management to use before and during a test.

SS 1.184A STUDYING FOR TESTS
(15 class hrs .75 cr) F/W/Sp
Self-paced mini-course. Presents strategies for test preparation. Students learn how to anticipate course requirements and plan study time. The methods for identifying, organizing and actively learning the important information in a course are taught.

SS 1.184B TEST-TAKING TIPS
(6 class hrs .25 cr) F/W/Sp
Self-paced mini-course. Helps students evaluate their test-taking attitude, develop successful test-taking strategies, manage time during test taking, evaluate test performance and feel more confident with the test-taking process.

SS 1.184C TAKING OBJECTIVE TESTS
(6 class hrs .25 cr) F/W/Sp
Self-paced mini-course. Helps students understand and practice strategies appropriate for taking the three major types of objective tests.

SS 1.184D TAKING ESSAY TESTS
(6 class hrs .25 cr) F/W/Sp
Self-paced mini-course. Helps students understand and practice organizational strategies and techniques appropriate for taking different types of essay tests.

SS 1.185 SPEED READING
(10 class hrs .5 cr) F/W/Sp
Self-paced mini-course. Exposes students to information about each person's ability to increase reading speed without significant loss in comprehension. Utilizes the computer to provide opportunities to improve eye movement.

SS 1.186A VOCABULARY IMPROVEMENT I
(20 class hrs 1 cr) F/W/Sp
Self-paced mini-course. Teaches students who need basic vocabulary development or students of limited English proficiency to use context clues to determine the meaning of unfamiliar words. Students learn to use words in various contexts. Note: Placement is by pre-test.

SS 1.186B VOCABULARY IMPROVEMENT II
(20 class hrs 1 cr) F/W/Sp
Self-paced mini-course. Teaches students who need vocabulary improvement to use context clues to determine the meanings of unfamiliar words. Students learn to use the words in various contexts. Note: Placement is by pre-test.

SS 1.186C VOCABULARY IMPROVEMENT III
(20 class hrs 1 cr) F/W/Sp
Self-paced mini-course. Teaches students who want to enrich their vocabulary to use context clues to determine the specific meanings of a word in a given context. Students learn to determine the meanings of words in various contexts. Note: Placement is by pre-test.

SS 1.186D VOCABULARY IMPROVEMENT IV
(20 class hrs 1 cr) F/W/Sp
Self-paced mini-course. Teaches students who want to improve their vocabulary to determine the meanings of unfamiliar words by using context clues. Students encounter the unfamiliar words in various contexts to learn various meanings. Note: Placement is by pre-test.

SS 1.187 STEP-BY-STEP PATTERN FOR LIBRARY RESEARCH
(6 class hrs .25 cr) F/W/Sp/Su
Self-paced mini-course. Provides students with guided instruction in learning about a variety of research options and how to implement them. Through exercises and videotape information, students learn to evaluate the quality and appropriateness of research sources and how to record for future use.

SS 1.188 TIME MANAGEMENT FOR STUDENTS
(10 class hrs .5 cr) F/W/Sp/Su
Self-paced mini-course. Students learn systems and structures to manage their time efficiently for greater success in classes. Topics include breaking large projects into smaller parts, improving concentration and structuring homework assignments.

ST ..... Science and Technology

ST 1.106 SCIENCE AND CULTURE IN THE WESTERN TRADITION
(3 class hrs/wk 3 cr)
Surveys the history of western civilization from the perspective of developments in science and technology. Emphasizes the interaction between scientific developments and cultural developments.

ST 1.107 TECHNOLOGY, SCIENCE AND SOCIETY
(3 class hrs/wk 3 cr)
Growth and use of technology in western society is explored in conjunction with aspects of religion, philosophy, sociology and economics. Technology is defined as the physical and intellectual manipulation of tools and materials. Reverse contributions in which technology provides tools to measure, perceive and extend scientific study are discussed.

TA ..... Theatre

➤ **TA 106 INTRODUCTION TO THEATRE: DRAMA**
(3 class hrs/wk 3 cr)
Surveys, from an audience point of view, theatrical production, styles and personnel involved in creating a live theatrical event. Not a performance course.

TA 107 INTRODUCTION TO THEATRE–ELECTRONIC ENTERTAINMENT
(3 class hrs/wk 3 cr)
Surveys American culture as expressed through the theatrical mass entertainment mediums of radio, television, film and computer-generated images.

TA 114 TECHNICAL THEATRE WORKSHOPS: STAGECRAFT
(3 class hrs/wk 3 cr)
Introduces basic theatre technology emphasizing the practical skills and crafts used in the performing arts -- from equipment and materials to constructing and mounting a production. Uses the Performing Arts Department's production schedule as a practical demonstration of these crafts, skills and techniques. Prior experience not required or expected.

TA 121, 122 FUNDAMENTALS OF ACTING I, II
(3 class hrs/wk 3 cr)
Offers basic training in the art of acting. Increases the student's understanding of the performing arts and sensitivity to communication situations. An experience-oriented class. Prerequisite to TA 122: TA 121 Fundamentals of Acting or TA 125 Improvisation or instructor approval.

TA 124 READER'S THEATRE
(3 class hrs/wk 3 cr)
Offers involvement in the performance of poetry and prose. Emphasizes selecting, scripting and directing of appropriate Readers Theatre scenes.

TA 125 IMPROVISATION
(3 class hrs/wk 3 cr)
Introduces sensory awareness and problem-solving exercises and theatre games. Intended to enhance creativity and polish acting skills through improvisation. An experience-oriented course. Prior experience not required or expected.

TA 161 FUNDAMENTALS OF TECHNICAL THEATRE: SCENERY
(5 class hrs/wk 4 cr)
Introduces theatre forms and spaces; the working elements of a theatre; and the basic principles and techniques of scenery construction, scene painting and properties. Prerequisite: TA 114 Technical Theatre Workshops: Stagecraft or instructor approval.

TA 162 FUNDAMENTALS OF TECHNICAL THEATRE: LIGHTING
(5 class hrs/wk 4 cr)
Introduces the history of theatrical illumination and the basic principles of stage lighting and scenic projections. Prerequisite: TA 114 Technical Theatre Workshops: Stagecraft or instructor approval.

TA 163 FUNDAMENTALS OF TECHNICAL THEATRE: SOUND AND STAGE MANAGEMENT
(5 class hrs/wk 4 cr)
Introduces basic principles of sound, the equipment and its operation for sound reinforcement in the theatre. Covers the role and responsibility of the stage manager in relationship to sound, lighting and other technical operations. Prerequisite: TA 114 Technical Theatre Workshops: Stagecraft or instructor approval.

TA 180/282 REHEARSAL AND PERFORMANCE
(3-15 class hrs/wk 1-3 cr) F/W/Sp
Offers credit for participating in a public theatre production of the college. Productions provide both extracurricular activity for non-majors and practical application of classroom theory for theatre students. Note: Each may be repeated for up to 9 credits. Prerequisite to TA 282: 3 credits of TA 180 Rehearsal and Performance.

TA 185/285 PRODUCTION WORKSHOP
(3-15) class hrs/wk 1-3 cr) F/W/Sp
Offers practical experience in the preparation of scenery, costumes, properties, sound and publicity for a college theatrical production. Prerequisite to TA 285: 3 credits of TA 185 Production Workshop.

TA 190/290 PROJECTS IN THEATRE
(2-6 class hrs/wk 1-3 cr)
Offers individually arranged projects in the theatre. Note: Each class may be repeated for up to 9 credits. Prerequisite: For TA 190: Instructor approval; for TA 290: 3 credits of TA 190 Projects in Theatre.

TA 198/298 INDEPENDENT STUDIES: THEATRE
(2-6 class hrs/wk 1-3 cr)
Offers individually arranged projects in the theatre. Prerequisite: Instructor approval.

TA 240 CREATIVE DRAMA FOR TEACHERS
(3 class hrs/wk 3 cr)
Explores philosophy, literature, activities and teaching methods of creative dramatics for children. Students experience, evaluate and teach each other through using techniques that tap the child's innate, imaginative potential.

TA 270 STAGE MAKE-UP
(3 class hrs/wk 3 cr)
Teaches basic theory and techniques of theatrical make-up. Includes lecture, demonstration and laboratory experience and is designed for both the theatre major and non-major. No previous experience is required.

TA 280 CWE THEATRE 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 theatre 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.

WD..... Welding

WD 4.151 WELDING I
(4 class hrs/wk 2 cr) F/W/Sp
Stresses safety and equipment familiarization, with lab exercises for skill development in basic gas and electric arc welding. This introductory course includes technical information lectures in related subjects.

WD 4.152 WELDING II
(4 class hrs/wk 2 cr) F/W/Sp
Provides welding skill level required in minor industrial applications. Includes more advanced electric arc-welding and an introduction to gas-shielded arc processes (MIG and TIG). Lab and technical information on related welding subjects included. Prerequisite: WD 4.151 Welding I.

WD 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: WD 4.152 Welding II or instructor approval.

WD 4.154 WELDING SEMINAR
(2-20 class hrs/wk 1-10 cr) F/W/Sp
Open-entry/open-exit course providing skills upgrading.

WD 4.240 BASIC ARC WELDING
(14 class hrs/wk 1-6 cr) F
Introduces arc welding practices on mild steel of various thicknesses and joint configurations in all positions.

WD 4.241 INTERMEDIATE ARC WELDING
(14 class hrs/wk 1-6 cr) W
Builds on skills learned in WD 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.

WD 4.242 FABRICATION AND REPAIR PRACTICES I
(8 class hrs/wk 1-4 cr) F
Introduces oxyacetylene welding practices on mild steel of various thicknesses and joint configurations in all positions.

WD 4.243 FABRICATION AND REPAIR PRACTICES II
(8 class hrs/wk 1-4 cr) W
Lecture/laboratory course in fundamentals of welding fabrication and repair. Introduces basic procedures in planning, sketching, cost evaluation, ordering, layout, metal preparation, tack-up and final welding. Prerequisite: WD 4.240 Basic Arc Welding; WD 4.242 Fabrication and Repair Practices I.

WD 4.245 LAYOUT PROCEDURES FOR WELDING
(4 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: WD 4.247 Interpreting Metal Fabrication Drawings.

WD 4.246 ADVANCED ARC WELDING
(14 class hrs/wk 1-6 cr) Sp
Provides continuation of WD 4.241 Intermediate Arc Welding. Prepares students for welder certification in the manual arc and semi-automatic processes.

WD 4.247 INTERPRETING METAL FABRICATION DRAWINGS
(4 class hrs/wk 3 cr) W
Introduces 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.

WD 4.250 FABRICATION AND REPAIR PRACTICES III
(8 class hrs/wk 1-4 cr) Sp
Continues WD 4.243 Fabrication and Repair Practices II. Provides a more in-depth approach to welding design, fabrication and repair. Prerequisite: Instructor approval.

WD 4.251 FUNDAMENTALS OF WELDING INSPECTION
(4 class hrs/wk 3 cr) Sp
Covers general duties and responsibilities of the welding inspector, including the essential subject knowledge required to judge the quality of welded products to meet the requirement of specifications and code standards. The course offers a comprehensive review of welding processes, codes specifications, qualification of welders and welding procedures, metallurgical considerations, materials control, weld defects testing and examination methods; and inspection techniques. Prerequisite: Previous occupational/training experience with direct relationship to weldments, design production, construction-inspection or NDT testing.

WD 4.255 , 4.256, 4.257 FABRICATION AND REPAIR PRACTICES IV, V, VI
(1- 6 cr, variable) F/W/Sp
Sequence provides 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 inventorying of materials, layout skills, fabrication and final assembly.

WD 4.258 WELDING PRINTS AND PROJECTS
(4 class hrs/wk 3 cr)
Introduces principles of welding fabrication drawings. Visualization of parts and projects, dimensioning and sketching are presented to develop the skills necessary to function in the fabrication and repair field.

WE..... Cooperative Work Experience

WE 202 CWE SEMINAR
(1 class hr/wk 1 cr) F/W/Sp/Su
A seminar, reading program and research paper providing students enrolled in SFE/CWE an opportunity to discuss issues involved in field work, such as ethics, issues, supervision, career opportunities and resume writing. Note: May be repeated for up to 4 credits.

WE 1.201 CWE SEMINAR
(1 class hr/wk 1 cr) F/W/Sp/Su
A Field Experience Seminar course that provides an opportunity for students involved in Cooperative Work Experience to share work-related experiences in a seminar situation with their work experience coordinator and fellow field placement students. Content presented at the seminar includes orientation to Cooperative Education, employability skills, basic planning and basic economics. This course is required for all students enrolled in Cooperative Work Experience and is open to other students who want to participate. Note: May be repeated for up to 4 credits.

WE 1.280 COOPERATIVE WORK EXPERIENCE
(6-42 class hrs/wk 1-14 cr) F/W/Sp/Su
An instructional program designed to give students practical experience in supervised employment related to their program. 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.

WR..... Writing

When possible, individual sections of writing classes will be held in or have access to a computer classroom.

WR 115 INTRODUCTION TO WRITING
(3 class hrs/wk 3 cr) F/W/Sp
Reviews basic conventions, purposes and strategies of standard written English. Emphasizes sentence variety, paragraph development and improvement of fluency in writing expository prose. Instills confidence in the student's ability to write acceptably and effectively at the college level. Note: This course does not satisfy institutional writing requirements for the transfer student. Placement determined by pre-enrollment testing.

WR 115T INTRODUCTION TO WRITING: TECHNICAL
(3 class hrs/wk 3 cr) F/W/Sp
Reviews basic conventions, purposes and strategies of standard written English, with an emphasis on workplace writing appropriate for technical and professional majors. Emphasizes writing that helps students use resources, information systems and technology. Students learn to work in teams more effectively by building basic skills in writing, reading and communication. Note: This course does not satisfy institutional requirements for the transfer student. Placement determined by pre-enrollment testing.

WR 121 ENGLISH COMPOSITION
(3 class hrs/wk 3 cr) F/W/Sp
Covers processes and fundamentals of writing expository essays, including rhetorical structure, organization and development, diction and style, revision and editing, mechanics and standard usage required for college-level writing. Emphasizes developing critical thinking skills. Note: Placement determined by pre-enrollment testing.

WR 121T ENGLISH COMPOSITION: TECHNICAL
(3 class hrs/wk 3 cr)
Covers processes and fundamentals of expository writing with an emphasis on workplace writing appropriate for technical and professional majors. Emphasizes writing that helps students use resources, information, systems and technology, and work in teams more effectively by building skills in writing, reading, problem-solving and communication. Note: Placement determined by pre-enrollment testing.

WR 122 ENGLISH COMPOSITION
(3 class hrs/wk 3 cr) W/Sp
Emphasizes the logical means of developing ideas in argumentative essays, thesis statements and reasoning. Includes logic, style and research. Prerequisite: WR 121 English Composition.

WR 123 ENGLISH COMPOSITION
(3 class hrs/wk 3 cr) W/Sp
Introduces informative and analytical writing supported by research. Students design a research plan, use primary and secondary sources critically, develop research methods, use proper documentation and develop writing strategies for longer papers. Prerequisite: WR 121 English Composition.

WR 214 BUSINESS COMMUNICATIONS
(3 class hrs/wk 3 cr) F/W/Sp
Emphasizes written and oral communication in business, incluading information gathering, writing, editing, listening, interviewing, non-verbal communication and collaboration. Prerequisite: WR 121 English Composition.

WR 227 TECHNICAL REPORT WRITING
(3 class hrs/wk 3 cr) F/W/Sp
Introduces gathering, evaluating, organizing and presenting technical information to professional and technical audiences. Emphasizes revision, problem solving and team work; includes writing instructions, proposals, progress reports and formal reports. Note: Keyboarding skills encouraged. Prerequisite: WR 121 English Composition.

➤ **WR 240 PERSONAL JOURNAL WRITING**
(3 class hrs/wk 3 cr) F/W/Sp
Practices the use of journals to record and reflect on personal experiences, to experiment with different writing techniques, and to gather and develop material for other writing projects. Emphasizes learning to write freely. Note: May be repeated once for credit.

➤ **WR 241 INTRODUCTION TO IMAGINATIVE WRITING: FICTION**
(3 class hrs/wk 3 cr) F/W/Sp
Studies 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: POETRY**
(3 class hrs/wk 3 cr) F/W/Sp
Studies basic elements of poetry, types of poetry, uses for poetry and the process of creating poetry. Emphasizes fostering individual style. Note: May be repeated once for credit.

WR 247 LITERARY PUBLICATION
(3 class hrs/wk 3 cr) W
Provides practical application of composition and literature instruction through work on The Eloquent Umbrella, a student creative arts publication.

WR 280 CWE ENGLISH/WRITING
(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 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.

WR 1.131 SPELLING
(3 class hrs/wk 3 cr) F/W/Sp/Su
Teaches spelling skills through structural analysis and spelling principles. Proofreading and dictionary usage are included.

WW..... Water Wastewater Technology

◆ **WW 6.154 PROCESS CONTROL I**
(6 class hrs/wk 4 cr) F
First course of a two-course sequence addressing advanced level monitoring, operation and control concepts for biological treatment processes. Introduces identification of process monitoring tools, data collection, process control calculations and interpretation for biological process evaluation and problem solving. The activated sludge wastewater treatment process is the application for this class. Quattro Pro is the computer spreadsheet program used for data control and analysis.

WW 6.155 PROCESS CONTROL II
(6 class hrs/wk 4 cr) W
Second course in the two-course sequence addressing advanced level monitoring, operation and control concepts for biological treatment processes. Continues the monitoring and computer-aided data interpretation for biological process evaluation and problem solving. Both suspended growth processes and attached growth processes are the applications for this class. Advanced control topics, including filamentous bacteria identification, biological nitrogen removal and biological phosphorus removal, are covered. Special topics and current issues are discussed as time allows.

WW 6.164 WATER SOURCES
(4 class hrs/wk 3 cr) F
A basic class for water resource managers. Includes surface and groundwater sources. Covers hydrology, water quality, laws and regulations, flow measurements, storage, intake structures and wells.

WW 6.165 WATER DISTRIBUTION AND COLLECTION SYSTEMS
(4 class hrs/wk 3 cr) Sp
Includes information on materials and equipment, line repair, fire hydrant maintenance, cross-connection control, storage, water quality, pump stations, cleaning and maintenance of lines, and infiltration/inflow monitoring.

WW 6.166 WATER PURIFICATION SYSTEMS
(5 class hrs/wk 4 cr) F
An advanced-level course covering the theory, application and operation of potable water treatment systems. Theory and operation of mixing systems, coagulation chemistry, optimization of chemical applications, flocculation, sedimentation and water filtration are covered. Special related topics in potable water supply may be added as time permits.

WW 6.168 IN-PLANT PRACTICUM
(40 class hrs/wk 2-12 cr) Su
In-Plant Practicum consists of full-time work in a water or wastewater treatment facility. Skills and knowledge developed in first-year courses are combined with on-the-job training by both plant supervisory personnel and LBCC visiting instructors. Prerequisite: HE 112 Emergency First Aid or HE 252 First Aid and instructor approval.

WW 6.180 WATER/WASTEWATER MECHANICS I
(6 class hrs/wk 2 cr) W
First course in a three-term sequence covering the basic mechanical skills required in the water and wastewater treatment industry. Topics include hand tools, threaded fasteners, packing, lubrication, gaskets, precision instruments, gears, belts, chains and plumbing fittings for steel, copper and PVC pipe.

WW 6.181 WATER/WASTEWATER MECHANICS II
(6 class hrs/wk 2 cr) Sp
Second course in a three-term sequence covering the basic mechanical skills required in the water and wastewater treatment industry. Topics include identification, maintenance and repair of valves, hydrants, positive displacement and centrifugal pumps, and chlorinators.

WW 6.190 INTRODUCTION TO ENVIRONMENTAL SCIENCE AND TECHNOLOGY
(8 class hrs/wk 5 cr) F
Introduces environmental science, pollution control and environmental technology. Provides the basic understanding of the normal ecology of the planet and the risks associated with polluting the environment. Environmental pollution and control technology topics include safe drinking water, wastewater treatment, air pollution, solid waste and hazardous waste management: Prerequisite: Program admission.

WW 6.191 WATER SYSTEMS OPERATION
(12 class hrs/wk 7 cr) Sp
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, sedimentation, filtration, disinfection, and finished water storage and distribution. Prerequisite: WW 6.190 Introduction to Water and Wastewater Operations. Corequisite: MTH 65 Elementary Algebra.

WW 6.192 WASTEWATER SYSTEMS
(12 class hrs/wk 7 cr) W
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: WW 6.190 Introduction to Water/Wastewater Operations. Corequisite: MTH 65 Elementary Algebra.

WW 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. Supports basic concepts through lab experiments relevant to the water/wastewater field.

WW 6.194 BASIC AQUATIC CHEMISTRY AND MICROBIOLOGY
(8 class hrs/wk 4 cr) W
Continues WW 6.193 Introduction to Aquatic Chemistry and Microbiology. Applies basic concepts to wastewater analytical techniques, including pH, chlorine residual, BOD, solids, activated sludge procedures, microscopic identification of microbes and fecal coliform tests. Prerequisite: WW 6.193 Introduction to Aquatic Chemistry and Microbiology.

WW 6.195 INTERMEDIATE AQUATIC CHEMISTRY AND MICROBIOLOGY
(8 class hrs/wk 4 cr) Sp
Continues WW 6.194 Basic Aquatic Chemistry and Microbiology. Basic concepts are applied to drinking water, analytical techniques, including alkalinity, hardness, chlorine residual, iron, total dissolved solids, jar test, taste and odor, and total coliform test. Prerequisite: WW 6.193 Introduction to Aquatic Chemistry and Microbiology.

WW 6.197 SOLIDS HANDLING
(4 class hrs/wk 3 cr) Sp
Deals with the various processes of solids handling and management. Includes aerobic and anaerobic digestion, centrifugation, gravity concentration, gravity thickening, flotation thickening, filter presses, vacuum presses, incineration, land fill and land application. Laboratory control procedures and sludge conditioning also are covered.

WW 6.198 INSTRUMENTATION
(5 class hrs/wk 4 cr) Sp
Provides an introduction to the instrumentation processes used to monitor and control contemporary water and wastewater treatment facilities. Measurement of temperature, pressure, liquid level and flow, and the transmission and controller for these parameters are discussed.

WW 6.199 INTRODUCTION TO HYDRAULICS
(4 class hrs/wk 2 cr) F
Provides an introduction to hydraulics for water/wastewater treatment plant operators. Includes performing basic hydraulic computations, hydraulic measurement units, pressure, head, head loss, flow and pump calculations. Corequisite: MTH 60 Introduction to Algebra.

WW 6.235 APPLIED HYDRAULICS
(3 class hrs/wk 3 cr) W
A practical course covering flow, head and head loss calculations, pump calculations and pump curves. Applications are made to water distribution systems and sewage collection systems. Corequisite: MTH 111T College Algebra: Technical.

Non-certificate/Non-degree courses

9.148 PREPARATION FOR WELDER CERTIFICATION
(4 class hrs/wk 1-2 cr) F/W/Sp
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: WD 4.152 or 9.152 Welding II or instructor approval.

9.151 WELDING I
(4 class hrs/wk 2 cr) F/W/Sp
Stresses 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
Provides the welding skill level expected in minor industrial applications. Includes more advanced electric-arc welding and an introduction to gas-shielded arc processes (MIG-TIG). Lab and technical information on related welding subjects included. Prerequisite: 9.151 Welding I.

9.218 FORK LIFT OPERATION
(10 class hrs/wk 1 cr)
Provides training needed to receive an operator's certification card. Meets OSHA safety training requirement. Note: One-week class.

9.320 BCLS-CPR INSTRUCTOR
(8 class hrs 1 cr) F/Sp
Reviews CPR skills and introduces or updates methods and techniques of CPR instruction. Includes writing lesson plans, using an instructor's manual, evaluating fellow students, and processing records and other forms for American Heart Association certification. Prerequisite: Current American Heart Association CPR Level C card.

9.415A CERTIFIED MEDICATION AIDE
(72 hr/14 wk 4 cr)
Fulfills Oregon State Board of Nursing requirements for CMA certification. Covers basic pharmacology, drug distribution and administration of non-injectable medication in both classroom and clinical learning environments. Prerequisite: CNA with one year of employment; recommendation by a director of nursing; Hepatitis B and measles immunizations required; plus other requirements.

9.419 MINI PHYSICAL ASSESSMENT WORKSHOP
(8 class hrs/wk 1 cr) F/W/Sp
Provides the practicing RN and other health care workers 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 recurring 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
(24 class hrs/wk 13 cr) F
Course designed for RNs and LPNs who have not practiced for the past five years or for RNs or LPNs who would like to increase their knowledge. 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. Prerequisite: Oregon State Board of Nursing Limited license to practice nursing or current OSBN RN or LPN license.

9.426 CORONARY CARE NURSING
(7 class hrs/wk 4 cr) F
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, physiology of the heart, diagnostic methods and treatment of cardiovascular disease. Principles of cardiac monitoring and electrocardiography are applied. Prerequisite: RN or LPN.

9.428 CONTINUING EDUCATION FOR NURSES: NEUROLOGICAL ASSESSMENT
(8 hrs 1 cr) F/Sp
Covers basic skills in neuroassessment. Reviews neuroanatomy and physiology, physical exam and intervention in the neurological patient. Note: One-day class.

9.428M ALZHEIMERS: BASIC CAREGIVING
(20 class hrs 2 cr)
Fundamental information on disease process of dementia and effective interventions of caregivers are presented in an interactive learning environment. Includes successful methods and how-to strategies for resolving caregiving problems. Class schedule varies. Prerequisite: Employed as a CNA or caring for an Alzheimers' patient in the home.

9.428O ACTIVITIES DIRECTOR
(36 hrs/5 wk 4 cr)
Fulfills state and federal regulations for activities director certification course for long-term care. Covers role of the activity director in adapting, modifying and implementing activities for various cognitive levels, volunteer recruitment and preparing for the state survey team. Prerequisite: High school diploma or equivalent.

9.428P RESTORATIVE AIDE
(50 class hrs 3 cr)
Prepares the Nursing Assistant with the theory and skills to safely perform restorative functions in long-term care facilities. Prerequisite: CNA for six months; recommendation by employing LTC facility; Hepatitis B and measles immunizations.

9.437 CANCER UPDATE (BONNIE IRA MEMORIAL)
(8 hrs 0 cr) Sp
Yearly continuing education seminar for health care providers in topics related to cancer. Updates current knowledge base.

9.449 ADVANCED CARDIAC LIFE SUPPORT
(24 class hrs 0 cr) F/Sp
American Heart Association approved curriculum in continuing education for health care providers. Covers evaluation and treatment of cardiac emergencies.

9.672 DIGITAL PRINCIPLES I
(6 class hrs/wk 3 cr)
Fundamental course in digital concepts and circuits. Includes practical theory of gates, registers, counters and similar digital circuits.

9.673 BASIC SEMICONDUCTORS I
(6 class hrs/wk 3 cr)
Fundamental course in semiconductors. Includes practical theory of semiconductor diodes, zener diodes, special application and bipolar transitor operations.

9.673A BASIC SEMICONDUCTORS II
(6 class hrs/wk 3 cr)
Continues Semiconductors I. Includes practical theory of bipolar transistors, field effect transistors, thyristors, integrated circuits and opto-electronic devices.

9.691 DIGITAL PRINCIPLES II
(6 class hrs/wk 3 cr)
Continues Digital Principles I. Includes practical theory of sequential logic circuits, combination logic circuits and their applications.

9.813 AGRICULTURAL CHEMICALS
(3 class hrs/wk 3 cr) W
Covers the use and chemistry of herbicides, insecticides, fungicides and nematocides. Emphasizes types of material, safety in handling and storing, and methods of application. Students learn to interpret and explain to customers the directions and precautions for various agricultural chemicals. Also covers keeping current with new product development.

9.828 TRACTOR SAFETY
(12 class hrs/wk 1 cr)
Qualifies under-age farm workers for certification in tractor safety and operation skills in accordance with federal regulations. Note: One-week class.

9.930 PROFESSIONAL ISSUES IN CHILD AND FAMILY STUDIES
(1 class hr /wk 1 cr)
Focuses on the legal and ethical issues in working with children and families, e.g. licensing, health and safety standards, adult:child ratios and child abuse reporting. Emphasizes the position of being family focused. Includes professional organizations, advocacy training and accreditation preparation.

9.931 OREGON CHILD-CARE BASICS
(1 class hr/wk 0 cr)
Provides basic information about health and safety issues and the social/emotional development of young children. Designed for practicing child care providers.

9.932 CHILD DEVELOPMENT
(1 class hr/wk 1 cr)
An interactive presentation of information on child development for practicing child care providers. Care givers focus on the development of children ages birth through 13 years and the implications for practice in a child care setting.

9.934 ORGANIZATION AND ADMINISTRATION
(1 class hr/wk 1 cr)
An interactive presentation of information on enhancing family child care as a business through developing skills in professional planning, building relationships, marketing, tax reporting, contracts and basic record keeping.

9.936 CURRICULUM DEVELOPMENT
(1 class hr/wk 1 cr)
Family and center care providers learn the components of high-quality programming for children. Enhances the child care provider's ability to plan appropriate activities, equip the environment and obtain resources to meet the special needs of children ages birth to 13 years.

9.938 INFANT AND TODDLER CARE (1-3 class hrs/wk 1-3 cr)
Family and center providers learn the elements of quality care for infants and toddlers. Emphasizes all areas of development: physical, social, emotional, cognitive and language. Includes group-care techniques and family/provider relationships.

9.939 SCHOOL AGE CARE
(1 class hr/wk 1 cr)
A comprehensive overview of school age care and education for those caring for children ages 5 to 15. Focuses on child and adolescent development, curriculum design, school age care center business practices, marketing and staff development.

9.945 LIVING AND LEARNING WITH YOUR CHILD WITH SPECIAL NEEDS
(3 class hrs/wk 2 cr)
A course for parents of children with special needs. 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, parents increase their knowledge and awareness of the child's development and social needs.

9.946 LIVING AND LEARNING WITH YOUR CHILDREN
(2-4 class hrs/wk 1-2 cr)
An active participation class for parents and their children (walking to age 4). Provides an opportunity for parents to discuss parenting topics and to help plan and join in activities with their children.

9.947 LIVING AND LEARNING WITH YOUR BABY
(2 class hrs/wk 1 cr)
An active participation class for parents and their infants (birth to beginning walkers). Provides parents an opportunity to discuss parenting topics and to join in activities with their baby.

9.948 LIVING AND LEARNING WITH YOUR TODDLER
(2 class hrs/wk 1 cr)
An active participation class for parents and their toddlers (walking to age 2 1/2). Provides an opportunity for parents to discuss parenting topics and to help plan and join in activities with their toddler.

9.949 LIVING AND LEARNING WITH YOUR TWO-YEAR OLD
(2-4 class hrs/wk 2 cr)
An active participation class designed to meet the needs of parents and their two-year-olds. In a lab situation, parents have an opportunity to practice guidance and communication techniques, create appropriate activities and design environments that foster growth and development. In seminars, parents have an opportunity to increase their knowledge of parenting topics.

9.950 LIVING AND LEARNING WITH YOUR THREE-YEAR-OLD
(2-4 class hrs/wk 2 cr)
An active participation class designed to meet the needs of parents and their young three-year-olds. In a lab situation, parents have an opportunity to practice guidance and communication techniques, create appropriate activities and design environments that foster growth and development. In seminars, parents have an opportunity to increase their knowledge of child development and share parenting tips and skills.

9.951 LIVING AND LEARNING WITH YOUR PRESCHOOLER
(4-10 class hrs/wk 2-3 cr)
A preschool cooperative designed to meet the needs of parents and their three-, four- and five-year-old children. In the lab situation, parents have an opportunity to practice guidance and communication techniques, create appropriate activities and design environments that foster growth and development. In seminars, parents have an opportunity to increase their knowledge of parenting topics and to collaborate on creating a good classroom environment for their children.

9.952 PEG: EFFECTIVE PARENTING
(2 class hrs/wk 1 cr)
Designed for parents of children of various ages. Emphasizes effective communication skills, mutual problem solving, child development and guidance. Based on a family-strengthening philosophy.

9.953 PEG: EFFECTIVE PARENTING OF TEENS
(2 class hrs/wk 1 cr)
Helps parents of teenagers improve their relationships with their children. Emphasizes effective communication skills, mutual problem solving and assuming responsible behavior. Recognizes the strengths that families have and the means of increasing personal growth for both parents and adolescents. Note: Eight-week class.

9.962C PARENT-TOT GYM
(1 class hr/wk 0 cr)
A gym class for parents and their toddlers. Provides a chance to sing, dance, march and pretend with your child while directing and participating in his or her active exploration of the gym and apparatus.

9.965 FOSTER PARENTING
(2.5 class hrs/wk 1 cr)
Provides basic orientation to individuals about the foster care program, including regulations. Other topics may include sexual abuse and behavior management.

9.968 ADOPTION ISSUES
(3 class hrs/wk 1 cr)
Enables prospective parents to explore adoption. Cosponsored with Planned Adoption Agency. Note: Five-week class.

9.971 FAMILY RESOURCE FAIR
(7 class hrs/wk 1 cr)
A one-day conference offering parents a wide selection of workshops for today's parents. Area schools and agencies cosponsor the conference.

9.980 BALANCING WORK AND FAMILY
(1 class hr/wk 0 cr)
Classes for family members who maintain a household and also work, or desire to work, outside the home. Covers skills that help balance the work-family lifestyle, general parenting skills and home management. Note: Six-week class.

9.985 COUPLES COMMUNICATION
(2 class hrs/wk 1 cr)
Friendship, fun and fighting fair. Offers skills and strategies for communication, problem solving and constructive conflict. Note: Six-week class.

FACULTY AND ADMINISTRATIVE STAFF

STATE ADMINISTRATIVE STAFF

Oregon Board of Education:

Susan Massey, Chair, North Bend
Judith Stiegler, Vice Chair, Bend
Joseph Burdic, Ontario
Jill Kirk, Portland
Thomas C. McClintock, Corvallis
Jeana Woolley, Portland
Vacancy

Oregon Department of Education:

Norma Paulus, State Superintendent of Public Instruction
Roger Bassett, Commissioner for the Office of Community College Services
Judy Patterson, Associate Superintendent, Division of Professional Technical Education

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John Davis, Vice Chair, Lebanon
Shirley Buttenhoff, Sweet Home
Ed House, Albany
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Joseph Novak, Albany
Thomas Wogaman, Corvallis

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Patsy Chester, Assistant to the President for Academic Affairs
Mike Holland, Vice President for Administrative and Student Affairs
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Gwen Chandler, Confidential Secretary to the President/Board of Education
Peter Scott, Dean, Science and Industry
Ann Smart, Dean, Extended Learning and Information Services
John Berg, Dean, Business, Training and Health Occupations
Ed Watson, Dean, Liberal Arts/Human Performance

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Faculty, Refrigeration, Heating and Air Conditioning. Graduate, National Technical School, Los Angeles. At Linn-Benton since 1984.

Carman, Brad
Faculty, Health and Physical Education. BS, Oregon State University; MS, University of Oregon. At Linn-Benton since 1993.

Carnahan, Jon
President. BA, MEd, Central Washington University. At Linn-Benton since 1973.

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; Master ASE Certificate (Automotive Technology). At Linn-Benton since 1969.

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Clark, Katherine
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Faculty, Healthy Start Program. BA, Boston University; MA, Oregon State University. At Linn-Benton 1990.

Conner, Gerald H.
Faculty, Business Management and Economics. BA, Park College; MBA, University of Oregon; MST, Portland State University. At Linn-Benton since 1974.

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Dutson, Margaret (Missy)
Faculty, Continuing and Related Health Occupations. RN, BSN, MN, Oregon Health Sciences University. At Linn-Benton since 1978.

Eastburn, Hal
Faculty, Performing Arts/Music. BS, Minot State University; MM, Colorado State University. At Linn-Benton since 1979.

Erickson, Carol
Faculty, JOBS Program, Lebanon. BS, Oklahoma State University; MSW, Portland State University. At Linn-Benton since 1991.

Esbenshade, Kelly
Supervisor, Printing Services. In printing profession since 1982. At Linn-Benton since 1987.

Etheridge, Ann Marie
Counselor. BA, MS, California State University. At Linn-Benton since 1974.

Etringer, Stephen
Faculty, Manufacturing Technology. BA, Northern Iowa; MFA, University of Iowa. Journeyman Machinist. At Linn-Benton since 1989.

Falk, Randy
Faculty, Physical Education. BS, Rocky Mountain College; MEd, University of Idaho. At Linn-Benton since 1991.

Fella, Charlene
Director, Student Programs and International/ Intercultural Services. BS, Abilene Christian University; MA, San Jose State University; MA, Mt. Angel Graduate Seminary. At Linn-Benton since 1984.

Franzone, Jeff
Faculty, Electronics Engineering Technology. MSET, Arizona State University. At Linn-Benton 1995.

Fraser-Hevlin, Janice
Counselor. BA, University of Alberta; Diploma in Ed., University of Victoria; MS, Oregon State University. At Linn-Benton since 1989.

Frisch, Nickie
Faculty, JOBS Program. BA, Boise State University; MSW, Portland State University. At Linn-Benton since 1992.

Gardner, Carolyn
Faculty, ABE/GED. BS, University of Illinois; MS, University of Pennsylvania. At Linn-Benton since 1985.

Garland, May
Faculty, Learning Center; Language Arts Coordinator. BA, Millsaps College; MA, Appalachian State University. At Linn-Benton since 1989.

Geiger, Jean
Faculty, Software Applications. BS, MS, University of Wisconsin. At Linn-Benton 1995.

Gibbs, Richard
Wellness Coordinator; Faculty, Health and Human Performance. BS, MS, CHES, Brigham Young University. At Linn-Benton 1995.

Gregory, Russell
Faculty, Developmental Studies. BA, MEd, Colorado State University. At Linn-Benton since 1975.

Griffith, John
Faculty, Physical Sciences. BS, East Texas State University; MS, Oregon State University. At Linn-Benton since 1993.

Grigsby, Paula
Faculty, Disabled Student Services. BS, Portland State University; MS, Oregon College of Education. At Linn-Benton since 1973.

Gusdorf, Myrna
Faculty, Business Management. BS, MSM, MBA, Marylhurst College. At Linn-Benton since 1993.

Hagfeldt, Rachel
Faculty, Nursing. RN, BSN, MSEd, University of Oregon; MS, Oregon State University. At Linn-Benton since 1981.

Hagood, Paul
Faculty, English/Foreign Languages. BA, Whitworth College; MA, Eastern Washington University. At Linn-Benton since 1985.

Hall, David H.
Director, Secondary Wood Products Training System; OATC Project Coordinator. BS, LeTourneau University; MT, MBA, National University; PhD, California Pacific University. At Linn-Benton 1995.

Hansen, Kent
Faculty, Electronics Engineering Technology. AS, Oregon Institute of Technology; BS, MEd, Oregon State University. At Linn-Benton since 1974.

Harding, Vera
Faculty, Foreign Language/Spanish. BA, Catholic University of Rio de Janeiro; MA, University of Oregon. At Linn-Benton since 1980.

Hawk, Gregory
Faculty, Physical Education and Health. BS, Northwest Missouri State University; MA, Eastern Washington University. At Linn-Benton since 1983.

Henich, Michael
Faculty, Auto Mechanics/Diesel. BGS, University of Nebraska; MSE, University of Southern California; PhD, Oregon State University. At Linn-Benton since 1979.

Hogeland, Elizabeth (Beth)
Faculty, Family Resources. BA, MS, PhD, Florida State University; MA, Northeast Missouri State University. At Linn-Benton since 1990.

Holland, Michael
Vice President, Administrative and Student Affairs. BS, MS, Western Oregon State College; JD, Willamette University. At Linn Benton since 1995.

Hopkins, Glenda
Faculty, ABE/GED. BA, Northwest Christian College; MEd, University of Oregon. At Linn-Benton since 1988.

Hopkins, Greg
Faculty, Training and Business Development Center. BS, MSEd., Boise State University. At Linn-Benton since 1995.

Horton, Richard
Faculty/Coordinator, Cooperative Work Experience. BS, Fort Hays University; MS, Kansas State University; MBA, Oregon State University. At Linn-Benton since 1979.

Hoskinson, Samuel
Faculty, Electronics Engineering Technology. BS, MS, Oregon State University. At Linn-Benton 1995.

Jackson, Allan
Faculty, Heavy Equipment Mechanics/Diesel. AS, Oregon Institute of Technology; Master ASE Certificate (Diesel/Heavy Equipment); related field experience. At Linn-Benton since 1978.

Johnson, Candice (Candy)
Director, Adult Basic Education. BS, Southern Oregon College. At Linn-Benton since 1977.

Johnson, Dagmar
Faculty, Training and Business Development Center. BA, San Jose State University. At Linn-Benton 1995.

Johnson, Elimina (Taffy)
Faculty, Nursing. BSN, Walla Walla College; MPH, Loma Linda University; PhD, Oregon State University. At Linn-Benton since 1984.

Kidd, David
Faculty, Engineering/Wastewater. BS, Northern Arizona University; MS, University of Alaska. At Linn-Benton since 1990.

King, Harold
Administrator, Benefits and Payroll. Certified Payroll Professional. BA, Oregon State University. At Linn-Benton since 1988.

Klampe, Rick
Faculty, Animal Technology. AS, Linn-Benton Community College; BA, MA, California State University at Fresno. At Linn-Benton since 1989.

Knudson, Ed
Faculty, Business Management. BS, MBA, Oregon State University. At Linn-Benton since 1993.

Krabbe, Janice
Faculty, Disabled Student Services. BS, MS, University of Houston; MS, Western Oregon State College. At Linn-Benton since 1985.

Kraft, John R.
Faculty, Physical Science. BA, Willamette University; MS, Oregon State University. At Linn-Benton since 1973.

Kraft, Judy
Faculty, Nursing. RN, BSN, MN, Oregon Health Sciences University. At Linn-Benton since 1987.

Krislen, Wendy
Faculty, Business Management. CPA. BS, MBA, Oregon State University. At Linn-Benton since 1988.

Lacey, Kevin
Supervisor, Custodial Services. Attended Iowa State University. At Linn-Benton since 1989.

Lammers, Mary Ann
Faculty, Business Technology. BS, Montana State University; MS, Utah State University. At Linn-Benton since 1985.

Laper, Marie
Faculty, Life and Employment Development. BS, Ithaca College; MSW, University of North Carolina. At Linn-Benton since 1994.

Lauris, George S.
Faculty, Speech/Theatre. BS, University of Oregon; MA, University of Northern Iowa. At Linn-Benton since 1988.

Lebsack, Carolyn J.
Faculty, Biology. BS, MS, Oregon State University. At Linn-Benton since 1976.

Lebsack, Stephen
Faculty, Biology. BS, MS, Oregon State University. At Linn-Benton since 1979.

Lee, John
Director, Benton and Linn County Retired and Senior Volunteer Program. At Linn-Benton since 1992.

Leier, Elaine
Faculty, JOBS Program. BS, North Dakota State University; MS, Oregon State University. At Linn-Benton since 1990.

Lewis, Robert
Faculty, Mathematics. BA, MAT, Duke University; MS, Montana State University; PhD, Oregon State University. At Linn-Benton since 1992.

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, Business Technology. BS, MS, Southern Oregon College. At Linn-Benton since 1978.

Litzer, Doris
Faculty, Fine Art. BS, University of Wisconsin - Stevens Point; MA, Northern Illinois University; MFA, University of Wisconsin - Madison. At Linn-Benton since 1988.

Lucas, James
Faculty, Agriculture/Animal Technology. BS, University of California, Davis; MS, California State University, Fresno. At Linn-Benton since 1978.

Lundy, Elizabeth
Faculty, Mathematics. BS, University of Nebraska at Kearney; MS, Oregon State University. At Linn-Benton since 1990.

Malosh, Ann
Faculty, JOBS Program, Lebanon. BA, MEd, University of Toledo - Ohio. At Linn-Benton since 1991.

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.

Maurer, Roger
Faculty, Mathematics. BS, MS, Oregon State University. At Linn-Benton since 1978.

McLennan, Seaton
Faculty, Metallurgy Technology. BS, Oregon State University. Journeyman welder. At Linn-Benton since 1976.

McPheeters, Mary Lou
Faculty, Business Technology. BS, MEd, Oregon State University. At Linn-Benton since 1978.

Miller, Robert A.
Associate Dean, College Services Division. BS, Southern Oregon State College; MS, PhD, Oregon State University. At Linn-Benton since 1969.

Mills, Ann
Faculty, Mathematics, Benton Center. BS, College of William and Mary; MS, Oregon State University. At Linn-Benton since 1978.

Moos, Bruce
Faculty, Agriculture/Animal Technology. BS, Fresno State; Vocational Certificate, University of California, Davis; MAg, Oregon State University. At Linn-Benton since 1975.

Moreira, Joyce L.
Faculty, Business Technology; Benton Center. BS, MEd, Oregon State University. At Linn-Benton since 1971.

Moskus, Virginia
Director, Fiscal Affairs. AA, Springfield Junior College; BA, University of Illinois; MPA, Sangamon State University; PhD, Illinois State University. At Linn-Benton since 1992.

Mundt, Carla
Faculty, Business Technology, East Linn-LBCC. BS, Oregon State University. At Linn-Benton since 1986.

Muscato, Louise
Faculty, Health and Human Performance. BS, James Madison University; MED, CHES, Oregon State University. At Linn-Benton 1994.

Nelson, Doris Helen (Dorie)
Director, Extended Learning and Benton Center. BA, Stanford University; MFA, University of Oregon. At Linn-Benton since 1984.

Nelson, Linda
Faculty, Family Resources. BS, Oregon State University. At Linn-benton since 1994.

Neville, Gene
Manager, Food Services. BS, University of Nevada. At Linn-Benton since 1981.

Nicholson, Kevin D.
Supervisor, Maintenance. Maintenance electrical license. At Linn-Benton since 1976.

Niemiec, Marjean
Faculty, Nursing. RN, BSN, MS, University of Illinois. At Linn-Benton since 1993.

Noone, Lucy Himelreich
Assistant Director, Extended Learning and Benton Center. BA., Purdue University; MEd, Oregon State University. At Linn-Benton since 1996.

Olsen, Linda
Faculty, ABE/GED, Student Development. BA, Oregon State University. At Linn-Benton since 1979.

Pascone, John
Faculty, Business Advocate; Business Counselor/Instructor, Training and Business Development Center. BS, University of San Francisco; MBA, University of Santa Clara. At Linn-Benton since 1986.

Patrick, Michael
Associate Dean, Science and Industry Division. BA, California State Polytechnic; MEd, Oregon State University. At Linn-Benton since 1971.

Paulson, Gregory F.
Faculty, Agriculture/Horticulture. BS, Colorado State University; MSEd, Oregon State University. At Linn-Benton since 1976.

Paulson, Jacqueline
Faculty, Nursing. RN, BS, BA, MA, University of Washington. At Linn-Benton since 1972.

Pearce-Smith, Liz
Faculty, Family Resources. BA, Tufts University; EdM, Harvard Graduate School of Education. At Linn-Benton since 1989.

Perkins, Raymond David
Faculty, Physical Science. BA, MEd, Central Washington University; MS, PhD, Oregon State University. At Linn-Benton since 1970.

Peterson, John Bruce
Manager, Takena Theatre. BA, MFA, San Diego State. At Linn-Benton since 1992.

Phillips, Jerald
Faculty, Criminal Justice, Sociology. BS, MPA, Portland State University. At Linn-Benton since 1981.

Phoenix, Jan
Faculty, Family Resources. BS, University of Oregon; MS, Portland State University. At Linn-Benton since 1994.

Ploetz, Holly
Faculty, Water/Wastewater Technology. Attended two years, Water/Wastewater Program. Fourteen years related experience. At Linn-Benton since 1985.

Popoff, Lance
Director, Financial Aid/Veterans' Affairs. BS, Pacific University. At Linn-Benton since 1986.

Propst, Marlene
Director, Career and Entry Center Services. AS, Linn-Benton Community College; BS, Oregon State University. At Linn-Benton since 1976.

Reeder, Carl
Faculty, Automotive Technology. BS, Oregon State University; MEd, Western Washington State University. ASE certified. At Linn-Benton since 1974.

Rice, Barbara
Director, Extended Learning and Evening Services. BA, Case Western Reserve University; MA, Ohio State University. At Linn-Benton since 1993.

Rinker, Russell
Manager, Networking and Systems Support. BS, University of Oregon. At Linn-Benton since 1981.

Rogers, Judith A.
Faculty, Fine Art. BFA, MFA, University of California, Santa Barbara. At Linn-Benton since 1977.

Rolfe, Jorry
Faculty, Library. BA, Pennsylvania State University; MLS, University of Pittsburgh. At Linn-Benton since 1986.

Ross, Robert
Faculty, Biology. BS, MS, University of Oregon. At Linn-Benton since 1968.

Ruppert, Gary
Faculty, Performing Arts/Music, Speech. BA, California State University, Sacramento; MM, University of Oregon. At Linn-Benton since 1975.

Salter, Christina
Counselor. BA, New College; MS, University of Oregon. At Linn-Benton since 1992.

Sargent, Dennis
Faculty/Business Counselor, Training and Business Development Center. CPA. BS, MS, Oregon State University. At Linn-Benton since 1983.

Schaafsma, Carol
Faculty, Training and Business Development Center. BA, Ashland College; MSIR, University of Oregon. At Linn-Benton since 1994.

Schiedler, Bryan
Faculty, Automotive Technology. AAS, Linn-Benton Community College; BA, Northern Montana College. At Linn-Benton 1993.

Schuetz, L. Jamison
Faculty, Business Management. BS, Southern Oregon State College; MS, Willamette University; PhD, Oregon State University. At Linn-Benton since 1980.

Schukart, Terry
Faculty, JOBS Program, Lebanon. BS, MS, Oregon State University. At Linn-Benton since 1991.

Schulz, Martin
Faculty, Training and Business Development Center. BS, MBA, Oregon State University. At Linn-Benton since 1994.

Scott, Peter C.
Dean, Science and Industry Division. BS, Oregon State University; PhD, Purdue University. At Linn-Benton since 1968.

Sharman, Ronald
Faculty, Water/Wastewater Technology. AS, Linn-Benton Community College; BS, Oregon State University. At Linn-Benton since 1979.

Shires, Tony
Faculty, Engineering Graphics. BS, Oregon State University. At Linn-Benton 1995.

Shulters, Sue
Faculty, EMT Program. At Linn-Benton since 1993.

Smart, Ann
Dean, Extended Learning and Information Services Division. BSEd, Ball State University; MHEc, PhD, Oregon State University. At Linn-Benton since 1975.

Smith, Sharyn
Faculty, Training and Business Development Center. BA, Lawrence University, Wisconsin; MS, Northwestern University, Illinois. At Linn-Benton since 1993.

Snyder, John
Coordinator, Financial Aid. BS, MEd, Oregon State University. At Linn-Benton since 1991.

Snyder, Paul K.
Faculty, Media Specialist. BS, Portland State University; MS, Western Oregon State College. At Linn-Benton since 1974.

Spain, Linda
Faculty, English/Foreign Languages. BS, Minot State University; MEd, Colorado State University. At Linn-Benton since 1979.

Stouder, Sally
Faculty, Business Technology. BS, MS, Oregon State University. At Linn-Benton since 1991.

Sweet, John
Faculty, Engineering/Electronics Engineering Technology. BS, MS, Oregon State University. At Linn-Benton since 1988.

Swigart, Ted
Director, Life and Employment Development. BS, MEd, Western Oregon State College. At Linn-Benton since 1995.

Taylor, Cathy
Faculty, Dental Assistant. CDA, EFDA, Linn-Benton Community College. At Linn-Benton since 1985.

Tepper, Glenda
Registrar. BS, Oregon Institute of Technology; MBA, Southern Oregon State College. At Linn-Benton since 1994.

Trautman, Dale
Faculty, Electronics Engineering Technology. BS, MEd, Oregon State University. At Linn-Benton since 1978.

Trautwein, W. Sue
Faculty, Business Technology. BS, Oregon State University; MS, University of Oregon. At Linn-Benton since 1978.

Trimpe, Lynn
Faculty, Mathematics. BS, MST, University of Missouri. At Linn-Benton since 1979.

Trombley, Laurie
Coordinator, Labor Relations and Compliance. AS, AA, Linn-Benton Community College; BS, Oregon State University. At Linn-Benton since 1984.

Turner, Judith E.
Faculty, Library. BA, Central Washington University; MLS, University of Washington. At Linn-Benton since 1989.

Ulrich, Robert
Faculty, Mathematics. BS, MAT, PhD, University of Washington. At Linn-Benton since 1978.

VanderPlaat, Andrew C.
Faculty, Business Management. BS, MBA, University of Portland. At Linn-Benton since 1986.

VanLaere, Margaret Susan
Faculty, ABE/GED. BA, MA, University of Wisconsin. At Linn-Benton since 1983.

Vee, Regina (Gina)
Faculty, Psychology and Sociology. BA, Northern Illinois University; MAIS, Oregon State University. At Linn-Benton since 1973.

Wacker, Jonathan L.
Faculty, Training and Business Development Center. BS, University of Chicago; MS, University of Iowa. At Linn-Benton since 1993.

Walczak, Al
Faculty, Business Management. BS, Portland State College; MEd, Oregon State University. At Linn-Benton 1969-78 and 1985 to present.

Watson, Diane
Director, Admissions and Records. BAE, University of Florida; MA, EdD, University of Northern Colorado. At Linn-Benton since 1985.

Watson, Edwin R.
Dean, Liberal Arts and Human Performance Division. BS, MS University of Oregon; Ph.D, Oregon State University. At Linn-Benton since 1993.

Weber, Roberta (Bobbie)
Faculty, Family Resources. BA, Seattle University; MS, University of Wisconsin, Madison. At Linn-Benton since 1977.

Weems, Peggy
Faculty, Business Computers. BS, MS, Oregon State University. At Linn-Benton since 1980.

Weiss, Mark
Counselor. BA, California State University at Long Beach; MEd, Oregon State University. At Linn-Benton since 1989.

Weiss, Michael
Faculty, History. BA, Hunter College; MA, Michigan State University; MA, University of Oregon. At Linn-Benton since 1989.

Wert, Charles
Faculty, Biology. BS, MS, Cal Polytechnic State University, San Luis Obispo; MA, San Diego State University; PhD, Idaho State University. At Linn-Benton since 1993.

Westfall, Betty
Faculty, Mathematics. BS, Idaho State University, MEd, University of California at Santa Barbara. At Linn-Benton since 1986.

Weyant, Charles E.
Faculty, Library. BA, The American University; MA, Wayne State University; MSLS, Simmons College. At Linn-Benton since 1984.

White, Jane
Faculty, English/Foreign Languages. BA, MA, Michigan State University. At Linn-Benton since 1978.

Whitehead, Mark
Faculty, Culinary Arts/Hospitality Services. Western Culinary Institute. At Linn-Benton since 1992.

Wibbens, Beth
Faculty, JOBS Program, Lebanon. BS, Southern Oregon State College; MS, Oregon State University. At Linn-Benton since 1990.

Widmer, Jay
Faculty, Ceramics, Benton Center. BA, Oregon State University. At Linn-Benton since 1974.

Wood, Dennis
Faculty, Welding. AA, Chabot College; journeyman welder; AWS certified welding OC-1 inspector. At Linn-Benton since 1976.

Wright, Carolyn
Faculty, Psychology. BS, Brigham Young University; MS, Portland State University. At Linn-Benton since 1991.

Yee, Cynthia
Director, Research. BS, Oregon State University. At Linn-Benton since 1991.

Yu, Kitson
Faculty, Business Computers. BS, MS, Troy State University. At Linn-Benton since 1981.

Zimmer, Sandra S.
Faculty, Fine and Applied Arts. BA, University of Nebraska at Kearney; MA, University of Northern Colorado. At Linn-Benton since 1972.

Alcohol- and Drug-Free Program In Place at Linn-Benton

As one part of it's Alcohol- and Drug-free (Workplace/School) Program, Linn-Benton Community College recently published a pamphlet to inform students and staff about the health risks of using drugs and to outline counseling and treatment resources available in the area. The pamphlet, which is repeated here, includes standards of conduct required of students and staff, a description of the health risks associated with using illicit drugs and abusing alcohol plus an overview of the applicable local, state and federal legal sanctions for the unlawful possesion, use or distribution of illicit drugs and alcohol. Anyone wanting additional information should contact LBCC's Human Resources Office, 967-6502.

I. INTRODUCTION

Linn-Benton Community College is legally required and morally committed to the prevention of illicit drug use and the abuse of alcohol by both students and employees. Drug and alcohol abuse is a significant public health problem which has spread throughout our society, affecting performance and productivity, as well as our level of general health. In addition, the use of drugs can adversely affect an organization's level of safety as well as its public confidence and trust. And lastly, with reference to "The Drug-Free Schools and Communities Act Amendment of 1989 (Public Law 101-226),"

"...no institution of higher education shall be eligible to receive funds or any other form of financial assistance under any Federal program, including participation in any federally funded or guaranteed student loan program, unless it certifies to the Secretary that it has adopted and has implemented a program to prevent the use of illicit drugs and the abuse of alcohol by students and employees..."

In brief, this section has been developed by LBCC to comply with the recently enacted federal law and to educate and inform its students and employees of the health risks, counseling and treatment resources, and sanctions for noncompliance. Linn-Benton will biennially review this program to determine its effectiveness and implement changes if needed and to ensure that the sanctions required are consistently enforced.

II. STANDARDS OF CONDUCT

STUDENTS

The LBCC *Student Rights, Freedoms, Responsibilities & Due Process* document (page 11, number 7) defines the following behaviors as violations of the standards of student conduct: "use, possession, or distribution on campus of alcoholic beverages, narcotics, or dangerous drugs as described by the Bureau of Narcotics and Dangerous Drugs, except as expressly permitted by law."

EMPLOYEES

In compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act Amendment of 1989 (Public Law 101-226), it shall be the policy of Linn-Benton Community College to maintain an alcohol and drug-free workplace for all employees of the District. The unlawful manufacture, distribution, dispension, possession or use of alcohol or a controlled substance, except by physician's prescription, is strictly prohibited in the workplace(s) of the Linn-Benton Community College District.

III. A DESCRIPTION OF THE HEALTH RISKS ASSOCIATED WITH THE USE OF ILLICIT DRUGS AND THE ABUSE OF ALCOHOL

ILLICIT DRUGS:

Marijuana is addictive and can cause: impaired short-term memory, visual tracking, heart rate, slowed reaction time/poor coordination, lung disease and damage to reproductive functions.

Cocaine and Crack are highly addictive and may cause: impaired judgment, short attention span, irritability, depression, mood swings, malnutrition, severe weight loss and liver damage, seizures, coma, seizure and heart attack.

PCP, LSD, Heroin, Mescaline and Morphine have a wide variety of negative health effects which may include: hallucinations, mental confusion and/or permanent loss of mental function, addiction, convulsions, coma, death

Prescription Drugs are too often used to reduce stress and are not safe unless they are taken as prescribed. If abused, they can lead to: malnutrition, sluggishness or hyperactivity, impaired reflexes, addiction and brain damage, coma, death.

ALCOHOL:

Alcohol is the most commonly abused drug and can cause: loss of concentration, poor judgment and coordination, impaired memory, drowsiness and mood swings, liver damage/cirrhosis of the liver, high blood pressure and heart attack, pancreatitis, various cancers, heart disease

V. LBCC SANCTIONS

STUDENTS

Sanctions which may be imposed on students for violations of the code include: *disciplinary probation* (a verbal or written warning by the college president or other administrator), *temporary exclusion* (removal for the duration of a class period), *suspension* (exclusion from classes, privileges, or activities for a specified period), *expulsion* (termination of student status).

EMPLOYEES

The college will impose sanctions or require satisfactory completion of a drug abuse assistance or rehabilitation program. Sanctions imposed may include *disciplinary probation* (the suspension of a more severe penalty for a specific time period, based upon good behavior), *suspension* (the temporary barring from employment for a specific time period, without pay), and/or *termination* (the severance of employment with the college).

VI. ASSISTANCE PROGRAMS AVAILABLE TO STUDENTS AND EMPLOYEES

COMMUNITY RESOURCES:

SUBSTANCE ABUSE:

Benton County Alcohol and Drug Treatment Program 757-6850
Linn County Alcohol and Drug Treatment Program 967- 3819
Alcoholics Anonymous,
Albany and Corvallis 967-6243
Alcoholics Anonymous, Lebanon 258-5205
Alcoholics Anonymous, Sweet Home 367-5744
Ala-Non/Ala-Teen:
Corvallis and Albany 967-6243
Ala-Non/Ala-Teen, Lebanon 451-5849
*Ala-Non/Ala-Teen, Sweet Home 367-5396
Narcotics Anonymous,
Albany and Corvallis 967-6262
Cocaine Abuse Hotline 1-800-COCAINE
Community Outreach, Inc. 758-3000
White Oaks Outpatient and Youth Treatment,
Salem 585-6278

* *Sweet Home is coordinated through the Albany Ala-Non Ala-Teen office.*

RESIDENTIAL TREATMENT:

Milestones Family Recovery Program,
Corvallis 753-2230
Serenity Lane, Eugene 687-1110

COLLEGE RESOURCES:

Students:

Counseling Center, Takena Hall 917-4780

Employees:

LBCC provides an Employee Assistance Program (EAP), available to all employees with .50 or greater contracts. Through this program, each employee and his or her dependents are allowed five visits per year at no cost for appraisal, limited counseling and/or referral. All employee contact with EAP is **strictly confidential**. Telephone numbers for EAP include: Corvallis (757-3013), Albany (928-8613), Salem (588-0777), Tigard (639-3009)

12-Step Program:

LBCC acknowledges the value of this 12-step, anonymous program in attaining and maintaining an alcohol-free lifestyle. Information can be found in room 207, College Center Building.

Federal Trafficking Penalties

Appendix A

CSA	PENALTY 2nd Offense	PENALTY 1st Offense	Quantity	DRUG	Quantity	PENALTY 1st Offense	PENALTY 2nd Offense
I and II	Not less than 10 years. Not more than life. If death or serious injury, not less than life. Fine of not more than $4 million individual, $10 million other than individual	Not less than 5 years. Not more than 40 years. If death or serious injury, not less than 20 years. Not more than life. Fine of not more than $2 million individual, $5 million other than individual	10-99 gm or 100-999 gm mixture	METHAMPHETAMINE	100 gm or more or 1 kg * or more mixture	Not less than 10 years. Not more than life. If death or serious injury, not less than 20 years. Not more than life. Fine of not more than $4 million individual, $10 million other than individual.	Not less than 20 years. Not more than life. If death or serious injury, not less than life. Fine of not more than $8 million individual, $20 million other than individual.
			100-999 gm mixture	HEROIN	1 kg or more mixture		
			500-4,999 gm mixture	COCAINE	5 kg or more mixture		
			5-49 gm mixture	COCAINE BASE	50 gm or more mixture		
			10-99 gm or 100-999 gm mixture	PCP	100 gm or more or 1 kg or more mixture		
			1-10 gm mixture	LSD	10 gm or more mixture		
			40-399 gm mixture	FENTANYL	400 gm or more mixture		
			10-99 gm mixture	FENTANYL ANALOGUE	100 gm or more mixture		

	Drug	Quantity	First Offense	Second Offense
	Others**	Any	Not more than 20 years. If death or serious injury, not less than 20 years, not more than life. Fine $1 million individual, $5 million not individual.	Not more than 30 years. If death or serious injury, life. Fine $2 million individual, $10 million not individual.
III	All	Any	Not more than 5 years. Fine not more than $250,000 individual, $1 million not individual.	Not more than 10 years. Fine not more than $500,000 individual, $2 million not individual.
IV	All	Any	Not more than 3 years. Fine not more than $250,000 individual, $1 million not individual.	Not more than 6 years. Fine not more than $500,000 individual, $2 million not individual.
V	All	Any	Not more than 1 year. Fine not more than $100,000 individual, $250,000 not individual.	Not more than 2 years. Fine not more than $200,000 individual, $500,000 not individual.

* Law as originally enacted states 100gm. Congress requested to make technical correction to 1 kg. **Does not include Marijuana, hashish or hash oil. (see separate chart).

Federal Trafficking Penalties - Marijuana

As of November 18, 1988

Quantity	Description	First Offense	Second Offense
1000 kg or more; or 1000 or more plants	**Marijuana** Mixture containing detectable quantity*	Not less than 10 years, not more than life. If death or serious injury, not less than 20 years, not more than life. Fine not more than $4 million individual, $10 million other than individual.	Not less than 20 years, not more than life. If death or serious injury, not less than life. Fine not more than $8 million individual, $20 million other than individual.
100 kg to 1000 kg; or 100-999 plants	**Marijuana** Mixture containing detectable quantity*	Not less than 5 years, not more than 40 years. If death or serious injury, not less than 20 years, not more than life. Fine not more than $2 million individual, $5 million other than individual.	Not less than 10 years, not more than life. If death or serious injury, not less than life. Fine not more than $4 million individual, $10 million other than individual.
50 to 100 kg	**Marijuana**	Not more than 20 years. If death or serious injury, not less than 20 years, not more than life. Fine $1 million individual, $5 million other than individual.	Not more than 30 years. If death or serious injury, life. Fine $2 million individual, $10 million other than individual.
10 -100 kg	**Hashish**		
1 to 100 kg	**Hashish Oil**		
50-99 plants	**Marijuana**		
Less than 50 kg	**Marijuana**	Not more than 5 years. Fine not more than $250,000 individual, $1 million other than individual.	Not more than 10 years. Fine $500,000 individual, $2 million other than individual.
Less than 10 kg	**Hashish**		
Less than 1 kg	**Hashish Oil**		

*Includes Hashish and Hashish Oil. (Marijuana is a Schedule I Controlled Substance.)
From the Federal Register, Vol. 55, No. 159, 8-16-90.

IV. A DESCRIPTION OF THE APPLICABLE LEGAL SANCTIONS UNDER LOCAL, STATE, AND FEDERAL LAW FOR UNLAWFUL POSSESSION, USE, OR DISTRIBUTION OF ILLICIT DRUGS AND ALCOHOL

The following chart describes the penalties in general for **possession** of key **drugs** according to the Federal Drug Schedules:

	Maximum Prison Time	Maximum Fine
Schedule I - Class B Felony Heroin, LSD, other hallucinogens, marijuana, others	10 years	$100,000
Schedule II - Class C Felony Methadone, morphine, amphetamine, cocaine, PCP	5 years	$100,000
Schedule III - Class A Misdemeanor Non-amphetamine stimulants, some depressants	1 year	$2,500
Schedule IV - Class C Misdemeanor Valium-type tranquilizers, some less potent depressants	30 days	$500
Schedule V - Violation Dilute mixtures, compounds with small amounts of controlled drugs	none	$1,000

Delivery of less than five grams or possession of less than one ounce of marijuana is a violation. HB 2479 established mandatory evaluation, education and treatment services for those under 18 years of age. If services are successfully completed, the charge will be dropped. Oregon has strong new laws allowing cars, boats, etc. that transport illegal drugs to be seized and forfeited.

Alcohol is an illegal drug for those under 21 years of age. For drivers under 18 ANY detectable amount of alcohol (above .00 BAC) is grounds for losing their license until they are 18. There are many more laws pertaining to alcohol and other drugs. This is a sample to demonstrate that most drugs are VERY illegal, and a criminal conviction may bar a student from their chosen career path or an employee from successful employment with the college.

MAJOR CODES

DEGREES AND MAJORS OFFERED AT LINN-BENTON COMMUNITY COLLEGE

PROFESSIONAL TECHNICAL PROGRAMS

(Programs without degree codes are non-degree/certificate programs)

Degree Code	Major Code	
C1	5050	Accounting Clerk
AAS	5002	Accounting Technology
AAS	5014	Administrative Assistant
AAS	5214	Administrative Medical Assistant
	5650	Adult High School Diploma
C1	5010	Advanced Supervisory Management
AAS	5401	Agriculture
C1	5401	Agriculture
AAS	5206	Animal Technology
AAS	5204	Animal Technology/Horse Management
AGS	5600	Associate of General Studies
AGS	5601	Associate of General Studies/Technology Option
AAS	5306	Automotive Technology
C2	5306	Automotive Technology
C	5011	Basic Supervisory Management
AAS	5000	Business
AAS	5106	Business Computer Systems
C1	5383	Collision Repair Technology
AAS	5320	Crafts and Trades (Apprenticeship)
AAS	5500	Criminal Justice
		Culinary Arts and Hospitality Services
		Areas of Concentration Available
AAS	8401	Chef Training
AAS	8403	Restaurant and Catering Management
***C1**	**7202**	**Dental Assistant**
	5200	Pre-dental Assistant
	5630	Undecided
C1	5075	Educational Assistant AAS
	5700	Electronic Imaging and Prepress Technology
***AAS**	**7310**	**Electronics Engineering Technology**
	5311	Pre-electronics
C1	**7298**	**Emergency Medical Technician**
AAS	5302	Engineering Graphics Technology
***C**	**5498**	**Farrier Science**
AAS	5108	Graphic Arts
C1	5316	Heating
AAS	5307	Heavy Equipment Mechanics/Diesel
C2	5307	Heavy Equipment Mechanics/Diesel
AAS	5402	Horticulture
C1	5402	Horticulture
AAS	5097	Legal Secretary
AAS	5309	Machine Tool Technology
C2	5309	Machine Tool Technology
C1	5215	Medical Office Specialist
C1	5213	Medical Transcriptionist
AAS	5395	Metallurgy and Materials Technology
C1	5400	Nondestructive Testing
***AAS**	**7208**	**Nursing**
	5210	Pre-nursing
C	5209	Nursing Assistant
C1	5087	Office Specialist
AAS	5317	Refrigeration, Heating and Air Conditioning
C2	5317	Refrigeration , Heating and Air Conditioning
AAS	5004	Supervisory Management
***AAS**	**7408**	**Water/Wastewater Technology**
***C1**	**5410**	**Water/Wastewater Plant Operation**
	5411	Pre-water/wastewater
AAS	5308	Welding Technology
C2	5308	Welding Technology
C1	5308	Welding Technology

***Major code numbers listed in bold print have special admission requirements. Admission for entry into these programs must be arranged through advance in the Admissions Office. See Catalog for details or contact the Admissions/First Stop Center at 917-4811.**

LOWER DIVISION TRANSFER Interest Areas

LBCC offers an Associate of Arts (AA) degree Oregon Transfer with an interest in any subject area listed below. An Associate of Science (AS) degree is offered in any area of concentration marked with an asterisk (*). See an advisor or counselor to determine which degree is most appropriate.

0604	Advertising and Promotion	
* 4997	Agricultural Education	
* 4999	Agriculture Business Management	
* 4996	Animal Science	
2202	Anthropology	
4998	Architecture	
* 1003	Art	
* 4987	Biological Sciences	
* 0506	Business Administration	
4953	Chemistry	
* 2210	Child and Family Studies	
* 0550	Computer Science	
8003	Creative Writing/Technical Writing	
2100	Criminal Justice	
* 0510	Economics	
* 0801	Elementary Education	
1501	English	
* 1001	Fine Art	
4954	Fisheries and Wildlife	
1101	Foreign Language	
4988	General Science	
2206	Geography	
2205	History	
* 4986	Home Economics	
* 4990	Human Performance	
2212	Human Services	
2211	International Studies	
* 0600	Journalism/Mass Communications	
* 4900	Liberal Studies	
8002	Literature	
* 4984	Mathematics	
8004	Music	
8005	Philosophy/Religion	
1920	Physics	
2207	Political Science	
4979	Pre-dental/Dental Hygiene	
* 4975	Pre-engineering	
2110	Pre-law	
4980	Pre-medicine	
4972	Pre-occupational Therapy	
4973	Pre-pharmacy	
4974	Pre-physical Therapy	
4978	Pre-veterinary Medicine	
2001	Psychology	
* 4992	Public Health and Education	
* 0829	Secondary Education	
* 2204	Social Science	
2208	Sociology	
8006	Spanish	
1014	Speech Communications	
4989	Technology Education	
* 1007	Theatre	

AFTER FOUR PROGRAMS

These programs can be completed by attending classes in the evening; however, it generally takes longer to complete a program. It is possible to complete some transfer programs in the evening by working closely with an advisor.

Degree Code	Major Code	
C1	5050	Accounting Clerk
AGS	5600	Associate of General Studies
AGS	5601	Associate of General Studies/Technical Option
AS	0506	Business Administration
AS	4900	Liberal Studies
AAS	5004	Supervisory Management
C1	5010	Advanced Supervisory Management
C	5011	Basic Supervisory Management

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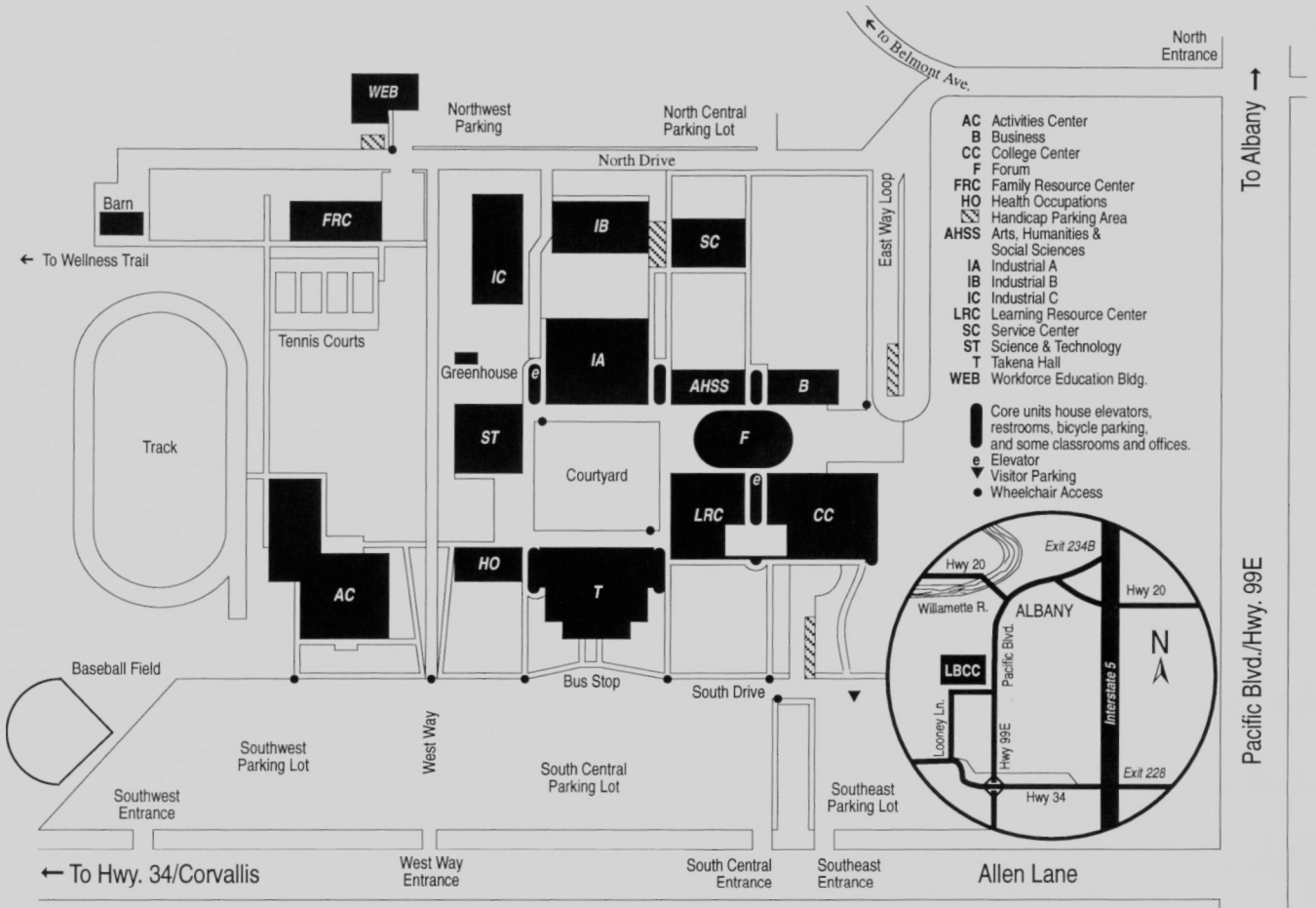
LINN-BENTON COMMUNITY COLLEGE CAMPUS MAP



Office ..... Room Number

Office	Room Number
ABE/GED	WEB-116
Academic Affairs	CC-101
Admissions	T-115
Affirmative Action	CC-113
Albany Extended Learning	T-105
Apprenticeship	ST-121B
Athletics	AC - 102
Bookstore	College Center first floor
Business Affairs Office	CC-130
Business Development Center	LRC-105
Business, Training and Health Occupations Division	B-111
Camas Room (Snack Bar)	Takena first floor
Career Center	T-101
Child Care Resource & Referral	WEB
College President	CC-101
College Services Division	CC-105
Commuter (The) [Student Newspaper]	CC-210
Computer Lab	F-204
Cooperative Work Experience	T-101
Counseling/Advising	T-101
Culinary Arts	CC-214
Developmental Studies	LRC-200
Disabled Student Services	LRC-201
Evening Services	T-105
Extended Learning and Information Services Division	CC-109
Family Resource Center	FRC
Family Resources Department	WEB-106
Financial Aid	T-119

Office ..... Room Number

Office	Room Number
First Aid (Security and Safety Services)	CC-123
Food Services	CC-214
Health Occupations	HO-121
Hospitality Services	CC-214
Human Performance	AC-102
Human Resources (Personnel)	CC-113
Learning Center	LRC-212
Liberal Arts/Human Performance Division	AHSS-108
Library	LRC-102
Literacy Program	WEB-117
Physical Education	AC-102
Physical Plant	SC-102
President's Office	CC-101
Publications / Media Relations	CC-107
Registration	T-115
Room Reservations	CC-214
RSVP	T-105B
Santiam Room Restaurant	CC-201
Science and Industry Division.	ST-121
Security and Safety Services	CC-123
Service Center	SC-102
Student Assessment Center (Testing)	T-227
Student Programs	CC-213
Student Services	T-117
Telecourses	LRC-106
Telephone Registration	T-115
Training and Business Development Center	LRC-105
Veterans' Affairs	T-119

Linn-Benton Community College
6500 Pacific Boulevard SW
Albany, OR 97321-3755

General
541 917-4999

Admissions
541 917-4811

Registration
541 917-4812