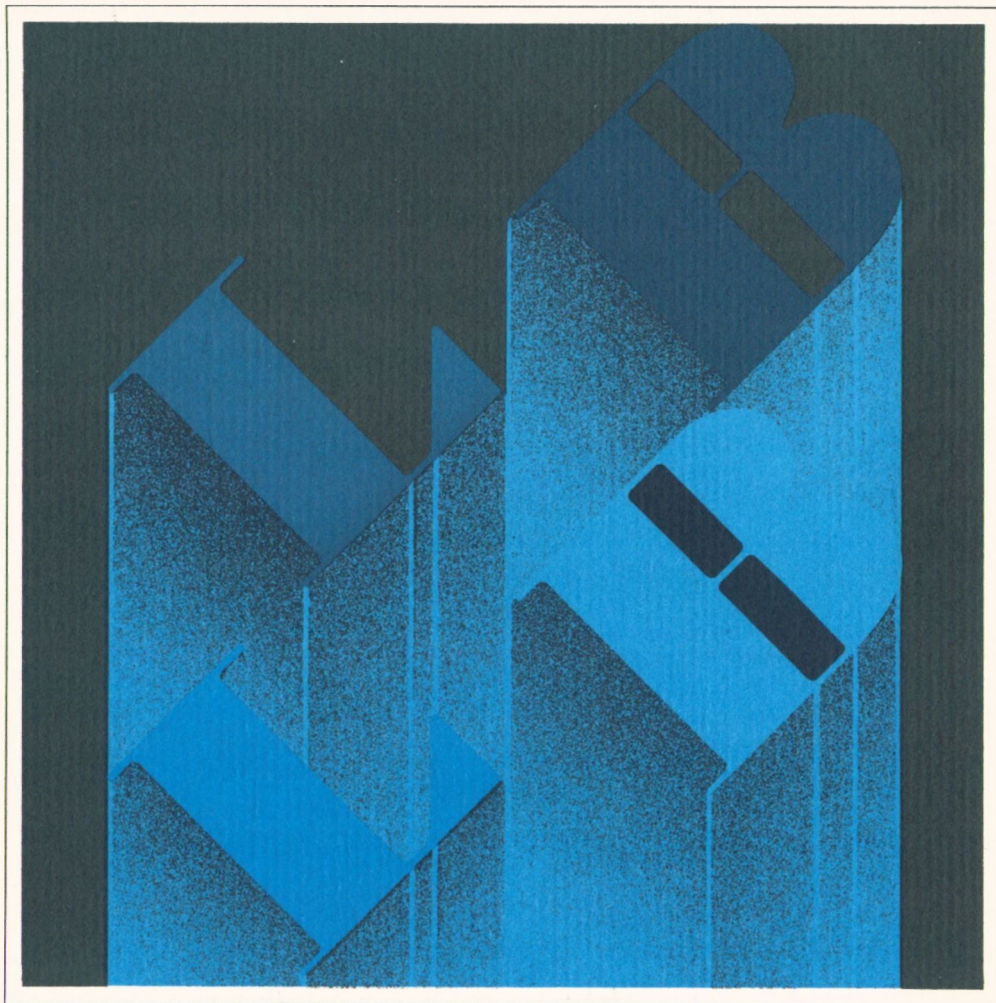


LINN-BENTON • COMMUNITY • COLLEGE



GENERAL CATALOG
1989 • 1990

Our Pledge to Quality Education

Linn-Benton Community College 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 Office of Instruction at Linn-Benton Community College.

Any LBCC graduate of an Associate of 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 the guarantee for details.*

*For further information, please contact:
Vice President for Instruction
Linn-Benton Community College
6500 S.W. Pacific Boulevard
Albany, Oregon 97321-3779
(503) 967-6100*

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THE COLLEGE

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 to LBCC is open to any district resident beyond high school age.

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

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

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

The college's Community Education Division offers a wide variety of credit and non-credit classes on the Albany campus, in the Corvallis, Lebanon and Sweet Home Centers and at other locations throughout the district. Non-credit classes that do not qualify for reimbursement from the state are required by the college to be self-supporting. Tuition rates for these classes are higher to cover all instructor and facility costs.

In addition to the regular Community Education classes, the division's Training and Economic Development Center and the Small Business Development Center serve the needs of the district's business and industrial community. The Department of Family Resources 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.

Oregon Board of Education:

Donald Kruse, Chairman, Roseburg
Thelma Elliott, Portland
Ruth Hewett, Salem
Jane Reyneke, Grants Pass
Felipe Veloz, LaGrande
G. David Weight, Portland
(One position vacant at time of publication)

Oregon Department of Education:

Verne A. Duncan, State Superintendent of Public Instruction
Mike Holland, Commissioner for the Office of Community College Services
Monty Multanen, Associate Superintendent, Division of Vocational Education

LBCC Board of Education:

Dave Schmidt, Chairman, Albany
Richard Wendland, Vice Chairman, Philomath
O. Robert Adams, Corvallis
Joseph Novak, Albany
Robert Hyland, Sweet Home
Nancy Schary, Corvallis
Karl Wise, Lebanon

LBCC Administration:

Thomas Gonzales, President
Jon Carnahan, Vice President for Instruction
George Kurtz, Vice President for Business Affairs

Philosophy

Linn-Benton is a two-year college, publically 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 potential, expand their knowledge and skills and become contributing members of a free society.
3. Learning opportunities should be available to the greatest number of people with minimum restrictions, based on individual and community needs.
4. Entry to LBCC should be based on an open door policy, so as to accommodate high school graduates and other adults who are capable of profiting from the instruction offered. Through proper guidance and testing, students will be able to select appropriate courses of study.
5. Appropriate standards of performance should be maintained within each course of study.
6. Educational scope of college programs should be as broad and flexible as possible, with priorities established on the basis of available resources. Within these limits, the programs should be responsive to local, state and national needs, as well as reflect sound educational standards.
7. Tuition and fees should be maintained at a reasonable level.
8. Local direction and control are maintained through the elected board of education, consistent with local, state and federal laws and policies.

Mission

The overall mission of Linn-Benton Community College is to provide equal opportunity and access to the services and programs delivered in an efficient and effective manner, to respond to business and industry needs, to provide a high-quality, two-year transfer program, to offer lifelong learning opportunities, to improve the quality of life for the people it serves, and to be an integral part of the community. This will be accomplished by formulating specific missions and goals for each segment of the college. The mission statements are all interrelated and prioritized as follows:

1. The college shall provide broad occupational programs for training or retraining those who plan to seek entry-level employment or advance in their occupation.
2. The college shall provide lower division transfer course offerings that will enable students to transfer to Oregon's four-year colleges and universities with a junior standing and/or enhance occupational curriculums.
3. The college shall provide developmental/remedial offerings that will improve the skills of under-prepared students so that they can enter the vocational or transfer programs of their choice.
4. The college shall provide general education in keeping with the philosophy of maintaining a comprehensive college while serving many segments of our populations and fulfilling a diverse range of educational needs. Aesthetics, leisure, citizenship, interpersonal relations, social skills, and adaptive and coping skills are all a part of the general education curriculum.
5. The college shall provide the services and facilities needed to further its institutional mission while fostering a learning environment and enhancing student life.
6. The college shall provide opportunities for residents of the district to appreciate and participate in cultural, recreational and civic activities that enhance the quality of life. The college and its staff shall support and participate in community service activities.

THE COLLEGE

History

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

In 1966, through a local election, the Linn-Benton Community College District was formed. A year later, 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. Currently, over 24,000 people take one or more classes through LBCC each year, or a full-time equivalent of about 4,400 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 Tadena Hall in 1979. Tadena 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 Family Resource Center for LBCC's Parent Education program. The new building opened the fall of 1988 and was formally dedicated in February 1989.

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 Tadena 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 the handicapped in mind, including special parking areas and access to buildings and classrooms.

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

Accreditation

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

Administration

Students who want to review information about LBCC's accreditation status may contact the President's office, CC-101, 967-6100. 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 sex, race, color, creed, national antecedents, handicap, economic need or age. Questions or concerns related to affirmative action, non-discrimination or equal opportunity should be directed to the Human Resources Office; Linn-Benton Community College; 6500 SW Pacific Blvd.; Albany, OR 97321-3779. Telephone: 967-6502.

Catalog Information

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



GENERAL INFORMATION

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 a 10-week period from mid-June until late August.

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 attendance 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, parking for handicapped persons and visitor parking.

Although parking stickers are not required to park on campus, they are recommended. The stickers help the Campus Security and Services Office locate car owners in case of car problems or an emergency. Stickers are free and available in the Campus Security and Services Office, College Center 109.

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

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 Registration Office, Takena 115, or call 967-6105.

Child Care:

A modern facility with the capacity to serve 70 children is available on campus in conjunction with the Parent Education program. Children must be at least two and one-half years of age and a fee is charged. Priority is given full-time students on a first-come, first-served basis. For additional information contact the Child Care Resource and Referral Office, Takena Hall 119, or phone 967-6501.

Child Care Resource and Referral is a free service offered to all LBCC credit students. The service helps students match their child care needs with local providers. Additional information about CCRR may be obtained from the Albany Center, Takena Hall 119, 967-6501.

Student Rights, Complaints, Freedoms & 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 Director of Student Development, Takena Hall 107, 928-2361, ext. 443.



ENTERING COLLEGE

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 Counseling and Career Information 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 Counseling and Career Information Center is located on the first floor of Takena Hall.

Admissions

Blaine Nisson, Director of Admissions,
Records and Student Programs
967-6106
Takena Hall 115

Admission Requirements

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

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

Students applying to enter an occupational program must be 18 years of age or older and, in the judgment of the administration, able to benefit from the instruction offered. Admission to occupational programs varies slightly, but most are available on a first-come, first-served basis. Date of application and completion of admission procedure is an important consideration in many programs.

Linn-Benton Community College provides assistance to people who want to complete a high school education. The college cooperates with local high school districts in providing assistance to the youth of Linn and

Benton counties. LBCC supports the law which states that responsibility for providing an education to anyone 17 years of age and younger rests with the local (K-12) school districts. As a result, admission requirements for high school completion programs for students under 18 years of age are as follows:

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

Admission Procedures

Full-time students:

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

1. Fill out an application for admission.
2. Provide the Admissions Office with a copy of their high school transcript if entering directly (within one year) from high school.
3. Take the Placement Test.
4. Forward official copies of transcripts directly to LBCC's Admissions Office, if wanting to receive credit for college work at another institution.

Part-time students:

Students enrolling part time (11 or fewer credits) and those enrolling for non-credit classes need only register for desired classes at the appropriate time. Eligibility to enroll in some math and writing courses, however, is based on demonstrated skill level through completing the appropriate prerequisite or by achieving the appropriate test score on the Placement Test or the Computerized Placement Test. Students should refer to the

current schedule of classes for specific courses that require assessment, or they should contact a counselor.

Those part-time students who plan to earn a certificate or degree at LBCC are encouraged to complete the admission process the same as full-time students. The process must be completed before a certificate or degree can be granted.

Official Acceptance:

Students who complete the admission process will receive a "Notice of Admission." This notice specifies a date and time for student orientation and registration.

Note: Part-time students receiving financial aid or veterans' benefits must go through the same admission procedure that is required of full-time students.

Limited Enrollment Admission

Students who have not completed the application process prior to Friday of the first week of classes may be admitted to the institution for one term only on limited enrollment status by completing the following procedure:

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

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. Questions about specific requirements may be addressed to the Director of Admissions, 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 reason-

able 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 admission 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 Development Division will review all petitions and make recommendations to the Director of Admissions.

Programs in Associate Degree Nursing, Dental Assistant and Emergency Medical Technician, as well as other technical programs, usually have waiting lists. Students interested in one of these programs should complete the application process outlined. For additional information on any selective admission program, contact the Admissions Office.

Associate Degree Nursing:

Applicants for the two-year program beginning fall term must: (1) have application and transcripts on file by a specified date (contact the Admissions Office for date); (2) supply to the Admissions Office transcripts from all colleges and universities attended and proof of high school graduation or GED; (3) complete the National League for Nursing Pre-Nursing and Guidance Examination (dates for administration of this exam are available through the Student Assessment Center--test scores are valid for five years); (4) complete the Placement Test; (5) if accepted, have a complete physical exam. Also, a negative tuberculin skin test or chest X-ray is required. ADN applicants will be notified of the disposition of their applications by June 15.

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

Computer Programming:

Applicants to the Computer Programming program must demonstrate an ability to enroll in WR 121 English Composition based on completion of WR 115 Introduction to Writing with a grade of "C" or better or an appropriate placement recommendation based on the sentence portion of the Placement Test and complete one of the following courses with a grade of "C" or better.

BA 131 Intro to Information Systems
CS 211 Intro to Computer Science
CS 213 Intro to Symb Prog: FORTRAN
CS 215 Computer Organization
CS 217 Intro to COBOL Programming

Applicants must declare interest in the Computer Programming program by filling out an application form at the Admissions Office. Applications may be submitted beginning January 1, with a deadline of June 30. Notification of admission to the program will be made in late summer.

Dental Assistant:

The Dental Assistant program is offered once each year, beginning in the fall term and ending the following summer term. Dental Assistant applicants must: (1) have application and transcripts on file in the Admissions Office; (2) be a high school graduate or have completed a GED; (3) complete the Placement Test with a standard reading score of 40 or better or successfully complete 1.128 Reading Skills; (4) be available for an admission interview; (5) if accepted, have a negative tuberculin test on file prior to the first class.

Applications may be submitted beginning January 1. Applicants will be notified of the disposition of their applications by early September, following an application deadline of June 15. The Admissions Office may be contacted for more information.

Electronics Engineering Technology:

Students wanting to enroll in the Electronics Engineering Technology program must take the Placement Test and demonstrate ability to enroll in MT 101 College Algebra and WR 115 Basic Writing Skills 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 January 1, with a deadline of June 30. Notification of admission to the program will be made in late summer.

Emergency Medical Technician:

Admission to the Emergency Medical Technician certificate program is limited and based on date of application. Applications may be submitted beginning January 1. Applicants must be high school graduates or have completed a GED and be in good physical health, as demonstrated by a physical examination prior to entry into the program. Applicants must obtain a standard score of 48 or higher on the reading section of the Placement Test or complete EN 115 Effective Reading with a "C" grade or better.

Water/Wastewater Technology:

Students applying for the one- or two-year Water/Wastewater program must demonstrate the ability to enroll in Math II (4.202) and WR 115 Basic Writing Skills. 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 January 1, with a deadline of June 30.

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. 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.

ENTERING COLLEGE

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.

Registration

Sue Cripe, Registrar
967-6105
Takena Hall 115

Registration for Credit Classes

1. Complete all admission requirements
2. Preregistration advisor conferences are required 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 in vocational/technical programs 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. Full tuition payment is required at the time of registration. The Financial Aid Office may be contacted for assistance in tuition payment. Students sponsored by one of the special programs or attending under a grant or scholarship must process an authorization form at the Financial Aid Office prior to registering.
 5. Registration materials are available in the Registration Office lobby. When all forms are completed, they are to be presented at the registration windows with full tuition payment or payment authorization from the Financial Aid Office.
 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 Social Security number is required for positive identification of records. An identification number may be requested from the Registration Office for students not possessing a Social Security number.

Registration for Community Education Classes

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

Schedule Changes

A student may add a course during the first week or, with the instructor's written permission, during the second or third week. A student may not add to full-time after the first week of the term.

A student may officially withdraw from a class up to the end of the seventh week of a full-term class. The drop period is 60 percent of a short-term class.

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

Auditing Classes

Students may audit on a space-available basis after the first day of classes. Charges for auditing are the same as for regular credit enrollment. A completed audit request form must be on file in the Registration Office by the end of the seventh week of a full-term class or by the end of 60 percent of a short-term class.

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 letter 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 & Fees

Tuition Schedule

At the time of publication of this catalog, the tuition and fee charges for credit and non-credit classes had not been determined for the 1989-90 school year. The tuition and fees shown below were in effect for the 1988-89 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	\$ 21	\$ 87	\$ 97
Full-time Tuition (12-20 credits)	\$252	\$1,044	\$1,164
Tuition per credit for over 20 credits (non-refundable)	\$ 21	\$ 87	\$ 97

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

Non-Credit & Community Education Classes

Contact Hours	Reimbursable	Non-Reimbursable
1 - 6	\$ 7	\$ 8
7 - 12	11	13
13 - 17	16	19
18 - 24	22	25
25 - 36	29	33
37 - 48	42	50
49 - 60	58	64

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

Special Fees

Course Add	No charge
Course Drop	No charge
Credit by Examination	\$5/credit
Placement Test	\$5

Late registration:

Twelve credit hours or more, beginning first week of classes	\$10
Each week thereafter (to maximum of \$25)	\$5
Eleven credits or fewer, beginning third week	\$5
Official copy of LBCC transcript	\$2
Unofficial copy of LBCC transcript	\$.50
Physical education activity fees (some courses)	variable

Student Activity and Program Fee:

Each student is assessed a \$1.11 per credit charge, to a maximum of \$13.32, as a student activity and program fee. The fee is included in the \$21 per credit tuition and fee charge listed above. Non-credit students who want to receive the benefits and services of the Linn-Benton Community College identification card may pay a special service fee of \$2 per term. Income derived from the fee is used to support a variety of extracurricular activities and programs, including athletics, artist and lecturer guest appearances, clubs and organizations, and a variety of 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.

Refunds

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

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

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

Official total withdrawal by a student enrolled in non-credit Community Education classes only: full refund less \$2.50.

Reduction of credit load: difference in tuition.

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

The refund period for short courses or late-starting classes will be during the first 25 percent of class duration.

Academic Regulations**Transferring LBCC Credits**

Lower division credits may be transferred to most colleges throughout the United States. Lower division students may transfer up to 108 credit hours to schools in the Oregon State System of Higher Education.

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

Students in lower division studies should plan to schedule an average 15 credits per term to accumulate 90 credits in a six-quarter (two-year) period. No more than 20 credits may be taken in any single term without an additional charge. This additional charge is non-refundable.

A veteran who has completed one or more years of active service and completed one quarter of satisfactory work as a full-time student (12 or more credits) at Linn-Benton Community College may receive twelve (12) elective credits. A petition for Military Service Credit is available in the Admissions Office.

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 at least six credit hours.

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 \$5 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 928-2361, ext. 277.

College Level Examination Program

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

Advanced Placement Tests

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

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

Repeating a Class

In general, a class that a student has already completed for credit at LBCC cannot be repeated for credit. Certain classes, however, can be repeated for credit. A note as to which classes can be repeated is listed under the individual course descriptions in the catalog.

LBCC students will not be allowed to register and receive credit for courses clearly identified as being prerequisites to LBCC classes already completed by the student with a grade of "C" or better. Exceptions must be authorized by written approval of appropriate faculty members and division directors.

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 vocational 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.

ENTERING COLLEGE

Grading System

- A: Excellent work; 4 grade points per credit.
 B: Above average college work; 3 grade points per credit.
 C: Average work; 2 grade points per credit.
 D: Below average work; 1 grade point per credit.
 F: Failing work, no credit given; 0 grade 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).
 NE: No entry; no credit earned (not computed in GPA).
 AU: Audit; no credit earned (not computed in GPA).

*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, with the exception of summer term. If a grade is not submitted by the instructor, the "IN" is changed to a "Y."

Grade Point Average (GPA) is calculated by dividing total points by total credits attempted. (Grades not included in GPA: IN, W, Y, P, NP, NE, 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).

Standards of Progress for Graduation

LBCC requires that 70 percent of the classes attempted be completed to qualify for graduation. "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 are processed through the Registrar's Office.

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 at the beginning of the third week of the quarter are subject to academic probation regulations.

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

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

Honor Roll

Students who obtain a grade point average of 3.33 or better with no incompletes and have carried 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

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

Transcripts and Records

LBCC official student transcripts may be ordered at the transcript window at a cost of \$2 each. (This fee is subject to change.) Unofficial copies are available for 50 cents

each. Processing of transcript orders takes a minimum of one to two working days. Students have access to transcripts and records as outlined in "Policy on Students Rights, Freedoms, Responsibilities and Due Process."

It is the policy of the LBCC Board of Education that records belonging to a student who has failed to repay an emergency loan, deferred tuition payment or other debt or obligation shall not be released, 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 first 25 percent of a class may expect a partial tuition refund (see "Refunds").

Financial Aid

Lance Popoff, Director of Financial Aid
 967-6104
 Tadena Hall 105

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

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

Certification and administration of veterans' educational benefits also are provided through the Financial Aid Office.

Application Procedures

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

In addition, the CSS Financial Aid Form (FAF) may be used to determine a student's eligibility for a Pell Grant. For students who want to apply only for the Pell Grant, a separate, free application form is available.

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

No additional institutional application is required other than the FAF.

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.

Prior to receiving financial aid, applicants must be fully admitted to LBCC as regular students (even if attending less than full time) and must register for classes. These are two separate requirements.

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	\$756
* Books & Supplies	\$450
Living Expenses	\$2,580

SINGLE (away from parents' home)

* Tuition & Fees	\$756
* Books & Supplies	\$450
Living Expenses	\$4,950

* Tuition estimates are provided here so total costs can be compared. Tuition and fees for the 1989-90 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.

Books and supply costs vary greatly. Check with the program/departments for current estimates in individual programs.

Deferred Payments

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

Types of Assistance

Pell Grants:

Grant awards are available to students who enroll for six or more credits in any term. Awards usually range from \$250 to \$2,300 for an academic year. The federal government determines the amount of award based on the applicant's financial need.

Supplemental Educational Opportunity Grants:

The Supplemental Educational Opportunity Grant (SEOG) is an award made to students with exceptional financial need. Grants vary from \$100 to \$1,500 per academic year, depending on need of the applicant.

State Need Grants:

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

College Board Scholarships:

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

Talent Recognition Awards:

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

Tuition Grants:

One-term, full and partial tuition grants are available to new students who have not previously attended LBCC on a full-time basis. Applicants must have at least a 2.00 GPA, two letters of reference and attend LBCC full-time the term for which the award is granted. Students are limited to one award and cannot receive Board or Talent awards in addition to Tuition Grants. Contact LBCC division directors for more information and an application.

Student Part-Time Employment:

A federally supported Student Work Program provides on-campus employment for students with financial need. Work schedules are assigned by supervisors, and students are paid \$3.85 an hour or higher for work performed. Higher wages are paid to returning student workers and for jobs requiring special skills. Employment during the school term may not exceed 20 hours per week. When possible, the student is placed in a job compatible with his or her career goal.

Perkins Loans (NDSL):

The Perkins Loan is a federally supported loan program provided by the college to needy students. Application is made through the CSS form. Eligibility is based upon need, other resources and availability of funds. Loan repayment and interest charges of 5 percent begin nine months after the borrower ceases half-time enrollment. Additional information regarding eligibility, deferment and cancellation provisions is available at the Financial Aid Office.

Stafford (formerly Guaranteed) Student Loans:

Loans of up to \$2625 per year are available to students through local banks. *A separate application is required for this program.* Students must first apply for the Pell Grant by completing the CSS Financial Aid Form. In addition, the CSS aid application will be used to determine eligibility for the loan. Prospective loan borrowers also are strongly encouraged to apply for grants administered by the state aid agencies in their state of legal residence. Non-Oregon residents can obtain the address of their state grant programs from LBCC's Financial Aid Office. At the time of application, a 5 percent origination fee is charged. Loan repayment and interest charges begin six months after the borrower ceases

ENTERING COLLEGE

full-time enrollment. Application forms and additional information regarding deferment and cancellation provisions are available at the Financial Aid Office.

Eligibility and interest rates on the Perkins and Stafford Loan programs are determined by the federal government and are subject to change.

Plus Loan:

These loans are available to the parents of dependent students regardless of need. Interest is variable but will not exceed 12 percent. Repayment begins 60 days after the funds are disbursed. Parents may borrow up to \$4,000 per year. Applications are available at the Financial Aid Office.

SLS Loans:

These loans are available to independent and, in some cases, dependent students. The interest rate is variable but will not exceed 12 percent. Interest accumulates from the time the loan is received. Repayment of interest and, in some cases, principal begins after the funds are received. Students must first apply for a Pell Grant and a Stafford Student Loan. Students may borrow up to \$4,000 per year. Applications are available at the Financial Aid Office.

Community Scholarships:

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

Repayment and Student-Owed Refunds to Grant and Loan Programs

If a student receiving financial aid withdraws from school during the regular, three-week refund period, the total refund due will be returned to financial aid programs. In addition, students receiving cash payments from financial aid programs (not including the Student Work Program) who withdraw from school or stop attending classes may be required to repay a portion of the aid received. More detailed information is given in the financial aid brochure, the award letter and the current schedule of classes.

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

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.

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.)

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 re-occurrence 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 paid back or deducted from future benefits.

SERVICES FOR STUDENTS

Career Center

Robert Talbott, Director of Student Development Division
928-2361, ext. 443
T 107A

Academic Advising

The academic advising program at LBCC helps students plan and carry out programs of study. At orientation, each student is assigned an academic advisor from the instructional staff 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 a counselor periodically for academic advising.

The Counseling Center may be contacted for more information.

Career Information Center

967-6102
T 103

The Career Information Center provides assistance to district residents who want to make a career decision. Career counseling and printed materials are available. Interest testing and career classes are available on a fee basis, while the career decision-making programs, "Discover" and "Career Finder," are available free to the public. An extensive collection of college catalogs also is available for use in the Career Information Center.

Counseling Center

967-6102
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 Community Education centers.

Student Employment Center/Cooperative Work Experience Services

Marlene Propst, Manager
967-6102
T 101

The Student Employment 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, microfiche listings from throughout the state supplied by the Oregon Employment Division, federal job information and a variety of listings solicited from other states. 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 and Linn and Benton counties. The center also has national labor trend information available.

The center maintains a library of local employer information notebooks 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 Development

Robert Talbott, Director
928-2361, ext. 443
T 107A

The Student Development Division provides a cluster of services designed for students, staff and community residents. Because it offers such broad services, it forms a bridge between instructional areas and student services. These developmental or growth programs provide for:

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

The Student Development Division maintains an open door policy. All students are encouraged to take advantage of center offerings and may do so with or without earning credit. Many courses are individualized so that a student may begin or end studies at any time during the term.

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

Math Lab

928-2361, ext 294
LRC 205

The Math Lab is an open study area where equipment, resources and assistance are available to help students who are having difficulties in math. Students in some courses may check out video tapes of selected topics. Instructor assistance and supplemental material for math courses also are available.

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

The lab also operates as a testing area for many of the math courses offered through the Science and Technology Division. The testing area can, within guidelines, be used by any instructor on campus who wants a secured and adaptable environment. The staff in the Math Lab try to offer a pleasant and encouraging atmosphere to ease the stress of testing.

SERVICES FOR STUDENTS

Disabled Student Services

928-2361, ext. 410
Teletypewriter 967-6114
LRC 200

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

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

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

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

Hearing impaired and deaf students and community members can receive information about LBCC classes or make appointments with LBCC staff members by calling the college's Teletypewriter (TTY) number, 967-6114. The TTY is located in the Student Development Office on the second floor of the Learning Resource Center.

This program is designed to provide vocational and academic support services to disabled LBCC students. Services are specific to individual student needs and may include one or more of the following:

- Scheduling of classes
- Interpreting
- Note taking
- Taped text
- Oral testing
- Vocational advising
- Tutoring
- Learning strategies classes
- Living skills classes
- Vocational study skills
- Other accommodations specific to a student's needs and disability

Students must meet special enrollment requirements to receive program services.

Testing Services

928-2361, ext. 277
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 Placement Test for all new full-time students;
3. the Computerized Placement Test (CPT) to place part-time students;
4. the College Level Exam Program (CLEP) test for college credit by examination;
5. course challenges that enable students to earn college credit by examination without completing regular credit course work;
6. skills tests, such as those for reading and writing;
7. vision and hearing screening; and
8. individualized testing for on-campus courses.

Supplemental Instruction

928-2361, ext. 293 or 410
LRC 204

Supplemental Instruction (SI) is available for many high-risk courses in subject areas such as math, physics and chemistry. Data indicate that regular attendance at Supplemental Instruction sessions help students earn a better grade than they would on their own. The SI leaders are students who have successfully taken the course. As leaders, they attend the class, take notes and meet with students weekly to help them with their studies. Check with your instructor or the Student Development Division on what SI courses currently are available.

Tutorial Services

928-2361, ext. 293 or 410
LRC 204

Free, individualized tutoring is available to students who desire additional help with course work. This assistance is available in most subject areas taught at the college.

Other Services

Auxiliary Support Services

Robert Miller, Director
967-6101
CC 214

Bookstore:

Nancy Nunnemaker, Supervisor. 967-6503, CC 111. The Bookstore sells texts and supplies for all LBCC courses. Art and school supplies and general interest books also are available.

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

Food Service:

Gene Neville, Manager. 967-6101, CC 214B. The cafeteria is located on the second floor of the College Center Building. Service is available from 7:30 am to 3:30 pm Monday through Friday.

The Santiam Restaurant is student operated and is located in CC 201. Daily menus are planned, 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.

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

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

Printing Services:

Michael O'Connor, Supervisor. 928-2361, ext. 431, LRC 105. The LBCC Print Shop offers convenience printing services for LBCC students and staff. The Print Shop is located on the first floor of the Learning Resource Building. Convenience printing orders can be placed between 8 am and 5 pm Mondays through Fridays.

Child Care

On-campus child care for LBCC families is provided through the Family Resource Department. Children must be at least two and one-half years of age.

The Child Care Resource and Referral service offers help and information to parents seeking child care.

For more information on either of these services, call 967-6501.

Library

928-2361, ext. 336 - circulation
928-2361, ext. 116 - reference
928-2361, ext. 330 - director
928-2361, ext. 395 - Health Information Network
928-2363 - evening number

The LBCC Library contains about 45,000 volumes and subscribes to approximately 500 periodicals and newspapers. It provides a basic reference collection, general index materials and current books 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. Equipment for using these materials and typewriters for student use 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.

Library materials not available in the LBCC Library usually may be obtained through interlibrary loans via OCLC, a national library network. Also, LBCC students with valid LBCC Library cards may borrow books from the Oregon State University Library under a reciprocal arrangement.

The library also is home for the Marine-Valley Health Information and Consumer Health Information networks, serving both health care professionals and consumers through resource development and sharing and through providing health care information. LBCC's International Education Service Center has been established in the library to provide services for foreign students and recent immigrants, to support global education at the college and to serve as a clearinghouse for information about international education in general.

Room Reservations/General Information

Campus Security and Services Office
967-6552
CC 123

Reservations for the college's meeting rooms are made through the Campus Security and Services Office, which is open 8 am to 5 pm, Monday through Friday. This office also provides information about meetings and events held on the main campus.

Student Programs

Blaine Nisson, Director
967-6105, T 115
Ann O'Brien Gonzales, Coordinator
928-2361, ext. 150, 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 and cultural interests. Student activities, organizations and sports are open to all students.

Clubs and organizations offer co-curricular and extra-curricular affiliation in such areas as welding, engineering, wastewater technology, nursing, drama, animal technology, business management, karate, pottery 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.

Drama:

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

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 men's and women's cross-country, women's volleyball, men's and women's basketball, men's and women's track and men's baseball.

Athletic programs are funded through student fees.

For more information, contact Dick McClain, Athletic Director, 967-6109, AC 102.

Music:

The college offers several opportunities for student participation in vocal and instrumental performing arts, including Chamber Choir, Concert Choir, Community Chorale and the Community Big Band. Interested students may contact the Performing Arts Department or the Arts, Humanities and Social Sciences Division, AHSS 101, for more information.

Publications:

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

Recreational Sports:

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

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, plus one at-large representative. Any student enrolled in at least one credit class at LBCC is eligible to hold a representative position. Interested students may contact the Student Programs Office, CC 213, ext. 150.

SERVICES FOR STUDENTS

Telecourses

928-2361, ext. 332
LRC 105

Telecourses enable college students of any age to earn college credit at home and are an alternative to attending classes on the LBCC main campus.

While much of the course content is televised, the majority of information is contained in text and workbook materials specially designed for the classes. Courses are telecast over the Oregon Public Broadcasting and local cable television channels. Tapes of courses are available at LBCC's Community Education centers in Corvallis, Albany, Lebanon and Sweet Home.

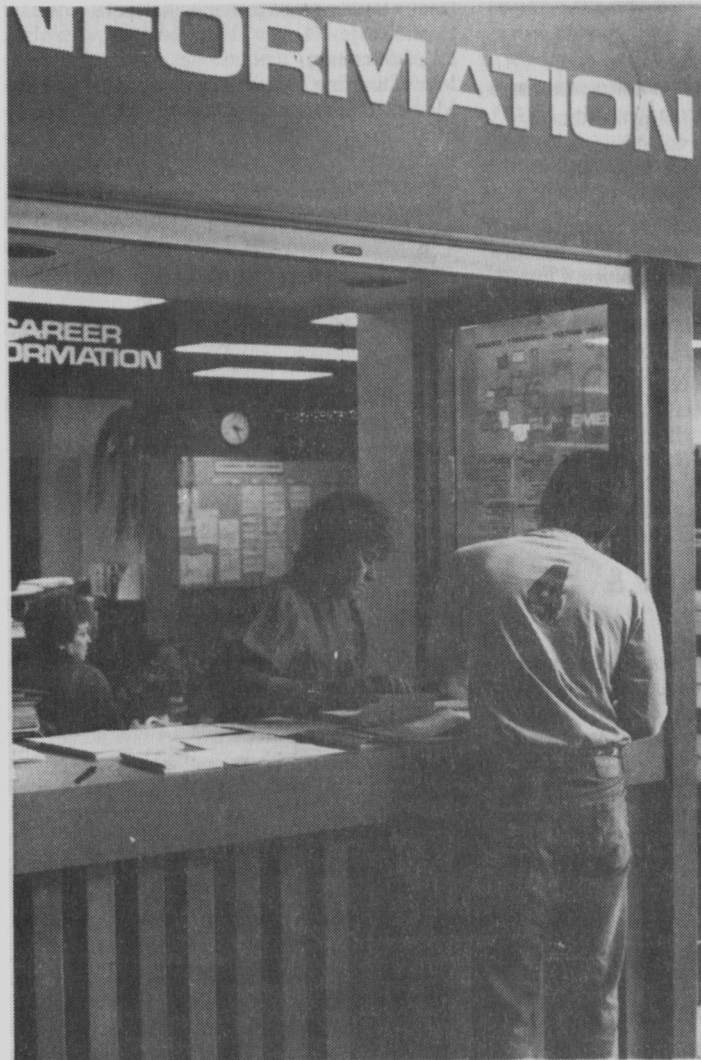
Registration procedures and tuition are the same as for regular LBCC courses. On-campus attendance is required three or four times for each class.

Veterans' Affairs

967-6104
T 105

The Veterans' Affairs coordinator is an LBCC staff member who provides assistance to veteran students and eligible dependents regarding college-related matters. A list of LBCC courses approved for benefits is available, 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.

Information on fulfilling the standards of satisfactory progress for students receiving veterans' benefits is given in the "Financial Aid" section of this catalog.



PROGRAMS OF STUDY

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

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

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

Degrees, Certificates & Diplomas

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

Associate of Applied Science Degrees

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

- Accounting Technology
- Administrative Secretary
- Agriculture
- Animal Technology
- Animal Technology/Horse Management
- Associate Degree Nursing
- Auto Body Repair
- Automotive Technology
- Banking and Finance
- Business Management/Marketing
- Civil Engineering Technology
- Computer Programming
- Crafts & Trades
- Criminal Justice
 - Corrections
 - Law Enforcement
- Culinary Arts and Hospitality Services
 - Chef Training
 - Conference & Resort Management
 - Restaurant & Catering Management
- Drafting Technology
- Electronics Engineering Technology
- Graphic Communications
 - Graphic Design
 - Printing Technology

- Heavy Equipment Mechanics/Diesel
- Horticulture
- Legal Secretary
- Manufacturing Technology
- Medical Receptionist
- Metallurgy Technology
- Refrigeration, Heating and Air Conditioning
- Supervisory Development
- Water/Wastewater Technology
- Welding Technology

Associate of Arts Degrees

This degree is awarded to those students who complete the requirements of a specified, two-year lower-division (transfer) program.

Associate of Arts degrees are offered in:

- Business Administration
- Computer Science
- Criminal Justice
 - Corrections
 - Law Enforcement
- Elementary Education
- Engineering
- Humanities
 - Creative Writing
 - Fine Art
 - Literature
 - Music
 - Philosophy/Religion
 - Spanish
 - Theatre
- Journalism/Mass Communications
- Laboratory Science
- Hotel, Restaurant and Tourism Management
- Secondary Education
- Social Science
 - American Studies
 - Behavioral Studies
 - International/Intercultural Studies
- Theatre/Acting
- Visual Arts
 - Fine Arts
 - Graphic Arts

Associate of Arts - General

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

Associate of General Studies

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

Evening Degree Program

Four degree opportunities currently are offered through LBCC's Evening Degree Program. The general transfer (undeclared major) Associate of Arts 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 Arts 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 General Studies is awarded to those students who complete a non-specified degree curriculum that includes transfer and/or non-transfer credit course work.

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

Certificates in Accounting Clerk and Supervision also can be earned through evening courses.

Certificates

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

One-year certificates are offered in:

- Accounting Clerk
- Advanced Supervisory Development
- Agriculture
- Dental Assistant
- Horticulture
- Medical Transcriptionist
- Microcomputer Operations
- Nondestructive Testing
- Office Specialist
- Water/Wastewater Plant Operations
- Welding

General Certificates are offered in:

- Emergency Medical Technician
- Farrier Science
- Nursing Assistant
- Supervision

Diplomas

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

1. *High School Continuation*: The High School Continuation program is offered in cooperation with high schools in the LBCC district and is designed for presently enrolled high school students who need to make up deficiencies in high school credits. A high school student, 16 years of age or older, can obtain a high school diploma by attending classes at LBCC with the approval of the high school (simultaneous enrollment). Instruction is based on individual requirements and individual study, with the high school evaluating the student's educational

PROGRAMS OF STUDY

records and determining which courses the student must take to meet graduation requirements. The diploma is issued by the local high school district.

2. **Oregon Competency Based Adult High School Diploma:** The primary purpose of this program is to assist individuals 18 years of age or older in completing credits required of all high school graduates in Oregon. LBCC evaluates the student's educational records and life experiences and assists in planning a study program that will meet individual needs.
3. **General Education Diploma:** LBCC offers the GED high school certificate through the GED Preparation Program and the Student Assessment Center.

Regional Programs

The LBCC Board of Education has designated the following programs 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 the in-state tuition rate. The residency requirements are outlined in the Admissions section of this catalog.

Regional programs include:

- Agriculture
- Animal Science
- Farrier School
- Horticulture
- Metallurgy
- Refrigeration, Heating and Air Conditioning
- Water/Wastewater Technology

Special Training Programs

Cooperative Work Experience

Richard Horton
CWE Coordinator
967-6102
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 280/1.280 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 202/1.201 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 of the units 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.

Navy ROTC:

The program of study fits into curriculums leading to first baccalaureate degrees. All midshipmen are required to take three credits of naval science per term. Additionally, scholarship students must complete three terms of calculus by the end of their sophomore year and three terms of physics by the end of their junior year.

Naval science (including summer training) pursued for four years in one of the undergraduate curriculums constitutes a co-major with all of the majors offered in degree-granting divisions of schools. NROTC students also may request participation in graduate programs.

Students interested in enrolling in one of these programs while attending Linn-Benton Community College should contact the Registrar's Office.

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 qualifying for an Associate of Applied Science or an Associate of Arts degree will not be allowed to apply for the Associate of General Studies degree. Students may elect to graduate under the requirements existing the year they graduate or under the requirements that existed the year they enrolled in the program. Students who complete a certificate or degree program that includes courses for a certificate of fewer requirements will receive only the highest certificate or degree. Students who want to complete more than one major or degree must complete fifteen (15) additional credits for each program above the original requirements. Students completing requirements must apply for graduation at the Admissions Office in Takena Hall one term prior to expected graduation.

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

Students who have completed the 24-credit residency requirement and transfer prior to completing the college degree requirements may transfer a maximum of (11) quarter credits of remaining requirements back to Linn-Benton Community College and graduate within one calendar year from the last term of attendance at LBCC.

Limitation Policy

Beginning with the 1989-90 school year, 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.

Degree Titles

Beginning with the 1989-90 school year, the college's existing Associate of Science degree title will be changed to Associate of Applied Science with a designated major. Students who established a major in an Associate of Science program prior to fall term 1989 will be allowed to graduate with that degree title through spring term 1990. Students who do not complete their programs by this date may petition for the Associate of Science degree title through spring term 1993. Students changing their major, returning from an absence of over five years and new students entering a vocational or technical program fall term 1989 will receive an Associate of Applied Science degree upon completing the requirements.

Beginning with the 1990-91 school year, the college will offer a new Associate of Arts degree without a designated major. This new degree 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 Associate of Arts degree meets the "block transfer" requirements. Courses will continue, however, to transfer on a course-by-course basis. Students who do not complete their programs by spring term 1992 may petition for the old Associate of Arts degree requirements through spring term 1994. Students changing their major, returning from an absence of over five years and new students beginning an Associate of Arts degree program fall term 1990 must complete the new Associate of Arts degree requirements.

Beginning with the 1990-91 school year, the college will offer a new Associate of Science degree program without a designated major. This will be a lower division transfer program that transfers, on a course-by-course basis, to any four-year college or university but will be designed primarily to assist students who intend to transfer to Oregon State University.

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 20

Courses numbered with 0. (zero decimal point) will not apply toward general ed. requirements

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)

1.103 Occupational Speech Communication 3

SP 111 Interpersonal Communication 3

SP 112 Fundamentals of Speech 3

SP 113 Introduction to Persuasion 3

Math (select one) (4)

1.110 Elements of Algebra 4

2.515 Business Math 4

4.202 Math II 4

(Students must have passed Math I Pre-Business Math or attained appropriate placement test score on the Placement Test or the Computerized Placement Test to enroll in the above math courses.)

Health and PE (select four credits) (4)

HE 112 Emergency First Aid 1

HE 250 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.)

Electives * (6)

Additional courses selected from other than major area. Three credits of electives must be taken from Humanities/Arts, Social Science, or Math/Science and must be taken outside of major. No course may be repeated to meet these six credits.

Computer Competency for degree: *

The student must show computer literacy at the level of CS 100 Computer Literacy or equivalent. This may be met by taking a course that includes computer use by the student.

* **Note:** To determine if a class may be applied toward fulfilling these requirements, 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 ♦.

GRADUATION REQUIREMENTS

Requirements for the Associate of Arts Degree

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

1. Complete the general education requirements and, if a declared major, the program requirements, or if an undeclared major, an additional 45 quarter credits of lower division electives.
2. Complete a minimum of 90 credits (some programs may have requirements that exceed this number).
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 areas, see a department advisor for assistance.

General Education Requirements45

Composition(6)

WR 121 English Composition (with a grade of "C" or better) and three additional credits selected from WR 122, WR 123, WR 214, WR 227, JN 216 or JN 217. Students 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 111 Interpersonal Communication3
SP 112 Fundamentals of Speech3
SP 113 Introduction to Persuasion3

Health and PE (select 6 credits)(6)

HE 112 Emergency First Aid1
HE 250 Health3
HE 252 First Aid3
HE 261 CPR1
Activity Courses1
PE 231 Lifetime Wellness3

Three (3) credits must be PE 231 Lifetime Wellness or HE 250 Health. 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.)

Humanities/Arts * (Select 9 credits) ** ... (9)

Selected courses in fine art, creative writing, foreign languages (200 level courses only), literature, music, philosophy, religion and theatre.

Social Science * (Select 9 credits)(9)

Selected courses in anthropology, criminal justice, economics, geography, history, political science, psychology, sociology and women's studies.

Math/Science * (select 12 credits)(12)

Selected courses in mathematics, biology, chemistry, botany, physical science, physics, zoology.

Math competency for degree: The student must show competency in mathematics at MT 101 College Algebra level. This requirement may be satisfied by either attaining the appropriate test score on the Placement Test or on the Computerized Placement Test or by taking MT 101 (these four credits would not count toward the 12 credit Math/Science requirement).

Computer Competency * for degree:

(The student must show computer literacy at the level of CS 100 Computer Literacy or equivalent. This may be met by taking a course that includes computer use by the student.)

*** Note:** For the Humanities/Arts, Social Science and Math/Science requirements, all courses must be alpha-numeric (transfer credit), numbered 100 or above. Courses numbered 199 and 299 will not satisfy general education requirements. With the above noted exception of P.E. activity courses, no course may be repeated to meet general education requirements.

To determine if a class may be applied toward fulfilling the last four requirement areas, 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 ♦.

**** Note:** Some Humanities/Art classes (in the music and fine art areas, for example) may be repeated for up to 6 credits, but only 3 credits can apply toward the general education requirements.

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 Requirements35

(Courses numbered 0. (zero decimal) will not apply toward general ed requirements.)

Composition(3)

WR 121 English Composition3

(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)

1.103 Occupational Speech3
SP 111 Interpersonal Communication3
SP 112 Fundamentals of Speech3
SP 113 Introduction to Persuasion3

Math (select one)(4)

1.110 Elements of Algebra4
2.515 Business Math w/Calculators4
4.202 Math II4

(Student must have passed Math I Pre-Business Math or attained 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 Aid1
HE 250 Health3
HE 252 First Aid3
HE 261 CPR1
PE 185 Activity Courses1
PE 231 Lifetime Wellness3

(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 student must show computer literacy at the level of CS 100 Computer Literacy or equivalent. This may be met by taking a course that includes computer use by the student.)

*** Note:** To determine if a class may be applied toward fulfilling these requirements 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 Certificate

Generally, students must complete, with an accumulative grade point average of at least 2.00, a minimum 36 credits to qualify for the one-year certificate. General certificates require a specified number of credit hours. Refer to department listings for specific requirements.

Requirements for the Diploma

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



ARTS, HUMANITIES & SOCIAL SCIENCES DIVISION

Director: Kenneth D. Cheney



The Arts, Humanities & Social Sciences Division has three educational aims. The first is to teach the richness of human existence, offering an education that is inward looking, personal and self-revealing, and which teaches 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 teaches students their relationship to other humans. The third is to fit the student for an economic role in society, through teaching the skills necessary for paid employment.

The division offers a broad range of academic subjects and programs in support of these aims. Collectively, these subjects are classified as the liberal arts. As a unifying force, they preserve a sense of community; in the inevitable process of change, they provide continuity; behind the arbitrary application of rules, they create the values.

The Arts, Humanities & Social Sciences Division offers programs leading to the Associate of Arts or Associate of Applied Science degree in the following subjects: criminal justice, graphic communications, humanities, journalism, social science, theatre and visual arts.

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

CRIMINAL JUSTICE

Faculty:

Jerald Phillips, Department Chairman

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 program (CWE) by active participation in criminal justice agencies, including police departments and sheriff offices, probation and parole offices, jails and other correctional facilities, halfway houses and juvenile group homes.

Two degree programs are offered. Students may earn either the Associate of Arts or the Associate of Applied Science degree in Criminal Justice, with concentrations available in either Law Enforcement or Corrections.

Associate of Arts in Criminal Justice

General Education Requirements45

See graduation requirements for Associate of Arts degree.

WR 123 Research Paper to be taken concurrently with

CJ 198 Research Topics is required.

SP 111 Interpersonal Communication is required.

Core Requirements25

CJ 101/SO 244 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 198 Research Topics	1
CJ 201/SO 221 Juvenile Delinquency	3
CJ 202/SO 214 Violence & Aggression	3
CJ 220 Substantive Law	3
CJ 226/PS 252 Constitutional Law	3

Sequence Requirements (select from the following list)12

CJ 100 Survey of Criminal Justice Systems	3
CJ 132 Intro to Parole and Probation	3
CJ 200 Police and Public Policy	3
CJ 210 Intro to Criminal Investigation	3
CJ 216 Criminal Justice Management	3
CJ 222 Procedural Law	3
CJ 225 Corrections Law	3
CJ 232 Corrections Casework	3
CJ 233 Community-Based Corrections	3
CJ 280 Cooperative Work Experience	*3

*Note: 3 credits only may be applied to this requirement.

Electives12

Must Be Taken From the Following Courses:

AN 103 Intro to Cultural Anthropology	3
CJ 280 Approved CWE to a total of	(14)
PS 207 Intro to Political Science	3
PY 110 Understanding Human Behavior	3
PY 216 Social Psychology I	3
R 201 Religions of the World	3
SP 113 Intro to Persuasion	3
SPN 102/103/104 First-Year Spanish	(12)
WR 227 Technical Report Writing	3

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Associate of Applied Science in Criminal Justice

General Education Requirements20

See graduation requirements for Associate of Applied Science degree.

SP 111 Interpersonal Communication is required.

Core Requirements25

CJ 101/SO 244 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 198 Research Topics	1
CJ 201/SO 221 Juvenile Delinquency	3
CJ 202/SO 214 Violence & Aggression	3
CJ 220 Substantive Law	3
CJ 226/PS 252 Constitutional Law	3

Sequence Requirements (Select from the following two categories)12

☐ Law Enforcement

CJ 100 Survey of Criminal Justice Systems	3
CJ 200 Police and Public Policy	3
CJ 210 Intro to Criminal Investigation	3
CJ 216 Criminal Justice Management	3
CJ 222 Procedural Law	3
CJ 280 Cooperative Work Experience	*3

*Note: 3 credits only may be applied to this requirement.

☐ Corrections

CJ 100 Survey of Criminal Justice Systems	3
CJ 132 Intro to Parole and Probation	3
CJ 225 Corrections Law	3
CJ 232 Corrections Casework	3
CJ 233 Community-Based Corrections	3
CJ 280 Cooperative Work Experience	*3

*Note: 3 credits only may be applied to this requirement.

Distribution Requirements18

Social Science	9
Humanities	9

Electives19

Additional Criminal Justice courses and/or approved CWE	9
Additional elective courses from other than major area	10

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EDUCATION

For information on the Associate of Arts degrees in Elementary Education and Secondary Education, see the Training and Economic Development Center section in the Community Education portion of this catalog.

ENGLISH/FOREIGN LANGUAGE

Faculty:

Beth Camp, Department Chairwoman
Art Bervin, Tom Chase, Linda Eastburn,
Paul Hagood, Vera Harding, Jane White

The English/Foreign Language 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 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 with an interest in creative writing and graphic arts have worked recently with faculty advisors from the English and Graphic Arts departments to produce LBCC's annual literary publication, *Eloquent Umbrella*.

Students wanting to pursue a transfer major or minor in English/Foreign Language may work towards the Associate of Arts in Humanities degree with a concentration in creative writing, literature or Spanish. See "Humanities."

ARTS/HUMANITIES/SOCIAL SCIENCES

FINE AND APPLIED
ARTS

Faculty:

Jim Tolbert, Department Chairman
John Aikman, Rich Bergeman, Judith Rogers,
Jay Widmer, Sandra S. Zimmer

Graphic Communications

The Graphic Communications program is dedicated to training students for entry-level positions in the printing, publishing and design fields. The program also is committed to assist in upgrading the skills of people already employed in the field and to providing basic lower-division requirements for those who wish to continue their education at a four-year institution.

The curriculums are designed to provide learning experiences consistent with the needs of potential employers in the industry. The equipment available for student use is comparable to that in the offices of printers, designers and the print media throughout the country.

Graphics students participate as photographers, designers and advertising and production staff on *The Commuter*, the student-run weekly newspaper for the campus. Projects in design and production provide opportunities for students to deal with clients and to accept responsibility for deadlines and quality control. Cooperative Work Experience (CWE) opportunities may offer on-the-job learning experiences.

Students in the graphic arts and graphic design programs should anticipate expenses of \$300 to \$500 per term for tools and materials. Printing technology students probably will spend \$100 to \$200 annually for tools and supplies in addition to textbooks.

Only those students who begin their program fall term may be assured of completing the program in two years. Students entering at other times may find it necessary to take more than six terms of classes to complete degree requirements.

The Graphic Communications curriculum leads to the Associate of Applied Science degree in Graphic Communications, with concentrations in either graphic design or printing technology.

Associate of Applied Science in Graphic Communications

General Education Requirements20

See graduation requirements for Associate of Applied Science degree.

SP 112 Fundamentals of Speech is required.

Core Requirements40

3.167 Offset Press	4
3.169 Negative Imposition & Platemaking	4
4.124 Technical Drawing I	2
9.048G Intro to Macintosh	1
9.607K Desktop Publishing on the Macintosh	3
AA 104 Intro to Graphic Communications	3
AR 115 Basic Design: Composition	3
AA 120 Layout and Pasteup Procedures	3
AA 174 Screen Printing	3
AA 224 Typographical Design	3
AA 229 Typesetting	3
AA 263 Process Camera	3
PHO 261 Intro to Photography	3
OA 121A Typing Keyboard*	2

*Students with a demonstrated typing proficiency of 55 words per minute may substitute additional electives.

Sequence Requirements

(Select either the Graphic Design sequence or the Printing Technology sequence)

Graphic Design Sequence(48)

3.171 Copywriting for Designers	1
AA 221 Graphic Design I	3
AA 222 Graphic Design II	3
AA 223 Graphic Design III	3
AA 225 Packaging and 3-D Design	3
AA 226 Typographical Design II	3
AA 228 Portfolio Preparation & Prof. Practices	3
AA 237 Illustration I	3
AA 238 Illustration II	3
AA 239 Illustration III	3
AR 116 Basic Design: Color	3
AR 131 Drawing I	3
AR 132 Drawing II	3
AR 133 Drawing III	3
AR 203 Intro to Art History: 20th Century	3
AR 234 Figure Drawing	3
JN 215B Journalism Production Lab	2

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Printing Technology Sequence(30)

3.168 Advanced Offset Press	4
4.130 Machine Processes	2
4.310 Introductory Physics	3
AR 102 Art Appreciation	3
JN 215B Journalism Production Lab (Repeated for 6 credits)	6
OA 121B Basic Production Typing	2
PHO 253 Zone System Photography or	3
PHO 262 Intermediate Photography	3
Electives	4

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Journalism and Mass Communications

The Journalism and Mass Communications degree program is for students interested in careers in journalism, business communications, public relations or advertising. The curriculum is designed with a two-fold purpose: to prepare students for transfer to a four-year college or university, where they can pursue bachelor's degrees in their chosen specializations, and to prepare graduates for entry-level positions in print media fields. The program is particularly advantageous to individuals who already hold bachelor's degrees in other fields and desire to move into journalism careers.

Students have the opportunity to participate as editors, writers, photographers, designers and advertising and production staff on student publications, thus getting a head-start on compiling a portfolio. In addition, Cooperative Work Experience (CWE) positions can be arranged to offer on-the-job learning experiences on and off campus.

Besides the cost of books, students may expect to spend about \$50 to \$75 in photographic and graphic supplies while enrolled in the program.

Only those students who begin their program of study fall term may be assured of completing the degree in two years. Students entering winter or spring terms may find it necessary to spend more than six terms to complete degree requirements.

Associate of Arts in Journalism and Mass Communications

General Education Requirements45

See graduation requirements for Associate of Arts degree.

Program Requirements34

AA 104 Intro to Graphic Communications	3
AA 120 Layout and Pasteup Procedures	3
AA 229 Typesetting	3
JN 134 Intro to Photojournalism	3
JN 215A Journalism Lab (repeated for 2 credits)	2
JN 215B Newspaper Production Lab	2
JN 216 News Reporting and Writing	3
JN 218 Editing and Page Design	3
JN 224 Mass Media & Society	3
JN 225 Intro to Advertising & Public Relations	3
JN 280 Cooperative Work Experience: Journalism	3
PHO 261 Intro to Photography	3

Electives and approved CWE11

Recommended electives: AA 263 Process Camera, PHO 263 Color Photography, history, political science, economics, criminal justice.

Visual Arts

The Visual Arts curriculum has three instructional objectives: to enhance students' sensitivity to their visual surroundings; to increase their ability to recognize historic influences in their own and others' works; and to develop skills that will enable them to express ideas through art.

Available classes include fundamental work in drawing, design and color. For those interested in three-dimensional art, there are course sequences in ceramics. Lecture courses in art history and art appreciation give added depth to the studio experience. To supplement the students' course work, instructional slides, films and an excellent collection of art books are available through the campus Learning Resource Center.

The department offers course work leading to an Associate of Arts degree in Visual Arts, which includes a core of 15 hours common to all students of art, plus additional work emphasizing either the fine arts or graphic arts. Students also may earn an Associate of Arts in Humanities degree with a Fine Arts concentration. See "Humanities."

Associate of Arts in Visual Arts

General Education Requirements45

See graduation requirements for Associate of Arts degree.

AR 210, 202 & 203 Art History required for humanities group.

SP 112 Fundamentals of Speech is required.

Core Requirements15

AR 115 Basic Design: Composition	3
AR 116 Basic Design: Color	3
AR 131 Drawing I	3
AR 132 Drawing II	3
AR 133 Drawing III	3

Sequence Requirements

(Select either the Fine Arts sequence or the Graphic Arts sequence)

□ Fine Arts Sequence(24)

AR 154 Beginning Ceramics	3
AR 234 Figure Drawing	3

Painting Classes (Select From:)6

AR 181 Painting: Still Life	3
AR 182 Painting: Portraiture	3
AR 184 Watercolor: Still Life	3
AR 186 Watercolor: Landscape	3
AR 284 Watercolor: Abstraction	3
Additional credits in either (not both) painting or ceramics	6
Additional studio credits selected from AR or AA prefix courses	6

Electives(6)

□ Graphic Arts Sequence(36)

AA 104 Intro to Graphic Communications	3
AA 120 Layout & Pasteup	3
AA 174 Screen Printing	3
AA 224 Typographical Design	3
AA 225 Packaging and 3-D Design	3
AA 229 Typesetting	3
AA 237 Illustration I	3
AA 238 Illustration II	3
AA 239 Illustration III	3
AA 263 Process Camera	3
AR 234 Figure Drawing	3
PHO 261 Intro to Photography	3

□ Music

Select MU 161 Music Appreciation

□ Philosophy/Religion (select from)

PH 201 Intro to Philosophy
R 210 World Religions

□ Theatre

Select TA 111 Intro to Theatre

Areas of Concentration (Complete one of the following areas of concentration)

□ Fine Art(24)30

AR 201, 202, 203 Intro to Art History	9
AR 115, 116 Design I and II	6
AR 131, 132 Drawing I and II	6
AR 154 Beginning Ceramics	3

Electives(6)

□ Literature(18)30 (Select two sequences)

EN 107, 108, 109 Literature of the Western World	9
EN 201, 202, 203 Shakespeare	9
EN 204, 205, 206 Survey of English Literature	9
EN 207, 208, 209 Literature of the Non-Western World	9
EN 253, 254, 255 American Literature	9

□ (Select 3 credits)(3)

WR 240 Personal Journal Writing or	3
WR 241 and/or 242 Intro to Imag. Writing	3

Electives(9)

□ Creative Writing (Repeat each course for 6 credits)(18)30

WR 240 Personal Journal Writing	6
WR 241 Intro to Imaginative Writing	6
WR 242 Intro to Imaginative Writing	6
Any literature course	(3)

Electives(9)

□ Music(22)30

MU 101 Music Fundamentals I	3
MU 131 Group Piano	2
MU 134 Group Voice	2
MU 161 Music Appreciation	3
Performance (Select from Concert Choir, Chamber Choir, Community Chorale or Community Big Band)	6
Additional MU or MP prefixed courses	6

Electives(8)

□ Philosophy/Religion(21)30

PH 201 Intro to Philosophy	3
PH 202 Elementary Ethics	3
PH 203 Elementary Logic	3
R 102 Religions of Eastern World	3
R 103 Religions of Western World	3
R 210 World Religions	3
R 211 Old Testament	3

Electives(9)

HUMANITIES

Advisors:

Fine Art: Jim Tolbert, Fine and Applied Arts Department

Music/Theatre: Gary Ruppert, Performing Arts Department

Literature/Creative Writing/Spanish: Beth Camp, English/Foreign Language Department

Philosophy/Religion: Doug Clark, Social Sciences Department

The Associate of Arts in Humanities degree provides students with a broad introduction to the humanities and permits the selection of an area of concentration in fine art, music, literature, creative writing, Spanish or philosophy/religion.

These programs prepare students for transfer to four-year colleges and universities and provide foundation skills in reading, writing and critical/analytical thinking necessary in any career. For further information, contact the program coordinator listed above.

Associate of Arts in Humanities

General Education Requirements45

See graduation requirements for Associate of Arts degree.

Core Requirements15

HU 100 Intro to Humanities	(3)
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Selectives(12)

(Select 12 credits from at least three of the following subject areas outside your area of concentration. Honors Colloquium, HO 250, may substitute for a selected subject area.)

□ Art (select from)

AR 102 Art Appreciation	
AR 211 Survey of Visual Arts: Non-Western	
AR 212 Survey of Visual Arts: Oregon	
AR 213 Survey of Visual Arts: 20th Century	

□ English (select from)

EN 104, 105, 106 Intro to Literature	
EN 107, 108, 109 Literature of the Western World	
EN 201, 202, 203 Shakespeare	
EN 204, 205, 206 Survey of English Literature	
EN 253, 254, 255 American Literature	

ARTS/HUMANITIES/SOCIAL SCIENCES

<input type="checkbox"/> Spanish	(24)	30
SPN 101, 102, 103 First-Year Spanish	12	
SPN 201, 202, 203 Second-Year Spanish	12	
Electives	(6)	

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<input type="checkbox"/> Theatre	(22)	30
TA 111 Intro to Theatre	3	
TA 121 Acting I	3	
TA 125 Improvisation	3	
TA 229 Oral Interpretation of Lit. or	3	
TA 180 and/or TA 185 Rehearsal & Performance or Production Workshop	3	
TA 161 or 162 or 163 Technical Theatre	4	
Additional TA prefixed courses	6	
Electives	(8)	

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PERFORMING ARTS (Music, Speech, Theatre)

Faculty:

Gary Ruppert, Department Chairman
David Apple, Jane Donovan, Hal Eastburn,
George Lauris

The Performing Arts Department provides its students with a solid academic and performance background in the areas of music, speech and theatre. Students may participate in department-sponsored theatre productions, Community Big Band, Vocal Chamber Ensemble, Concert Choir and Community Chorale.

The department has superior facilities in which to work. Mainstage rehearsals are held on stage in the fully equipped theatre in Tadena Hall. Music classes meet in specially designed classrooms, with small practice rooms available to individuals.

Most department performances are held on the Mainstage, Tadena Hall. The performing arts also make use of The Loft Theatre, a converted classroom in Tadena Hall, for Reader's Theatre, Chamber Theatre and other experimental theatre performances.

The department offers the Associate of Arts degree in theatre and provides concentrations in music and theatre within the Associate of Arts degree in Humanities. See "Humanities."

Associate of Arts in Theatre

General Education Requirements45

See graduation requirements for Associate of Arts degree.

Program Requirements36

TA 111 Intro to Theatre	3
TA 121 Fundamentals of Acting	3
TA 122 Fundamentals of Acting	3
TA 125 Improvisation	3
TA 161 Fundamentals of Technical Theatre	4
TA 162 Fundamentals of Technical Theatre	4
TA 163 Fundamentals of Technical Theatre	4
TA 180 Rehearsal & Performance	3
TA 185 Production Workshop	3
TA 229 Oral Interpretation of Literature	3
Additional credits in either Rehearsal & Performance or Production Workshop	3

Electives9

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SOCIAL SCIENCES

Faculty:

Doug Clark, Department Chairman
Max Lieberman, Jay Mullen, Gina Vee,

In general, social science is the field of human knowledge that deals with all aspects of the 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 and the natural habitats of humans; 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 while sociologists consider group behavior and the structure of society; economists focus on the organization and use of resources.

Because all aspects of human culture are related and interdependent, the social science curriculum at LBCC 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. To this end, students may pursue an Associate of Arts degree in Social Science with special emphasis in one of three areas of concentration: Behavioral Studies, American Studies or International/Intercultural Studies.

Behavioral Studies: 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: 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:

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.

Students also may earn an Associate of Arts in Humanities with a concentration in philosophy and religion. See "Humanities."

Social science is a practical field for both the short term and the long run. It provides a valuable background for people interested in the 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.

Associate of Arts in Social Science

General Education Requirements45

See graduation requirements for Associate of Arts degree.

Research Requirements1

___ 198 Research Topics1
Prerequisite: WR 123 and instructor approval.
Topics are to be defined in consultation with the instructor. Select the 198 Research Topic course listed in the discipline of your choice.

Area of Concentration21

(Complete 21 credits in one area listed below, including at least one 9-credit sequence.)

☐ Behavioral Studies(21)

AN 101 Intro to Physical Anthropology	3
PS 207 Intro to Political Science	3
PY 110 Understanding Human Behavior	3
*PY 201, 202, 203 General Psychology	(9)
PY 213 Intro to Physiological Psychology	3
PY 216, 217 Social Psychology I & II	(6)
PY 236 Human Development: Adult	3
*SO 204, 205, 206 General Sociology	(9)
SO 214 Social Problems: Violence & Aggression	3
SO 222 Marriage Relations	3
SO 221 Juvenile Delinquency	3
SO 244 Intro to Criminology	3

☐ American Studies(21)

AN 232 Native North Americans	3
GE 207 Geography of Oregon	3
GE 290 Environmental Studies	3
*HS 201, 202, 203 United States History	(9)
HS 207 History of the Frontier	3
HS 215 Social History of Oregon	3
HS 220 Labor History	3
HS 224 Labor Today	3
HS 240 Oregon History	3
*PS 201, 202, 203 American Government	(9)
PS 204 Govt. Reg. of Bus. & Economy	3
PS 220 U.S. Foreign Policy	3
PS 252 Constitutional Law	3
SO 206 General Sociology	3

(Continued on next page)

□International/Intercultural**Studies(21)**

*AN 101 Intro to Physical Anthropology	3
AN 102 Intro to Archaeology/Prehistory	3
*AN 103 Intro to Cultural Anthropology	3
AN 107 Anthropology Today	3
AN 210 Selected Topics in Social Anthropology	3
*GEO 105 Natural Environments	3
*GEO 107 Cultural Geography	3
*GEO 201, 202, 203 World Regional Geography	(9)
*HS 101, 102, 103 Western Civilization	(9)
*HST 157, 158, 159 History of the Third World	(9)
HS 191 China - Society & Culture to 1911	3
HS 192 China	3
*IS 250 World Value Systems	3
*IS 251 Population & Global Resources	3
*IS 252 Rich Nations & Poor Nations	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

Selectives12

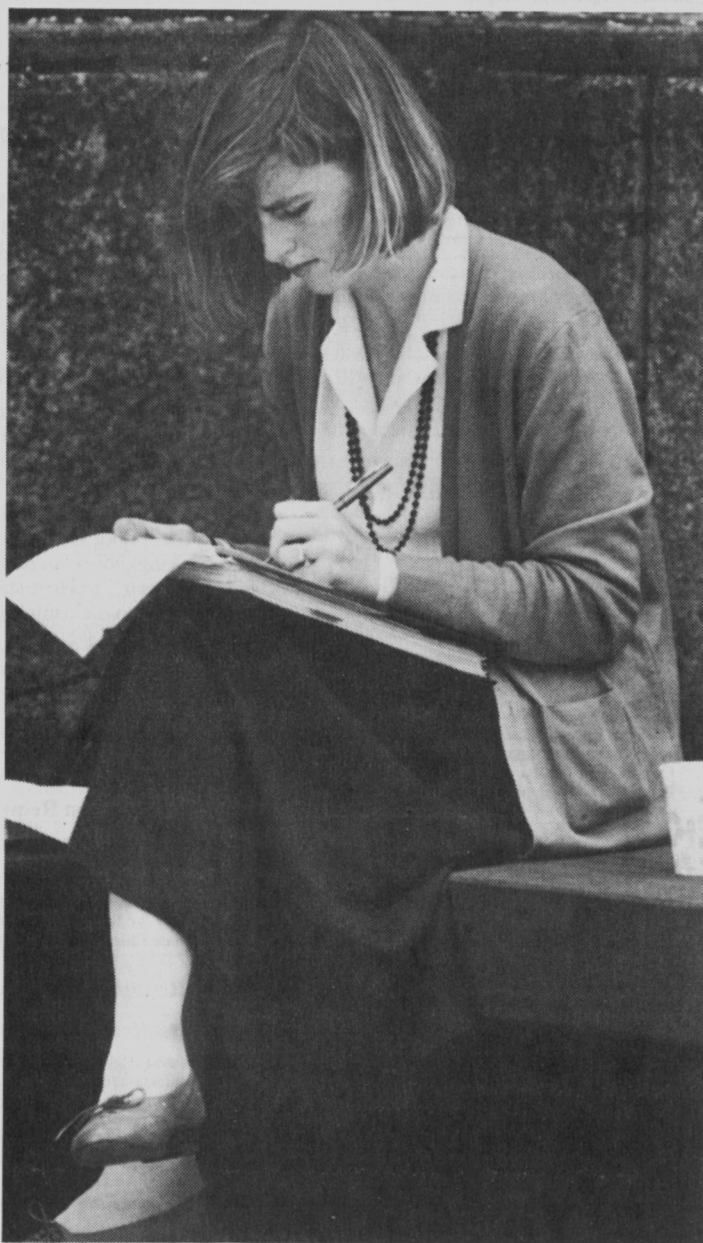
(Select 12 credits from the two areas not selected as the major area of concentration, a minimum of 6 credits from each area. Three of these credits may be taken either as CWE Social Science Internship or an HO 250 Honors Colloquium.)

Electives11

*Identifies courses that comprise elements of a 9-credit sequence.

BUSINESS DIVISION

Director: Patsy Chester



The Business Division provides students with the professional training necessary for successful careers in today's business and technical fields.

Associate degrees are offered in business management, accounting, banking, computer programming, supervision and a variety of office-related areas (including administrative, legal and medical) for individuals interested in seeking employment upon completion of these two-year programs. The Division also provides an associate degree in Business Administration for those students who are planning to pursue a bachelor's degree at a four-year institution.

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

This division is dedicated to serving the needs of currently employed individuals as well as those beginning new careers and, therefore, provides a variety of courses and programs that are available as evening classes.

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

BUSINESS MANAGEMENT

Faculty:

Maynard N. Chambers, Department Chairman
Gerry Conner, Leigh Leuthold, J.T. Peterson,
Larry Schuetz, Al Walczak

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

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

Accounting Technology

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 20

See graduation requirements for Associate of Applied Science degree.

1.110 Elements of Algebra* and SP 112 Fundamentals of Speech are required.

*Prerequisite for 1.110 Elements of Algebra is appropriate Placement Test score or 4.200 Math I.

Major Requirements 72-73

Fall - First Year

2.515 Business Math with Calculators	3
2.530 Practical Accounting I	3
BA 101 Intro to Business	4
OA 121A Typing Keyboarding	2

Winter

2.515 Business Math with Calculators	2
2.531 Practical Accounting II	3
2.535 Payroll Accounting	3
BA 131 Intro to Information Systems	4

Spring

2.532 Practical Accounting III	3
2.533 Computerized Accounting	3
BA 110A Using the PC-Intro & DOS	1
BA 110B Using the PC-Lotus	1
BA 110C Using the PC-dBase III+	1

Fall - Second Year

2.127 Government Accounting	3
2.516 Business Statistics	4
2.595 Professional Accounting I	3
BA 206 Principles of Management	3

Winter

2.518 Business Law or	3
BA 226 Business Law	4
2.596 Professional Accounting II	3
BA 215 Cost Accounting	3
BA 223 Principles of Marketing	4

Spring

2.597 Professional Accounting III	3
BA 207 Labor Management Relations	3
BA 222 Financial Management	3
EC 115 Outline of Economics	4

92-93

One-Year Certificate in Accounting Clerk

Major Requirements 46

Fall

2.515 Business Math with Calculators	3
2.530 Practical Accounting I	3
BA 101 Intro to Business	4
OA 121A Typing Keyboarding	2
WR 121 English Composition	3

Winter

1.110 Elements of Algebra	4
2.515 Business Math with Calculators	2
2.531 Practical Accounting II	3
2.535 Payroll Accounting	3
BA 131 Intro to Information Systems	4

Spring

2.532 Practical Accounting III	3
2.533 Computerized Accounting	3
BA 110A Using the PC-Intro & DOS	1
BA 110B Using the PC-Lotus	1
BA 110C Using the PC-dBase III+	1
SD 113 Human Relations in Business	3
SP 112 Fundamentals of Speech	3

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Banking and Finance

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

Students wanting to take individual courses to qualify for special employment opportunities may do so with the consent of the Business Management Department. The specialized banking courses will be offered evenings only during the school year. Some of the specialized banking courses are not offered each academic year; students should consult with their advisor to determine when these courses are offered.

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

Associate of Applied Science in Banking and Finance

General Education Requirements 20

See graduation requirements for Associate of Applied Science degree.

1.110 Elements of Algebra* and SP 112 Fundamentals of Speech are required.

*Prerequisite for 1.110 Elements of Algebra is appropriate Placement Test score or 4.200 Math I.

Major Requirements 60-61

Fall - First Year

2.515 Business Math with Calculators	3
2.530 Practical Accounting I	3
BA 101 Intro to Business	4

Winter

2.515 Business Math with Calculators	2
2.531 Practical Accounting II	3
OA 121A Typing Keyboarding	2

Spring

2.532 Practical Accounting III	3
BA 206 Principles of Management	3
BA 223 Principles of Marketing	4
EC 115 Outline of Economics	4

Fall - Second Year

2.516 Business Statistics	4
2.518 Business Law or	3
BA 226 Business Law	4
BA 131 Intro to Information Systems	4
BA 269 Principles of Banking	3

(Continued on next page)

BUSINESS

Winter

BA 110A Using the PC-Intro & DOS	1
BA 110B Using the PC-Lotus	1
BA 110C Using the PC-dBase III+	1
BA 270 Money and Banking	3

Spring

BA 207 Labor Management Relations	3
BA 222 Financial Management	3
BA 275 Bank Management	3

Electives 12

Additional Banking and Finance Courses	9
Additional Business Course	3

92-93

Business Administration

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

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

Associate of Arts in Business Administration

General Education Requirements 45

See graduation requirements for Associate of Arts degree.

MT 101 College Algebra, 162, 163 Mathematics for Non-Science majors, required for math/science group requirement.

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

SP 112 Fundamentals of Speech, required for speech group requirement.

WR 121 English Composition, WR 214 Business English required for writing requirement.

Major Requirements 32

Fall - First Year

BA 101 Intro to Business	4
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Winter

BA 226 Business Law	4
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Spring

BA 131 Intro to Information Systems	4
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Fall - Second year

BA 200 Principles of Accounting I	3
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BA 206 Principles of Management	3
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Winter

BA 201 Principles of Accounting II	3
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BA 235 Intro to Business Statistics	4
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Spring

BA 202 Principles of Accounting III	3
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BA 223 Principles of Marketing	4
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Electives 15

Additional courses approved CWE.

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Business Management/Marketing

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

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

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

Associate of Applied Science in Business Management/Marketing

General Education Requirements 20

See graduation requirements for Associate of Applied Science degree.

1.110 Elements of Algebra* and SP 112 Fundamentals of Speech are required.

*Prerequisite for 1.110 Elements of Algebra is appropriate Placement Test score or 4.200 Math I.

Major Requirements 66-67

Fall - First Year

2.515 Business Math with Calculators	3
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2.530 Practical Accounting I	3
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BA 101 Intro to Business	4
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Winter

2.515 Business Math with Calculators	2
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2.531 Practical Accounting II	3
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OA 121A Typing Keyboarding	2
----------------------------------	---

Spring

2.532 Practical Accounting III	3
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BA 206 Principles of Management	3
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BA 223 Principles of Marketing	4
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EC 115 Outline of Economics	4
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Fall - Second Year

2.516 Business Statistics	4
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BA 131 Intro to Information Systems	4
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BA 224 Personnel Management	3
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BA 238 Principles of Salesmanship	3
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Winter

2.518 Business Law or	3
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BA 226 Business Law	4
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BA 110A Using the PC-Intro & DOS	1
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BA 110B Using the PC-Lotus	1
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BA 110C Using the PC-dBase III+	1
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BA 249 Retail Merchandising	3
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SD 113 Human Relations in Business	3
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Spring

BA 207 Labor Management Relations	3
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BA 222 Financial Management	3
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BA 233 Intro to Market Research	3
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Electives 6

Additional Business Courses

92-93

Associate of Arts in Restaurant Management

Students planning to pursue a four-year degree in Hotel, Restaurant & Tourism Management at Oregon State University may complete freshman and sophomore requirements while earning an Associate of Arts Degree in Restaurant Management at LBCC. One-on-one advising is done with the chairman of the Culinary Arts & Hospitality Services Department.

Small Business Management

This program is designed to meet the needs of the small-business owner/manager, providing classes, seminars and one-on-one consulting services. The curriculum advisor will assist the small-business person in developing a program of study to satisfy individual needs.

Supervision

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 18-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 18- and 45-credit programs before completing the Associate degree program.

The Supervision curriculums lead to an Associate of Applied Science degree in Supervisory Development or a certificate in Supervision or Advanced Supervisory Development.

(Continued on next page)

Associate of Applied Science in Supervisory Development

General Education Requirements 16

See graduation requirements for Associate of Applied Science degree.

SP 112 Fundamentals of Speech is required.

Major Requirements 45

2.515 Business Math with Calculators (applies to general ed. requirements)	5
2.530 Practical Accounting I	3
BA 101 Intro to Business	4
BA 110A Using the PC-Intro & DOS	1
BA 110B Using the PC-Lotus	1
BA 110C Using the PC-dBase III+	1
BA 131 Intro to Information Systems	4
BA 207 Labor Management Relations	3
BA 226 Business Law	4
EC 115 Outline of Economics	4
HE 125 Occupational Safety	3
SD 101 Supervision/Fundamentals	3
SD 102 Supervision/Techniques	3
SD 103 Supervision/Communication	3
SD 113 Human Relations in Business	3

Electives 29

Additional business courses, approved CWE or credit for prior work experience

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Certificate in Supervision

Major Requirements 13

BA 101 Intro to Business	4
SD 101 Supervision/Fundamentals	3
SD 102 Supervision/Techniques	3
SD 103 Supervision/Communication	3

Electives 5

Additional business courses, approved CWE or credit for prior work experience

18

Certificate in Advanced Supervisory Development

Major Requirements 37

2.515 Business Math with Calculators (applies to general ed. requirement)	5
BA 101 Intro to Business	4
BA 131 Intro to Information Systems	4
BA 207 Labor Management Relations	3
HE 125 Occupational Safety	3
SD 101 Supervision/Fundamentals	3
SD 102 Supervision/Techniques	3
SD 103 Supervision/Communication	3
SD 113 Human Relations in Business	3
SP 112 Fundamentals of Speech	3
WR 121 English Composition	3

Electives 8

Additional business courses
Approved CWE or credit for prior work experience.

45

DATA PROCESSING

Faculty:

Peggy Ayres, Department Chairwoman
Philip V. Clark, Gladys Norman, Kitson Yu

The Computer Programming curriculum is designed to develop graduates able to successfully enter the job market as application programmers. The student will learn to write programs in several different languages and to apply these skills to the solving of actual business problems.

Students finishing the first year of the curriculum should be able to enter the job market as programmer trainees with at least two languages at their disposal. Students completing the full two-year curriculum will be granted an associate degree in computer programming and will be in a strong position to enter the job market.

The Computer Science program provides students with the first two years of a four-year program. Upon completion of these requirements, the student will receive an Associate of Arts Degree in Computer Science.

The objective of the one-year Microcomputer Operations program is to equip students with proficient skills that will enable them to obtain, and be successful in, beginning-level data entry positions. In order to accomplish these goals, a series of specific skills courses are combined with traditional introductory business courses. In addition to these courses, the student will complete four credits of Co-operative Work Experience (CWE).

Students interested in any of these programs should receive advising from the Data Processing Department.

Associate of Applied Science in Computer Programming

General Education Requirements 16

See graduation requirements for Associate of Applied Science degree.

Math is not required.

Major Requirements 74-75

Fall - First Year

2.571 Data Processing I - Machine Logic	6
CS 211 Intro to Computer Science	4
OA 121A Typing Keyboarding	2

Winter

2.572 Data Processing II - Adv Logic	6
BA 235 Business Statistics or	4
WR 227 Tech Report Writing	3
CS 215 Computer Organization	4

Spring

2.573 Data Processing III - PL/I	6
BA 230 Mngmt. Info Systems	3
CS 233R RPG	4

Fall - Second Year

2.581 Data Processing IV - Analysis & Design	6
CS 217 Intro to COBOL	4

□ Accounting Option (select one) (3)

2.530 Practical Accounting I	3
BA 200 Principles of Accounting I	3

Winter

2.582 Data Processing V - Adv Concepts	6
CS 233C Advanced COBOL	4

□ Accounting Option (select one) (3)

2.531 Practical Accounting II	3
BA 201 Principles of Accounting II	3

Spring

1.280 CWE Data Processing	7
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□ Accounting Option (select one) (3)

2.532 Practical Accounting III	3
BA 202 Principles of Accounting III	3

90-91

Associate of Arts in Computer Science

General Education Requirements 45

See graduation requirements for Associate of Arts degree.

Math 200, 201, 202 Calculus is required.

WR 122 English Composition is required.

Major Requirements 27

Fall - First Year

BA 131 Intro to Information Systems	4
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Winter

CS 211 Intro to Computer Science	4
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Spring

CS 212 Techniques for Computer Programming ..	4
CS 213 Intro to Symbolic Prog. FORTRAN	4

Fall - Second Year

MT 241 Elem Linear Algebra	4
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Winter

CS 215 Computer Organization	4
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Spring

WR 227 Tech Report Writing	3
----------------------------------	---

Selectives (select two) 8

CS 217 Intro to COBOL	4
CS 233C Adv. COBOL	4
CS 240 'C' Language & UNIX	4

Electives 10

As approved by four-year institution to which student will transfer, see Data Processing Department advisor.

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BUSINESS

One-Year Certificate in Microcomputer Operations

Major Requirements43

Fall

2.512 Microcomputer Techniques	2
2.513 Microcomputer Skill Building: Numbers....	2
2.530 Practical Accounting I	3
2.653 Automated Office Concepts	3
OA 121B Basic Production Typing	2
WR 115 Intro to Writing	3

Winter

2.515 Business Math with Calculators	3
2.555 Data Entry on Microcomputer	4
BA 110A Using the PC-Intro & DOS	1
BA 110B Using the PC-Lotus	1
BA 110C Using the PC-dBase III+	1
BA 131 Intro to Information Systems	4

Spring

1.280 CWE Data Entry	4
2.517 Data Entry Concepts	3
2.519 Data Entry Practicum	3
2.533 Computerized Accounting	3
OA 201A WordPerfect: Beginning	1

Electives2

Suggested electives are 2.535 Payroll Accounting, 2.587 Intro to WordStar, 2.652 Filing, OA 122 Typing II, OA 123 Typing V: Skill Building or OA 202A WordPerfect: Advanced.

45

OFFICE TECHNOLOGY

Faculty:

Sue Trautwein, Department Chairwoman
Illa Atwood, Jay Brooks, Leigh Leuthold,
Mary Ann Lammers, Peggy Lind,
Mary Lou McPheeters, Joyce Moreira

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

The Office Technology curriculums lead to Associate of Applied Science degrees in Administrative Secretary, Legal Secretary and Medical Receptionist or to one-year certificates in Office Specialist and Medical Transcriptionist.

Associate of Applied Science in Administrative Secretary

General Education Requirements15

See graduation requirements for Associate of Applied Science degree.

2.515 Business Math with Calculators is required.

Major Requirements77

Fall - First Year

1.131 Spelling (may be waived based on competency exam; if taken, applies to general ed requirements)	3
2.500 Business Orientation	1
2.515 Business Math with Calculators (applies to general ed requirements)	2
2.652 Filing	1
OA 122 Typing II	3
OA 201A WordPerfect: Beginning	1
OA 201B WordPerfect: Advanced	2

Winter

2.515 Business Math with Calculators (applies to general ed requirements)	3
2.551 Office Communications	3
2.588 Editing Skills for Info Processing	3
2.653 Automated Office Concepts	3
OA 114 Alphabetic Shorthand	3

Spring

2.527 Transcribing Machines I	3
2.610 Clerical Office Procedures	3
2.664 WordStar	2
BA 110A Using the PC-Intro & DOS	1
BA 110B Using the PC-Lotus	1
BA 110 C Using the PC-dBase III+	1
OA 214 Applied Alphabetic Shorthand	3

Fall - Second Year

2.528 Transcribing Machines II	3
2.530 Practical Accounting I	3
2.647 Administrative Management	3
2.656 Info. Processing Practicum	3
2.666 IBM Displaywriter	3

Winter

2.533 Computerized Accounting	3
2.613 On-the-Job Training	4
2.682 Desktop Publishing	3
2.683 Computerized Records Management	3

Spring

2.613 On-the Job Training	4
SD 113 Human Relations in Business	3

92

Associate of Applied Science in Legal Secretary

General Education Requirements16

See graduation requirements for Associate of Applied Science degree.

2.515 Business Math with Calculators is required.

Major Requirements79

Fall - First Year

1.131 Spelling (may be waived based on competency exam)	3
2.500 Business Orientation	1
2.515 Business Math with Calculators (applies to general ed requirements)	3
2.518 Business Law	3
OA 122 Typing II	3
OA 201A WordPerfect: Beginning	1

Winter

2.515 Business Math with Calculators (applies to general ed requirements)	1
2.588 Editing Skills for Info Processing	3
2.652 Filing	1
2.653 Automated Office Concepts	3
2.657 Legal Term & Office Proc. I	3
OA 202A WordPerfect: Advanced	2

Spring

2.527 Transcribing Machines I	3
2.551 Office Communications	3
2.587 Intro to WordStar	1
2.674 Abbreviated Keyboarding	3
2.676 Legal Term & Office Proc. II	3

Fall - Second Year

2.530 Practical Accounting I	3
2.647 Administrative Management	3
2.662 Legal Transcription	3
2.666 IBM Displaywriter	1
2.677 Legal Term & Office Proc. III	3

Winter

2.533 Computerized Accounting	3
2.613 On-the-Job Training	4
2.682 Desktop Publishing	3
2.683 Computerized Records Management	3
OA 114 Alphabetic Shorthand	3

Spring

2.613 On-the-Job Training	4
2.656 Info Processing Practicum: Legal	3
OA 214 Applied Alphabetic Shorthand	3

95

Associate of Applied Science in Medical Receptionist**General Education Requirements 16**

See graduation requirements for Associate of Applied Science degree.

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

Major Requirements 82**Fall - First Year**

- 1.131 Spelling (may be waived based on competency exam; if taken applies to general ed requirement) 3
- 2.500 Business Orientation 1
- 2.652 Filing 1
- 5.630 Medical Terminology I 3
- OA 121A Typing Keyboarding 2
- OA 121B Basic Production Typing 2
- WR 115 Intro to Writing (may be waived based on competency exam) 3

Winter

- 2.515 Business Math with Calculators (applies to general ed requirements) 2
- 2.588 Editing Skills for Info. Processing 3
- 2.671 Medical Law and Ethics 2
- 5.633 Medical Terminology II 3
- OA 122 Typing II 3
- OA 201A WordPerfect: Beginning 1
- OA 202A WordPerfect: Advanced 2

Spring

- 2.515 Business Math with Calculators (applies to general ed requirements) 2
- 2.527 Transcribing Machines I 3
- 2.587 Intro to WordStar 1
- 2.656 Info. Processing Practicum: Medical 3
- 2.670 Medical Office Procedures 3
- 5.634 Medical Terminology III 3

Fall - Second Year

- 2.524 Medical Transcription I 3
- 2.551 Office Communications 3
- 5.625 Clinical Office Procedures 4

Winter

- 2.525 Medical Transcription II 3
- 2.530 Practical Accounting I 3
- 2.613 On-the-Job Training 4
- 2.653 Automated Office Concepts 3
- OA 114 Alphabetic Shorthand 3

Spring

- 2.535 Payroll Accounting 3
- 2.613 On-the-Job Training 4
- 2.672 Intro to Medical Coding 3

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One-Year Certificate in Medical Transcriptionist**Major Requirements 46****Fall**

- 1.131 Spelling (may be waived based on competency) 3
- 2.500 Business Orientation 1
- 2.515 Business Math with Calculators 1
- 2.588 Editing Skills for Info. Processing 3
- 5.630 Medical Terminology I 3
- OA 122 Typing II 3
- OA 201A WordPerfect: Beginning 1
- OA 202A WordPerfect: Advanced 2

Winter

- 2.527 Transcribing Machines I 3
- 2.587 Intro to WordStar 1
- 2.671 Medical Law and Ethics 2
- 5.633 Medical Terminology II 3
- SD 113 Human Relations in Business 3
- WR 115 Intro to Writing (may be waived based on competency exam) 3

Spring

- 2.529 Applied Medical Transcription 5
- 2.656 Info. Processing Practicum-Medical 3
- 2.672 Intro to Medical Coding 3
- 5.634 Medical Terminology III 3

46

One-Year Certificate in Office Specialist**Major Requirements 47****Fall**

- 1.131 Spelling (may be waived based on competency exam) 3
- 2.500 Business Orientation 1
- 2.525 Business Math with Calculators 2
- 2.652 Filing 1
- 2.653 Automated Office Concepts 3
- OA 114 Alphabetic Shorthand 3
- WR 115 Intro to Writing (may be waived based on competency exam) 3

Winter

- 2.515 Business Math with Calculators 2
- 2.551 Office Communications 3
- 2.588 Editing Skills for Info. Processing 3
- BA 110A Using The PC-Intro & DOS 1
- BA 110B Using the PC-Lotus 1
- BA 110C Using the PC-dBase III+ 1
- OA 122 Typing II 3
- OA 201A WordPerfect: Beginning 1
- OA 202A WordPerfect: Advanced 2

Spring

- 2.527 Transcribing Machines I 3
- 2.530 Practical Accounting I 3
- 2.610 Clerical Office Procedures 3
- 2.656 Info. Processing Practicum 3
- 2.664 WordStar 2

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COMMUNITY EDUCATION DIVISION

Directors: Ann Smart, Community Education
Mary Spilde, Department of Family Resources/
Training and Economic Development Center

The Community Education Division offers a variety of credit and non-credit classes and programs both on and off the LBCC campus. Organized into four community-based centers open both days and evenings, the Community Education Division is able to provide educational classes within commuting distance of most residents of Linn and Benton counties.

The four main centers, located on the main college campus in Albany and in Corvallis, Lebanon and Sweet Home, also arrange for classes to be held on a regular basis in many of the college district's smaller communities, including Scio, Crabtree, LaComb, Brownsville, Philomath and Alsea. Classes are held in other areas when there are sufficient numbers of students and an available public or private facility.

In response to the needs of its local service area, each Community Education center offers a mixture of classes and programs, including lower-division college transfer courses, vocational preparatory and vocational upgrading, general self-improvement courses for adults (covering areas such as agriculture, health, physical fitness, art, music, foreign languages, job search and personal growth), and hobby and recreation courses that are self-supporting through student tuition and fees. A major component of instruction at each off-campus center is the free instruction in reading, writing and math for adults with below eighth-grade education and low-cost instruction for adults wanting to obtain a high school diploma or a high school equivalency certificate (GED). These services are provided on the main campus and at the off-campus centers by the Student Development Division.

Students working on degrees or certificates through LBCC may be eligible to participate in the Cooperative Work Experience program. For more information see the CWE section of this catalog.

In addition to the regular Community Education classes, the division's Training and Economic Development Center serves the training needs of the district's business and industrial community. The Department of Family Resources provides special services, including classes, workshops and consultations, to help strengthen families.



COMMUNITY EDUCATION CENTERS

ALBANY CENTER

Director:

Dee Deems

Asst. to the Director:

Jim Carter

The Albany Center is located in Takena Hall on the main LBCC campus, 6500 S.W. Pacific Blvd., and serves the general populations of Albany, North Albany, Tangent and Shedd. Workshops and courses are offered for vocational upgrading and life enrichment in subjects such as conversational language, art, music, physical fitness, microcomputers, personal growth, consumer education and vocational/technical fields.

In addition to classes scheduled on campus, the Albany Center also offers courses in locations throughout the greater Albany area, including the Albany Senior Center, the Albany Boys and Girls Club, the Linn County Fairgrounds and the Albany Public Schools. To better serve the community, some courses are cosponsored with other organizations, such as the Albany Parks and Recreation Department and Albany General Hospital.

Part-time students may register at the Albany Center for any class offered through an LBCC Community Education Center.

Evening, Weekend Campus

During the regular academic year, the Albany Center is open Monday through Thursday evenings until 10 p.m. and 9 a.m. to 5 p.m. on Fridays and serves as the information and registration center for the evening classes.

BENTON CENTER

Director:

Ann Smart

Asst. to the Director:

Doris Nelson
Joanne Walker

Faculty:

Annamay Lundstrom, Ann Mills,
Joyce Moreira, Jason Widmer

The Benton Center is located at 630 NW 7th, Corvallis, in the old Washington School and is open from 8 a.m. - 10 p.m. Monday through Thursday during school weeks and 8 a.m. - 5 p.m. on Fridays. The center serves all of Benton County except the North Albany area, providing classes in the rural areas as well as in Corvallis. Many of the programs are made possible through the cooperation of school districts in the area.

The center has many self-study, open-entry labs that allow students to start a program when they are ready and to make their own schedule. The center provides lower division transfer courses, vocational preparation programs and adult self-improvement courses. Popular subject areas include practical accounting, computer applications, art, physical fitness, conversational language, outdoor education, ceramics, cooking and parent education. Courses are offered during the day and in the evening. Registration and purchasing of books occur at the center, too.

A vocational counselor is available to residents of the area at no charge. Some evening hours are available. Appointments may be made by calling the center.

Adult General Education
Faculty:

Sue VanLaere

The Student Development Division offers programs at the Benton Center in Adult Basic Education, General Education Development, Adult High School Diploma, High School Continuation, Citizenship Preparation and English as a Second Language, writing lab, study skills, spelling skills and reading. For additional information, see "Adult General Education Programs. Student Development Division."

Computer Lab

The Benton Center Computer Lab provides students the chance to improve their ability to gain employment or improve their current on-the-job productivity in a wide variety of subject areas. The lab also provides the opportunity for students, staff and community members to gain computer literacy; makes classes available on the programming of and the applications for computers; and provides access to a wide variety of software.

The lab is used for short-term vocational training programs, classes on specific computer applications or programming, and open lab time for individual or class projects. People may buy time on the computers or register for self-study classes in the open lab time.

Electronics Lab

The Electronics Lab is designed to teach or upgrade electronics job skills, with individualized instruction in a wide range of independent-study courses. The student is able to begin the program at any time when space is available and to choose desired class(es).

In addition to instruction provided by the center, the lab is open for independent use by knowledgeable community members.

Math Lab
Faculty:

Ann Mills

The Math Lab is designed for individualized study, with assistance readily available. Instructors provide advice on which courses to take and help arrange a suitable study program and time schedule. The classes may be entered at any time during the school year.

Office Technology Lab
Faculty:

Joyce Moreira

The Office Technology Lab offers a place to upgrade or learn new office skills. The student may begin courses at any time and work at an individualized pace.

Students enrolled for credit courses will have equipment reserved for a specific time period. Equipment also may be used at other times on a space-available basis. Students enrolled by the hour will have equipment reserved for the specified number of hours.

Courses offered apply towards the certificates and degrees offered by the Office Technology Department of the Business Division. See that catalog section for degree requirements.

LEBANON CENTER

Director:

Al Barrios

The Lebanon Center, located at 2600 Stoltz Hill Road, serves the communities of Lebanon, Scio and rural East Linn County. The center houses three classrooms, with several other facilities throughout the area used for classes. Although a variety of daytime classes are offered, the Lebanon Center schedule consists primarily of evening courses.

The Community Education Division emphasizes the value and rewards of lifelong learning opportunities by providing a broad range of courses to meet the interests and learning needs of the local community. Typical offerings include introductory college courses; job skills improvement and vocational upgrading courses; and credit and non-credit courses in art, agriculture, business, mathematics, science, language arts, physical education and health, family living and self-improvement.

Other college services available through the Lebanon Center include career, academic and financial aid counseling; general information about the LBCC campus and instructional programs; registration for part-time students; and textbook sales for classes offered through the Lebanon Center.

COMMUNITY EDUCATION

Adult General Education

Faculty:

Carolyn Gardner

The Student Development Division offers programs at the Lebanon Center in Adult Basic Education, General Education Development, Adult High School Diploma and High School Continuation. For additional information see "Adult General Education Programs, Student Development Division."

Office Technology Lab

Faculty:

Carla Mundt

The Office Technology Lab offers a place to upgrade or learn new office skills. The student may begin courses at any time and work at an individualized pace.

Courses offered apply towards the certificates and degrees offered by the Office Technology Department of LBCC's Business Division. See that catalog section for degree requirements.

SWEET HOME CENTER

Coordinator:

Mona Waibel

The Sweet Home Center, located at 1314 Long Street, across from the post office, serves the communities of Brownsville, Halsey, Sweet Home, Cascadia and Foster. It was established to provide educational opportunities to the members of the community it serves. The facility houses five classrooms, with several other locations throughout the area used for classes. Although the Center is limited in equipment for vocational training, it has available a complete and efficient computer lab with IBM-compatible computers. Students may purchase time to practice on the equipment and use the software that is available. A variety of other daytime courses are offered as well as evening courses.

The Sweet Home Center provides a broad range of courses to meet the interests and learning needs of the local community, including college transfer, vocational upgrading and general self-improvement courses for adults. Typical offerings include credit and non-credit courses in art, business, computer science, language arts, physical education, and home and family living.

Other college services available through the Sweet Home Center include career, academic and financial aid counseling; general information about the LBCC campus and instructional programs; registration for part-time students; and textbook sales for classes offered through the Sweet Home Center.

The Center serves a diverse group of students, including those who have limited experience outside of educational institutions and those who re-enter the formal education process after experience in the world of work.

Adult General Education

Faculty:

Candy Johnson

The Student Development Division offers programs at the Sweet Home Center in Adult Basic Education, General Education Development, Adult High School Diploma and High School Continuation. For additional information see "Adult General Education Programs, Student Development Division."

DEPARTMENT OF FAMILY RESOURCES

Faculty:

Bobbie Weber, Department Chairwoman
Pam Dunn, Work and Family Specialist
Alta Hunter, Family Resource Center
Coordinator

Jayne Nanavaty-Dahl, Family Child Care
Coordinator

Judith Keiff, Outreach Specialist/PEG
Coordinator

The Family Resource Department serves parents, transfer students, child care providers and local employers throughout the district to improve the quality of life for children and their families.

Each program helps to strengthen families through delivery of educational services to specific populations. Classes, workshops and consultations are offered through the department. Child care for the campus community is provided through the Family Resource Center. The Family Resource Department is located on the first floor of LBCC's Takena Hall.

Home Economics

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, early childhood education or food systems management. But throughout this multi-disciplinary field runs a common thread: a real concern for the family as it faces the challenges of a changing world. There are a large number of areas of concentration in the field of Home Economics. Because degree re-

quirements vary according to the area of concentration chosen, it is essential for students to contact their advisor. It is highly advisable that a student make an early identification of the college or university to which they plan to transfer.

Home Economics Curriculum

General Education Requirements45

Major Requirements11

HE 100 Perspectives in Home Economics	1
FN 225 Foods and Nutrition (taught in Science and Technology)	4
HDF 225 Child Development or	3
HDF 226 Growing Years (telecourse)	3
HDF 240 Contemporary American Families	4

Requirements dependent upon area of concentration34

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Parent Education

Parent Education classes are offered to those parents interested in learning more about child development, guidance and discipline and how various learning activities enable children to reach their maximum potential.

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.

Parent Education Groups in the Schools (PEG) enable parents in participating school districts to work with the Outreach Specialist to design classes that help them support the development and education of their children.

Special interest classes and workshops meet specific needs.

Work and Family

Child Care Resource and Referral

The Linn and Benton Counties Child Care Resource and Referral provides comprehensive information on available child care resources in Linn and Benton counties. This service works to improve the child care system by providing educational, training and consulting resources to employers, employees, parents and child care providers.

Services include:

- child care referrals
- education and information about child care
- consumer education materials
- consultation and support services for child care providers
- consultation to employers/employees

(Continued on next page)

Community residents can access this service through a district telephone line. Request for other services can be made through the department.

Family Child Care Training

Family Child Care Training serves those persons who, in their own home, care for other people's children. The basic 15 hours of training covers the essentials of operating a successful business and providing high-quality child care. Advanced workshops focus on additional skill development, including those that will lead to national accreditation. This program is part of the national Family to Family Initiative of the Mervyn Foundation.

Work and Family Seminars

Work and Family seminars are offered at the worksite and are tailor-made to company needs. Seminars provide opportunities for employees to increase their skill and ability to balance their work and family lives. Topics such as stress reduction, managing financial resources, and communication and negotiation skills are included.

Participation in the seminars contributes to a healthy, productive workforce and promotes a supportive atmosphere among employees. The Work and Family Coordinator consults directly with employers to enable them to plan a seminar series that meets the identified needs of their particular work force.

TRAINING AND ECONOMIC DEVELOPMENT CENTER

Director:

Mary Spilde

Program Manager:

Susan Wolff

The Training and Economic Development (TED) 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 small businesses.

The TED Center provides quick, effective responses to the training needs of area businesses and industries by coordinating training activities with all LBCC instructional

divisions. Specialized training provided by the center includes short-term and on-site training, professional management, fire science and business assistance.

The Small Business Management Program, business seminars and counseling are offered through the Center.

The TED Center is located on the first floor of LBCC's College Center Building.

Business and Industry Training and Assistance Programs

Contracted Training

Faculty:

Marti Ayers-Stewart
Carol Putnam

This training is tailored to the specific business or industry and is geared to the needs of their employees. Examples of the types of training that can be provided are computer orientation, supervisory training, problem solving, interpersonal communication and technical training.

Professional Development

The TED Center offers quality, affordable professional development options for individuals and businesses. A wide range of programs is available, including management and supervisory workshops and communication skills.

Short-Term Training

A variety of courses are offered to help unemployed people learn new skills or upgrade current skills. Courses to train employees for new industries moving into the area also will be developed, including training areas such as retail sales, clerical, food service and word processing.

Small-Business Development Center

Director:

John Pascone

Faculty:

Deborah Holmes, Dennis Sargent, Bill Stater

This center offers assistance specially geared to small businesses in the area. Assistance is designed to help small businesses start up, stay in business or expand.

Available services include an information and referral service providing access to information regarding all aspects of businesses, such as licensing procedures and financial planning. The center also can help the business owner find a variety of resources currently available in the community.

The center is able to provide intensive help to a small number of businesses. This assistance takes the form of monthly meetings with instructors to attack specific problems and helps business owners maximize their capabilities to survive and/or expand.

The center also makes available a variety of reference materials.

Wellness

Coordinator:

David Bakley

Experts predict a threefold return for every dollar a business invests in a wellness program because of reduced healthcare costs, lower absenteeism, decreased employee turnover and increased productivity. For this reason, the Training and Economic Development Center offers quality, affordable options to assist local businesses and industries in providing comprehensive wellness programs or components for their employees.

The center works with other college divisions to offer programs that include, but are not limited to:

- Health (assessment and consultation)
- Developing Employee Assistance Programs
- Fitness (assessment and consultation)
- Substance Abuse
- Stress Management
- Counseling
- Time Management
- AIDS Education
- Balancing Work and Family

A wellness program takes into consideration the welfare of employees and provides a supportive atmosphere in which the individual can improve his or her quality of life. Employees need to know that the employer cares about "me as a person" as opposed to the "job I do."

Fire Science

Advisor:

Susan Wolff

A variety of Fire Science classes are available to paid and volunteer firefighters based on needs and demand.

COMMUNITY EDUCATION

Education

Advisor:

Marian L. Roberts

By 1990, all elementary and secondary teacher education programs in Oregon must have implemented five-year teacher education curricula. The State Board of Higher Education has directed all state colleges and universities to do so.

All students preparing to become teachers will select an academic major, complete a bachelor's degree, and then apply for admission to the teacher education program, which will require at least one year of study beyond the bachelor's degree. Upon successful completion of the fifth year, students will be eligible for state certification.

Some colleges and universities may include an Education minor.

Specific education requirements vary slightly at different four-year schools. Students planning to become teachers are urged to make an early decision about their intended transfer institutions and to work closely with an advisor in scheduling their programs.

Associate of Arts in Elementary Education

Education	9
ED 200 Intro to Education	3
ED 210 Theory & Practicum II	5
ED 210A Theory and Practicum II—Seminar	1
Sophomore Block (ED 200 Prerequisite)	
Composition	9
WR 121 English Composition	3
WR 122 English Composition	3
WR 123 English Composition	3
Speech	3
SP 112 Fundamentals of Speech	3
*Math	4
Math competency at the Math 101 College Algebra level or MT 101 College Algebra	4
Computer Science	3
Physical Education & Health	6
PE 185 Activity Courses	3
PE 231 Lifetime Wellness	3
Science	12
BI 101 General Biology	4
BI 102 General Biology	4
GS 106 Physical Science	4
Humanities	9
EN 104 Intro to Literature	3
EN 105 Intro to Literature	3
EN 106 Intro to Literature	3
Psychology	6
PY 201 General Psychology	3
PY 202 General Psychology	3

Social Sciences 12

Suggestions:

Geography	3
Sociology, Political Science, Anthropology	9

Creative Arts Courses 9 (Distributed Among the Following)

Art, Theatre and Music (9 credits)

Suggestions:

AR 102 Art Appreciation	3
MU 101 Music Fundamental	3
TA 121 Fundamentals of Acting	3

Electives 8

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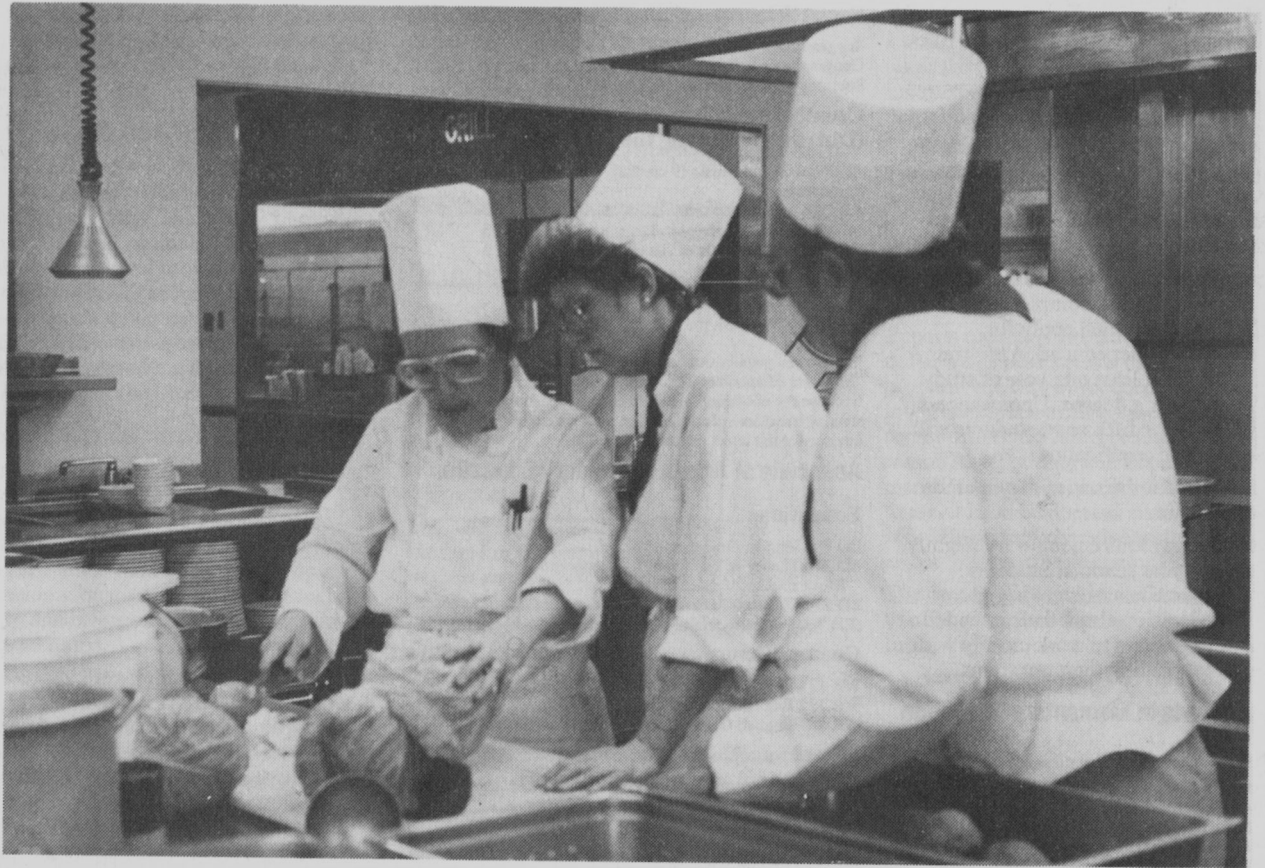
*Please see your Education Advisor regarding the "Math for Elementary Teachers" sequence. Because the education program in Oregon is in a state of transition, please contact your education advisor for the latest developments.

Associate of Arts in Secondary Education

Education	9
ED 200 Intro to Education	3
ED 210 Theory & Practicum II—Sophomore Block	5
ED 210A Theory & Practicum II—Seminar	1
(ED 200 is a prerequisite for Sophomore Block)	
Composition	9
WR 121 English Composition	3
WR 122 English Composition	3
WR 123 English Composition	3
Speech	3
SP 112 Fundamentals of Speech	3
Physical Education & Health	6
PE 185 Activity Courses	3
PE 231 Lifetime Wellness	3
Humanities/Arts	9
EN 104 Intro to Literature	3
EN 105 Intro to Literature	3
EN 106 Intro to Literature	3
Math/Science	16
MT 100 Intermediate Math	4
Laboratory Science - one-year sequence	12
Computer Courses	3
Social Science	9
Suggestions: Geography, Sociology, Political Science, Anthropology	9
Psychology	6
PY 201 General Psychology	3
PY 202 General Psychology	3
Major Requirements	20
Courses to be selected in area of concentration	

90

Because the education program in Oregon is in a state of transition, please contact your education advisor for the latest developments.



CULINARY ARTS & HOSPITALITY SERVICES DEPARTMENT

Faculty:

Scott Anselm, Department Chairman

The Culinary Arts and Hospitality Services Department offers theory courses and hands-on training in all facets of the hospitality industry: food preparation, dining room service, food and beverage management, marketing and finance, facilities management, banquet and conference management and off-premise catering. The curriculum is designed for students entering the hospitality industry, for advanced students who have previous industry experience and for those planning to open their own restaurant or resort.

The program is based on hands-on training supplemented by lectures and demonstrations. Students prepare and serve a total of 400 meals a day for six different types of operations: a full-service restaurant, natural foods and short-order outlets, a bake shop, a cafeteria and a catering service.

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

During the first two weeks of class, students are required to purchase hand tools, non-slip work shoes, a kitchen uniform and a dining room uniform. Students will keep their uniforms clean and tools well maintained; students will be neat and properly attired at all times.

Because this program offers intensive professional and technical training in a production setting, absences and tardies are not accommodated.

Chef trainee candidates need a combination of cooking skills and management abilities, including computing, reading, writing and speaking.

Management candidates should enjoy frequent contact with the public and demonstrate effective oral communication. Candidates also must exhibit organizational and leadership abilities.

The department recommends that candidates for the Chef Training and the Management options fulfill the college math, speech, composition and computer literacy requirements during their first year. The department also recommends completion of the accounting requirement before starting the Management options.

Full-time students spend an average of 20 hours a week in production and about 10 hours a week attending lectures, demonstrations and seminars. Successful students manage their time and energy carefully to take full advantage of the opportunities in the program. Students develop a strong foundation of theory and skill in food preparation, dining room service and basic management before they may advance to more specialized training in cooking or management. All first-year students take the same core curriculum, which emphasizes basic skills in sanitation, safety, table service and short-order and quantity cooking. First-year students take part in the preparation and service of cooked-to-order foods in the department restaurant.

Students earning the Associate of Science degrees offered by the department are in great demand, and, upon employment, they may advance rapidly to sous chef, banquet manager, dining room manager or assistant manager. With department approval, students may enroll for more than one option.

Students with advanced skills may enter the **Chef Training** second-year program upon department approval. This option combines advanced cooking techniques with theory and application courses in menu planning and kitchen management.

The **Restaurant and Catering Management** option emphasizes training for line management of restaurants, catering firms and banquet operations. Students refine dining room skills, manage the full-service restaurant and catering service, and increase their culinary skills in regional American and selected European Cuisines. Entry requires department approval. Six credits of Cooperative Work Experience are required.

Conference & Resort Option. After acquiring the fundamental skills in cooking and restaurant operations in the first year, students who enter the Conference and Resort option will learn the skills of front desk procedure, marketing, cash handling and controls through Cooperative Work Experience in an actual hotel, motel, conference or resort setting. There is also a demanding schedule of accounting and business classes the student should be prepared to pursue.

Transfer Program. Students who plan to pursue a four-year degree in Hotel, Restaurant and Tourism Management at Oregon State University may complete freshman and sophomore requirements while earning an Associate of Arts degree at LBCC. One-on-one advising is done with the chairman of the Culinary Arts & Hospitality Services Department.

The **Food Preparation Lab**, providing hands-on experiences, contains virtually all types of equipment found in restaurant, hotel and cafeteria kitchens. The Lab includes an a la carte restaurant kitchen, natural foods and short-order kitchen, a bake shop and the cafeteria/banquet kitchen, with butcher, garde manger, vegetable, entree, soup and stock stations.

Associate of Applied Science: First Year All Options

CAHS Required Courses

Fall - First year

8.310 Foodservice Practicum I	5
8.336 Foodservice Sanitation	1
8.337 Station, Tools & Culinary Techniques	3
8.345 Service Techniques	1
8.354 ***Banquet & Buffet Lab E.....	1
8.373 Costings	1
8.402 Baking Fundamentals	1
8.404 Cheese, Eggs & Breakfast Cookery	1
8.407 Pantry	1
8.411 Vegetable Cookery	1

Winter

8.311 Food Service Practicum II	6
8.341 Soups & Sauces	2
8.350 Banquet & Buffet Lab A	1
8.405 Seafood & Poultry Cookery	1
8.414 Garde Manger	1
8.415 Adv. Baking & Pastry	2

Spring

8.312 Foodservice Practicum III	6
8.351 Banquet & Buffet Lab B	1
8.409 Meats	3
8.419 Nutrition & Special Diets	1
BA 101 Intro to Business	4

Other Required Courses

2.515* Business Math	4
HE 252* First Aid	3
HE 261* CPR	1

Second Year - Chef Training Option

General Education Credits20

Fall

8.321 Adv. Cooking Management I	6
8.354*** Banquet & Buffet Lab E.....	1
8.368 Creating the Menu	1
8.418 Beverage Operations & Services	2

Winter

8.322 Adv. Cooking Management II	6
8.352 Banquet & Buffet Lab C	1
BA 160 Purchasing	3

Spring

8.323 Adv. Cooking Management III	6
8.353 Banquet & Buffet Lab D	1

Other Required Courses

BA 206 Principles of Management	3
SD 113 Human Relations in Business	3
SP 111* Interpersonal Speech	3
WR 121* English Composition	3
*Electives	6

Suggested Electives

1.110 Elements of Algebra	4
2.140 Promotional Strategy	3
4.202 Math II	4
9.504 Employee Training	3
9.514 Cost Control for Supervisors	3
AR 291 Sculpture: Figure Study	3
BA 250 Small Business Management	3
CS 100* Computer Literacy	3
FN 225 Nutrition	4
SD 101 Elements of Supervision	3
SP 112 Fundamentals of Speech	3
*Meets General Education Requirements	
**May be taken any term following completion of First-Year Requirements	
***Optional	

Major Credits75

95

Second Year - Conference and Resort Management

General Education Credits20

Fall

1.280** CWE: Conference & Resort Mngmt.	3
8.354*** Banquet & Buffet Lab E.....	1
8.418 Beverage Operations & Services	2

Winter

1.280** CWE: Conference & Resort Mngmt.	4
8.352 Banquet & Buffet Lab C	1
BA 160 Purchasing	3

Spring

8.353 Banquet & Buffet Lab D	1
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Other Required Courses

2.518 Business Law	4
2.530 Practical Accounting I	3
BA 206 Principles of Management	3
BA 223 Principles of Marketing	4
SD 113 Human Relations in Business	3
SP 111* Interpersonal Speech	3
WR 121* English Composition	3
**Electives	9

Suggested Electives:

1.110 Elements of Algebra	4
2.140 Promotional Strategy	3
4.202 Math II	4
9.504 Employee Training	3
9.514 Cost Control for Supervisors	3
AR 291 Sculpture: Figure Study	3
BA 250 Small Business Management	3
CS 100* Computer Literacy	3
FN 225 Nutrition	4
SD 101 Elements of Supervision	3
SP 112 Fundamentals of Speech	3

*Meets General Education Requirements

**May be taken any term following completion of First-Year Requirements

***Optional

Major Credits78

98

Second Year - Restaurant and Catering Management

General Education Credits20

Fall

8.321 Adv. Cooking Management	6
8.354***Banquet & Buffet Lab E	1
8.368 Creating The Menu	1
8.418 Beverage Operations & Services	2

Winter

8.322 Adv. Cooking Management II	6
8.352 Banquet & Buffet Lab C	1
BA 160 Purchasing	3

Spring

1.280** CWE: Management Projects	6
8.353 Banquet & Buffet Lab D	1

Other Required Courses

2.530 Practical Accounting I	3
BA 206 Principles of Management	3
BA 223 Principles of Marketing	4
SD 113 Human Relations in Business	3
SP 111* Interpersonal Speech	3
WR 121* English Composition	3
*Electives	6

Suggested Electives:

1.110 Elements of Algebra	4
2.140 Promotional Strategy	3
4.202 Math II	4
9.504 Employee Training	3
9.514 Cost Control for Supervisors	3
AR 291 Sculpture: Figure Study	3
BA 250 Small Business Management	3
CS 100* Computer Literacy	3
FN 225 Nutrition	4
SD 101 Elements of Supervision	3
SP 112 Fundamentals of Speech	3
*Meets General Educational Requirements	
**May be taken any term following completion of First-Year Requirements	
***Optional	

Major Credits82

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CULINARY ARTS & HOSPITALITY SERVICES

Associate of Arts in Hotel, Restaurant and Tourism Management

Fall - First Year

8.310 Food Service Practicum I	5
8.336 Food Service Sanitation	1
8.337 Stations and Tools	3
8.354 Banquets & Buffet E	1
MT 101 College Algebra	4
WR 121 English Composition	3

Winter

8.311 Food Service Practicum II	6
8.351 Banquets & Buffet A	1
*Humanities and/or Art Courses	3
**LAB SCI Laboratory Science	4
MT 162 Math Biol/Mngmt/Soc. Sc.	4
PE 185 Physical Education	1

Spring

BA 131 Intro to Information Systems	4
LAB SCI Laboratory Science	4
MT 163 Math Biol/Mngmt/Soc. Sc.	4
PE 185 Physical Education	1
PE 231 Lifetime Wellness	3
WR 214 Business English	3

Fall - Second Year

BA 226 Business Law	4
EC 201 Principles of Economics I	3
HRTM 104 Intro to Hotel & Restaurant Mngmt. .	3
*Humanities and/or Art Courses	3
**LAB SCI Laboratory Science	4
PE 185 Physical Education	1

Winter

BA 211 Principles of Accounting	4
BI 234 Microbiology	4
EC 202 Principles of Economics II	3
HRTM 105 Intro to Hotel & Restaurant Mngmt. .	3
*Humanities and/or Art Courses	3

Spring

BA 235 Intro to Business Statistics	4
EC 203 Principles of Economics III	3
FN 225 Nutrition	4
HRTM 106 Hotel and Restaurant Organization....	3
SP 112 Fundamentals of Speech	3



Note: Block transfer of 17 vocational credit hours will be awarded upon completion of three terms at Oregon State University.

American Studies

Architecture/Landscape Architecture

Art

English (EN prefix only)

Foreign Languages (except first year)

History (a Social Science at LBCC)

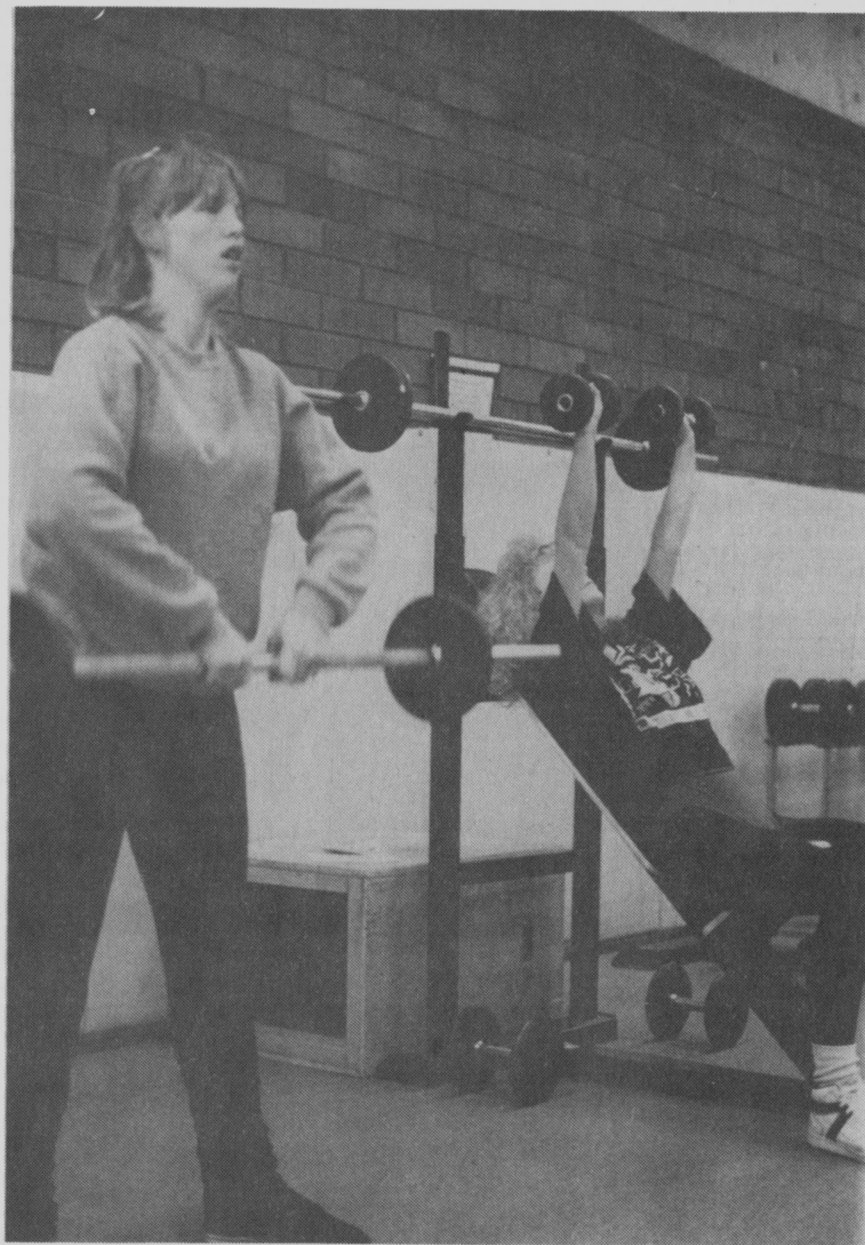
Music

Philosophy-Religious Studies

Theatre Arts

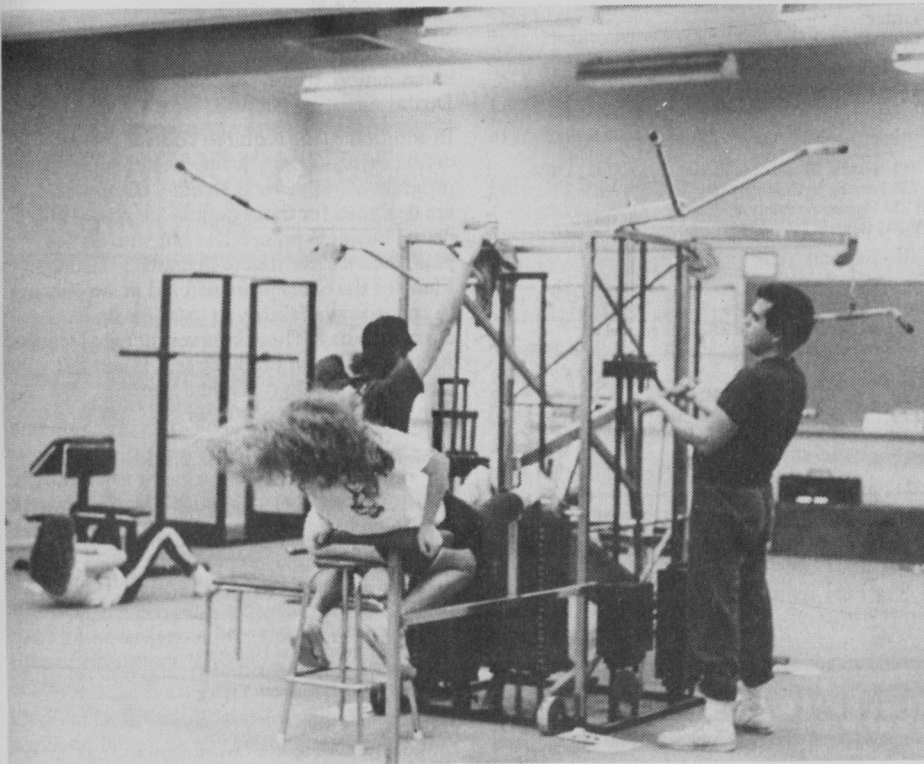
*Humanities and/or Art Courses

**Biology or Chemistry recommended.



HEALTH OCCUPATIONS & P.E. DIVISION

Director: H. Richard McClain



This division provides career preparation for health occupations, as well as classes in physical education, personal health and first aid.

Programs in health-related fields include associate degree nursing (RN), nursing assistant, dental assistant, emergency medical technician and related health areas. Preparation includes both classroom and clinical experience. Students completing these programs are qualified to pursue various health service occupations in hospitals, nursing homes, clinics and doctors' or public health offices.

Activity classes are offered for students who must take physical education to meet graduation requirements and for those desiring opportunities for skill development and increased physical fitness.

Personal health, first aid, lifetime wellness and stress management also are a part of the division's curriculum.

The Health Occupations and Physical Education Division encourages students to make career choices based on interests, needs and abilities, without regard to the traditional roles of men, women or minorities.

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

ASSOCIATE DEGREE NURSING

Faculty:

Jacqueline Paulson, Department Coordinator
Vicki Beck, Evon Bergstrom, Rachel
Hagfeldt, Mary Kolbe, Judy Kraft

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 bedside nurses (RN) oriented to patient care. Clinical facilities are the hospitals, nursing homes and health agencies in Linn and Benton counties and the state hospital in Salem.

Following acceptance into the nursing program (See "Admission to Health Occupations 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 130 Elementary Physiological Chemistry and 1.110 Elements of Algebra as program prerequisites.

The student is graded in all aspects of the program, including clinical practices. Evening clinicals may be required. The student is expected to participate on a daily basis; absence is made up through agreement with the instructor.

All nursing courses are to be completed at Linn-Benton Community College unless special permission for transfer credit is granted. Related courses may be taken prior to or concurrent with enrollment in the nursing program.

Students unable to meet the required competency level for the program may be advised of other alternatives to meet their goals. Petitions to complete the nursing program at a later time will be reviewed by the program coordinator and the health occupations director.

The Associate Degree Nursing curriculum leads to an Associate of Applied Science degree. Graduates are eligible to take the National Council Licensing Examination for Registered Nurse licensing (NCLEX-RN).

Associate of Applied Science in Nursing

General Education Requirements 17-20

See graduation requirements for Associate of Applied Science degree

1.110 Elements of Algebra is required.

SP 111 Interpersonal Communication is required.

AN 103 Introduction to Anthropology or SO 204

General Sociology substitutes for the elective requirement.

Major Requirements 86

Fall - First Year

5.711 Nursing I	6
5.732 Drug Administration	2
BI 231 Human Anatomy & Physiology	4
FN 225 Nutrition	4

Winter

5.712 Nursing II	8
BI 232 Human Anatomy & Physiology	4
BI 234 Microbiology	4
PY 201 General Psychology	3

Spring

5.713 Nursing III	9
5.726 Nursing in Contemporary Society I	1
BI 233 Human Anatomy & Physiology	4
PY 202 General Psychology	3

Fall - Second Year

5.721 Nursing IV	10
AN 103 Introduction to Anthropology or SO 204	
General Sociology (substitutes for general ed requirement)	3

Winter

5.722 Nursing V	10
5.727 Nursing in Contemporary Society II	1

Spring

5.723 Nursing VI	10
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Electives 3

Additional humanities courses

106-109

DENTAL ASSISTANT

Faculty:

Patty Parker

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 receptionist procedures. Clinical facilities include a modern, fully equipped, on-campus dental clinic and cooperating dental offices throughout Linn and Benton counties.

This program accepts only one class of limited size each year, which begins in fall term. (See "Special Admissions Programs" in the "Entering the College" section of this catalog.)

Continuation in the program is contingent on satisfactory completion of course work each preceding term. Exceptions will be considered on an individual basis.

The Dental Assistant curriculum leads to a one-year certificate. Graduating students are awarded the state of Oregon Expanded Function Dental Assistant (EDFA) certificate and are eligible for the state of Oregon Radiological Proficiency certificate. Graduates also are eligible to take the national Certified Dental Assistant (CDA) examination, which is administered by the Dental Assisting National Board, Inc.

In addition to the required courses for the dental assisting certificate, the dental assisting program offers several elective courses that are designed for those people interested in dental business procedures but who do not plan to earn a certificate in dental assisting. Many of the courses are offered in the evening to enhance availability to people who work during the day. These courses include Dental Anatomy; Dental Procedures I, II and III; Dental Terminology; Dental Records; and Dental Business Procedures.

One-Year Certificate in Dental Assisting

Major Requirements 61

Fall

4.220 Integrated Basic Science I	4
5.461 Dental Radiology I	2
5.494 Clinical Practice I	4
5.497 Dental Health Education I	1
5.500 Oral Anatomy and Histology	2
OA 121A Keyboarding	2
OA 121B Basic Production Typing	1

Winter

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

Spring

5.453 Dental Pathology	2
5.463 Dental Radiology III	1
5.485 Dental Materials II	3
5.489 Expanded Duties II	2
5.491 Dental Office Records	1
5.492 Dental Office Emergencies	1
5.496 Clinical Practice III	4
5.499 Dental Health Education III	1
PY 216 Social Psychology I	3

(Continued on next page)

HEALTH OCCUPATIONS & P.E.

Summer	
5.510 Office Practicum	8
HE 261 CPR	1

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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	
CH 104, 105, 106 General Chemistry	
MT 100 Intermediate Algebra	
PE 185 (2 terms) activity classes	
PY 201, 202, 203 General Psychology	
WR 121, 122 English Composition	

EMERGENCY MEDICAL TECHNICIAN**Faculty:**

Mary Ann Vaughan, Department Chairwoman
Neal Conrad

The Emergency Medical Technician program is seven terms in length, including one summer term. It is a competency-based program reflecting the educational goals and objectives of the National Standard Emergency Medical Technician-Paramedic Course.

The EMT program is designed to provide the graduate with the technical competencies to function as an EMT-1 through EMT-IV. In addition, the program will provide opportunity to increase understanding and skills through related course work, particularly in basic science.

Clinical facilities utilized are ambulance services, hospitals and community health agencies throughout the state of Oregon. Clinical dates are scheduled during days, evenings and some weekends.

Special admissions procedures for the EMT program are outlined in "Admissions to Health Occupation Programs" in the "Entering the College" section of the catalog.

Individual courses also are available for students seeking EMT competencies but not enrolled in the full-time program.

The Emergency Medical Technician curriculum leads to a certificate. Graduates are eligible to take the certification exam through the Oregon State Health Division and the Board of Medical Examiners.

The Emergency Medical Technician curriculum is being revised because of new national guidelines. This curriculum is for reference only.

Certificate in Emergency Medical Technician**Major Requirements75****Fall - First Year**

5.630 Medical Terminology	3
9.313 EMT I	8
BI 231 Human Anatomy & Physiology	4

Winter

2.671 Medical Law & Ethics	2
9.314 EMT II	7
BI 232 Human Anatomy & Physiology	4

Spring

1.280 CWE	2
9.320 CPR Instructor	1
BI 233 Human Anatomy & Physiology	4

Fall - Second Year

5.733 Pharmacology	3
9.315 EMT III A	7

Winter

1.280 CWE	1
9.315 EMT III B	7

Spring

1.280 CWE	1
9.316 EMT IV A	10
9.322 Patient Assessment	1

Summer

9.316 EMT IV B	10
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Electives 11

Math	4
PE	1
Speech	3
Business (Select one from BA 222, BA 224, SD 101, SD 107, SD 113)	3

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NURSING ASSISTANT/ HOME HEALTH AIDE**Faculty:**

Missy Black

The Nursing Assistant program is a 100-hour course of study that prepares students for positions as nursing assistants in hospitals and nursing homes. Graduates often use this program as a starting point toward related health careers. Through classroom experience and on-the-job training under the supervision of a professional nurse, students gain the background needed to care for the moderately ill or convalescent patient.

Students interested in applying for this program should contact the Health Occupations Office at 967-6107. Instructor permission is required for entry into this program.

The Nursing Assistant curriculum leads to a certificate.

The Home Health Aid program is a 60-hour course of study preparing students, through classroom lecture and clinical experience, to provide physical care for clients in a home setting. Oregon Nursing Assistant Certification is required by the State Board of Nursing as a prerequisite to the Home Health Aide class.

Certificate in Nursing Assistant**Major Requirements5**

5.406 Nursing Assistant	5
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5

5.400 Home Health Aide (optional)	4
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PHYSICAL EDUCATION AND HEALTH**Faculty:**

Verlund Kimpton, Department Chairman
David Bakley, Arlene Crosman, Greg Hawk,
Jean Irvin, Debbie Prince

The Physical Education and Health Department provides a comprehensive program for students who want to gain knowledge about the value of preventive and corrective health practices and who want to participate in physical activities to gain and maintain physical fitness.

Health-related instruction includes theory and application of facts and attitudes for the health of the individual and the society.

Physical activity is provided through three distinct learning and participation opportunities: Students may learn lifetime recreational skills; developmental courses stress conditioning of the body and maintenance of a specific level of physical condition; and team sport courses provide a high level of conditioning and activity.

INDUSTRIAL/ APPRENTICESHIP DIVISION

Director: Michael Patrick



The Industrial and Apprenticeship Division offers programs of study in the following subject areas: auto body repair, automotive technology, farrier science, heavy equipment mechanics/diesel, manufacturing technology, metallurgy technology, non-destructive testing, refrigeration/heating/air conditioning and welding.

Courses are designed to provide training to students seeking initial employment opportunities within their chosen field. Upgrading and skill improvement in new technologies and production techniques are provided for those already employed.

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

The Associate of Applied Science degree may be earned upon completion of specified curriculums within the division.

Apprenticeship Program

The Industrial/Apprenticeship Division serves as the center for apprenticeship training. Specialized curricular offerings have been developed to meet the needs of apprentices working full time in various trades. Individualized learning materials have been adapted for the apprentices in those trades which have a limited audience for related training.

Apprenticeship is a two-fold program: the indentured apprentice learns skills through on-the-job work experience and receives approximately 144 clock hours of related training in the classroom per year.

Classes currently are being offered for the following crafts and trades: inside wireman, machinist, industrial maintenance mechanic, industrial pipefitters, industrial welder, manufacturing plant electrician, power lineman, industrial instrumentation and industrial millwright. Being an indentured apprentice is a condition for entering related training classes.

Upon completion of the required training program, the apprentice is eligible to take a state-required examination of journeyman standing. LBCC also offers the journeyman the opportunity to earn an associate degree in the industrial trades. The recognized journeyman will be granted 45 credits toward the industrial crafts and trades degree. An additional 50 credits must be earned; of these credits, 20 must be general education courses.

Information on entrance procedures and requirements for apprenticeship-related training is available from the Industrial/Apprenticeship Division office.

AUTO BODY REPAIR

Faculty

Clifford Harrison, Department Chairman
Daryl Hogan

The Auto Body Repair program is designed to develop the skills and knowledge necessary in vehicle collision repair and refinishing. The program's curriculum emphasizes particular fields, such as frame straightening, supervision, custom painting and insurance adjusting.

The Auto Body Repair program combines variable-credit block classes with individualized, hands-on instruction. This system places students of all training levels within a block class, thereby creating an industry-type environment.

Block classes are held Monday through Thursday. Students are encouraged to participate in the Friday open laboratory session. This six-hour study skills period offers opportunity for special learning activities and additional credit.

Previous auto body repair experience may be accredited through a performance test and/or written test.

A variety of auto body hand tools are required for use in the courses offered. In addition to the usual books and supplies, students should expect to spend between \$280 and \$325 over the two-year period for a personal set of tools.

The Auto Body Repair program supports student participation in Vocational Industrial Clubs of America (VICA) and student competition in the United States Skill 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 VICA state skills contest. Any student who earns a first place at state level also will have expenses paid to participate in the national competition.

The Auto Body Repair curriculum leads to an Associate of Applied Science degree.

Associate of Applied Science in Auto Body Repair

General Education Requirements 20

See graduation requirements for Associate of Applied Science degree.

2.515 Business Math with Calculators recommended for math requirement.

Major Requirements 72

Fall - First Year

3.511 Auto Body Basic 10
4.151 Welding I 2

Winter

3.512 Auto Body Procedures 10
4.152 Welding II 2
HE 125 Occupational Safety 3

Spring

3.513 Minor Collision Repair 10
4.153 Welding III 2

Fall - Second Year

3.514 Frame & Unibody Repair 10

Winter

3.515 Major Collision Repair 10
SD 113 Human Relations in Business (may be used to meet general ed elective requirements) ... 3

Spring

3.516 Advanced Shop Procedures 10

Electives 4

3.195 Auto Body Skills or approved CWE

FARRIER SCIENCE

Faculty:

Larry Bewley

Dates for Farrier School terms are:

Fall Term 1989: Sept. 11-Dec. 14

Winter Term 1990: Jan. 2-April 5

Spring Term 1990: April 16-July 19

Fall Term 1990: Sept. 10-Dec. 13

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 frequent 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 \$450 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: Director, Industrial 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:

October 30, 1989 - February 15, 1990

February 19, 1990 - May 31, 1990

October 29, 1990 - February 14, 1991

The Farrier Science curriculum leads to a certificate.

(Continued on next page)

INDUSTRIAL/APPRENTICESHIP

Certificate in Farrier Science

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

23

INDUSTRIAL SKILLS
LAB

Faculty:
Elgin Rau

The Industrial Skills Lab is designed to provide basic mechanical skills services for students enrolling in Mechanical Technology, Refrigeration/Heating/Air Conditioning and other industrial technologies.

The Industrial Skills Lab provides the following instructional services:

1. Diagnostic pre-tests in order to determine individual levels of competency.
2. An individual course of study for each student based on pre-test results.
3. Evaluation of each student's progress in mechanical skills knowledge.
4. Self-paced instructional modules relevant to the student's major field of study.
5. An opportunity for those knowledgeable and skilled individuals to challenge Industrial Skills Lab course work for credit.

All Automotive and Heavy Equipment Mechanics/Diesel students are expected to demonstrate an above average level of proficiency and evidence of satisfactory skill-level development during their first year at LBCC.

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

MANUFACTURING
TECHNOLOGY**Faculty:**

Douglas Chambers, Department Chairman
John Griffiths

The Manufacturing Technology curriculum is designed to develop skills in a wide variety of machining processes, including operating the drill press, engine lathe, tracer lathe, vertical and horizontal milling machine, C/N/C milling machine, C/N/C lathe, 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, including 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 and in employer-employee relations are emphasized continually.

The lab facilities and the 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 for students entering the program is optional. It is recommended, however, that the student have mechanical interest or some demonstrated aptitude toward manipulative skills.

The Manufacturing 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 costs 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 Manufacturing Technology curriculum leads to an Associate of Applied Science degree.

Associate of Applied Science in
Manufacturing Technology

General Education Requirements 16-20

See graduation requirements for Associate of Applied Science degree.
4.202 math II is required.

Major Requirements 83

Fall - First Year

3.403 Manufacturing Technology I	9
3.412 Machine Tool Programming I	2
4.128 Drafting Fundamentals	4

Winter

3.404 Manufacturing Technology II	9
3.413 Machine Tool Programming II	2
HE 125 Occupational Safety	3

Spring

3.405 Manufacturing Technology III	9
3.414 Machine Tool Programming III	2
4.204 Math III (may be used to meet general ed elective requirements)	4

Fall - Second Year

3.406 Manufacturing Technology IV	9
3.409 Computer Integrated Mfg I	2
4.151 Welding I	2

Winter

3.407 Manufacturing Technology V	9
3.410 Computer Integrated Mfg II	2
3.446 Metals Investigation & Evaluation	2
4.152 Welding II	2

Spring

3.408 Manufacturing Technology VI	9
3.411 Computer Integrated Mfg III	2

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MECHANICAL
TECHNOLOGY**Faculty:**

David E. Carter, Department Chairman
Mike Henich, Allan Jackson, Gene Mayer,
Carl Reeder

The Mechanical Technology department offers programs in automotive technology and heavy equipment mechanics/diesel. The curriculums offered lead to an Associate of Applied Science degree.

Automotive Technology

The Automotive Technology program provides students with the facilities, equipment and instruction necessary to develop skills and abilities in auto mechanical work. The curriculum is designed to permit student entry into the program at the beginning of each term.

Upon completing the program, a student may enter the auto service trades as an auto mechanic, specialty shop operator or in a related position. Starting salaries range from \$5 to \$11 per hour.

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

The 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.

The Automotive Technology curriculum leads to an Associate of Applied Science degree.

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

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

Associate of Applied Science in Automotive Technology

General Education Requirements 20

See graduation requirements for Associate of Applied Science degree.
4.202 Math II is required.

Major requirements 84

3.290 Industrial Skills Lab I	3
3.291 Industrial Skills Lab II	3
3.292 Industrial Skills Lab III	3
3.295 Power Train Systems	10
3.296 Suspension/Braking Systems	10
3.297 Electrical & Fuel Systems	10
3.298 Automotive Tune-up	10
3.299 Automotive Engines	10
3.300 Automatic Transmissions	10
3.447 Metallurgy for Mechanics	2
3.529 Mobile Air Conditioning	3
4.130 Machine Processes	2
4.151 Welding I	2
HE 125 Occupational Safety	3
SD 113 Human Relations in Business (may be used to meet general ed elective requirements) ...	3

Electives 3

3.301 Service & Repair Practices or approved CWE.

Heavy Equipment Mechanics/Diesel

The curriculum of the Heavy Equipment Mechanics/Diesel program is designed to give the student a balance of theory and practical experience gained by diagnosing, servicing, repairing and rebuilding components and live equipment.

Diesel mechanics repair and maintain diesel engines, which power railroad trains; ships; generators; and construction, highway and farm equipment. To become a diesel mechanic, a student should have a mechanical aptitude and a knack for shop work, mathematics and science. Being able to read with understanding also is essential because considerable time is spent in reading service manuals.

Students may be admitted to advanced standing upon confirmation of appropriate education or experience, which is evaluated through transcripts, work experience and competence examination. Permission of the division director is required to gain advanced standing.

The Heavy Equipment Mechanics/Diesel 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 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 \$500 for a personal set of diesel mechanic hand tools.

Upon completing the program, the student may gain employment in service departments of distributors and dealers that sell diesel-powered autos, trucks, and farm and construction equipment. Bus lines, railways, and truck and marine industries also employ diesel mechanics. Electric power plants, local industries, and both state and federal government have a great need for trained mechanics. Starting salaries range from \$1,000 to \$1,500 per month.

The Heavy Equipment Mechanics/Diesel curriculum leads to an Associate of Applied Science degree.

Industrial Skills Lab I, II and III are required courses 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 3.301 Service & Repair Practices.

Associate of Applied Science in Heavy Equipment Mechanics/Diesel

General Education Requirements 20

See graduation requirements for Associate of Applied Science degree.
4.202 math II is required.

Major Requirements 87

3.295 Power Train Systems	10
3.296 Suspension/Braking Systems	10
3.297 Electrical & Fuel Systems	10
3.128 Fuel Injection Systems	10
3.129 HE/Diesel Engines	10
3.130 HE/Diesel Tune-up	10
3.132 Pneumatic Braking & Access Syst.	2
3.134 Industrial Fluid Power	3
3.290 Industrial Skills Lab I	3
3.291 Industrial Skills Lab II	3
3.292 Industrial Skills Lab III	3
3.529 Mobile Air Conditioning	3
4.151 Welding I	2
4.152 Welding II	2
HE 125 Occupational Safety	3
SD 113 Human Relations in Business (may be used to meet general ed requirements)	3

Technical Elective 2

3.131 Heavy Equipment Service & Repair or approved CWE

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METALLURGY TECHNOLOGY

Faculty:

Seaton McLennan, Department Chairman

The Metallurgy 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 solid state ultrasonic digital readout and programmable systems.

A one-year certificate in Non-destructive Testing is offered with standards approved by the American Society of Non-destructive Testing (ASNT). Preparatory course work for taking QC-1 Inspection examination is included in this program.

(Continued on next page)

INDUSTRIAL/APPRENTICESHIP

Students may choose to emphasize their work at LBCC in occupations involving the extraction, purification, treatment, fabrication, examination and testing of materials; the valuation of industrial processes; or quality control. Students completing prescribed courses may qualify for a certificate of completion according to the American Society of Non-destructive 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 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 Technology graduates is excellent, especially for those willing to relocate. Past experience indicates that after hiring their first LBCC Metallurgy students, employers are seeking additional employees from the program. Recent metallurgy salaries range from \$15,000 to \$40,000 annually, with excellent benefits and educational opportunities.

Students may work in industry as metallographers and as technicians in areas such as quality control, X-ray, ultra-sonic, materials testing, heat treatment, magnetic particle, dye penetrant or research and development.

The Metallurgy Technology program supports student participation in Vocational Industrial Clubs of America (VICA) and student competition in the United 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 Technology

General Education Requirements20

See graduation requirements for Associate of Applied Science degree.

1.110 Elements of Algebra is required.

Major Requirements75

Fall - First Year

3.448 Welding Processes	2
6.281 Non-destructive Testing I	3
6.293 Intro to Metallurgy	4
GS 104 Physical Science (may be used to meet general ed elective requirements)	4

Winter

3.445 Welding Metallurgy II	4
4.100 Blueprint Reading	2
6.276 Physical Metallurgy	4
6.282 Non-destructive Testing II	3
6.298 Metallography I	3

Spring

4.120 Fundamentals of Specification	3
6.283 Non-destructive Testing III	3
6.299 Metallography II	3
HE 125 Occupational Safety	3

Fall - Second Year

4.122 Strength of Materials	3
4.161 Materials Testing I	3

Winter

4.162 Materials Testing II	3
6.285 Ultrasonics	4
CH 101 General Chemistry (may be used to meet general ed elective requirements)	4

Spring

4.130 Machine Processes	2
4.163 Materials Testing III	3
6.284 Radiography	4
6.294 Process Metallurgy	4
CH 102 General Chemistry (may be used to meet general ed elective requirements)	4

Technical Electives2

3.442 Industrial Technical Society or approved CWE	2
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One-Year Certificate in Non-destructive Testing

Major Requirements42

Fall

1.103 Occupational Speech	3
1.110 Elements of Algebra	4
3.448 Welding Processes	2
6.281 Non-destructive Testing I	3
HE 125 Occupational Safety	3

Winter

3.445 Welding Metallurgy II	4
3.935 Interpreting Metal Fab Drawings	3
6.282 Non-destructive Testing II	3
6.285 Ultrasonics	3

Spring

4.130 Machine Processes	3
4.251 Fundamentals of Welding Inspection	3
6.283 Non-destructive Testing III	3
6.284 Radiography	4

42

REFRIGERATION, HEATING AND AIR CONDITIONING

Faculty:

Jack Campbell, Department Chairman
Peter Martens

The Refrigeration, Heating and Air Conditioning program is designed to help students acquire mechanical skills necessary to install, maintain and repair refrigeration, heating, air conditioning and solar equipment and accessory units common in residences and business.

Working on refrigeration, heating and air conditioning systems requires a high degree of skill and precision. Success requires good work and safety habits, sound judgment, and the ability to plan ahead and work cooperatively with other skilled craftsmen.

Entering students should have good math and reading skills or be prepared to improve them during the first terms of the program. Courses relating to the program include math, electricity, welding and sheet metal. Students learn to read, interpret and work from sketches, layouts and blueprints; develop knowledge of standard practices, methods, tools and materials of the trade; analyze machine operation and diagnose faulty performance; and develop skills in making replacements or repairs.

A variety of tools and specialized instruments are required. In addition to the usual books and supplies, students should expect to spend about \$500 over the two-year period for a personal set of tools.

Job prospects in this field are good. Beginning pay ranges from \$6 to \$10 per hour. Qualified workers may advance to positions as supervisors, with pay ranging from \$15 to \$24 per hour.

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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 curriculum leads to an Associate of Applied Science degree.

Associate of Applied Science in Refrigeration, Heating and Air Conditioning

General Education Requirements20

See graduation requirements for Associate of Applied Science degree.
4.202 Math II is required.

Major Requirements78

Fall - First Year

- 3.293 Industrial Skills Lab 1
- 3.552 Trade Electrical Components I 3
- 3.580 Intro to Ref/Heat/AC 6

Winter

- 3.553 Trade Electrical Components II 3
- 3.583 Principles of Refrigeration 6
- 3.584 Sheet Metal Basics 4
- 4.100 Blueprint Reading 2

Spring

- 3.585 Principles of Heating 6
- 3.586 Mech Installation Procedures 4
- 4.151 Welding I 2

Fall - Second Year

- 3.527 Alternate Energy Sources 4
- 3.588 Pneumatic Controls 4
- 3.589 Diagnosis, Service and Repair 6
- 4.204 Math III (may be used to meet general ed requirement) 4

Winter

- 3.587 Operation Principles of AC and Air Movement 6
- 3.590 Control Applications 4
- HE 125 Occupational Safety 3

Spring

- 3.591 Commercial & Industrial Refrigeration 6
- 3.592 Systems Design 4

WELDING TECHNOLOGY

Faculty:

John Alvin, Department Chairman
Elgin Rau, Dennis Wood

The Welding Department offers several options to men and women wanting to prepare for entry-level positions in welding repair and fabrication. A one-year Certificate of Completion is available, offering extensive training in welding procedures, blueprint reading and layout. A two-year Associate of Applied Science degree is available, offering some general education classes as well as more specialized training in areas of layout, fabrication and welding repair.

Students who desire to transfer to Oregon State University or Oregon Institute of Technology 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 a student limited exposure to welding techniques but provide the opportunity for students to be certified in pipe or plate welding. Testing is done by an independent agency in the Welding Lab at LBCC.

Students wanting to enter the welding program should have a basic math background and high school level reading skills. Because a variety of working conditions exist in the welding field, students 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 well with others is a valuable asset. The program requires students to take initiative in working 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 program as a basis for applying to apprenticeship programs, such as Millwright, Pipefitter, Steamfitter, Iron Workers and other related trades.

Welding is a rewarding career for people who enjoy working with their hands. The beginning wage is good, opportunities for advancement exist with on-the-job training, and the welder experiences a pride of workmanship in this industrial field.

Associate of Applied Science in Welding Technology

General Education Requirements16-20

See graduation requirements for Associate of Applied Science degree.
SD 113 Human Relations in Business or 4.124 Technical Drawing I, recommended for elective requirement.

Major Requirements78

Fall - First Year

- 4.100 Blueprint Reading 2
- 4.202 Math II (applies to general ed requirement) .. 4
- 4.240 Basic Arc Welding 6
- 4.242 Basic Oxyacetylene Welding 4

Winter

- 4.241 Intermediate Arc Welding 6
- 4.243 Welding Projects I 4
- 4.247 Interp Metal Fab Drawings 3

Spring

- 3.444 Weld Metallurgy I 4
- 4.245 Layout Procedures for Welding 3
- 4.246 Advanced Arc Welding 6
- 4.250 Welding Projects II 4

Fall - Second Year

- 3.134 Industrial Fluid Power 3
- 4.130 Machine Processes 2
- 4.255 Fab Repair I 6

Winter

- 3.445 Welding Metallurgy II 4
- 4.256 Fab Repair II 6
- 6.330 Voc Electricity 2

Spring

- 4.257 Fab Repair III 6
- HE 125 Occupational Safety 3

SCIENCE & TECHNOLOGY DIVISION

Director: Peter C. Scott



The Science & Technology Division offers curriculums meeting the needs of students pursuing professional careers in science or science-related fields.

Science-related, associate degree programs are offered in agriculture, pre-engineering, engineering technologies and laboratory science. Programs in mathematics and physical and biological science serve the general education needs of the college as a whole and provide the technical background for students majoring in forestry, medicine and similar transfer programs.

The entire division is involved in community development, providing educational opportunities outside the traditional education setting. Upgrading for personnel presently employed in science-related fields within the district is provided through a variety of workshops and evening classes.

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

The Science & Technology Division offers programs leading to Associate of Applied Science degrees or certificates in agriculture and the engineering technologies. Associate of Arts degrees are offered in transfer pre-engineering and laboratory science.

AGRICULTURAL SCIENCE

Faculty:

James Lucas, Bruce Moos, Gregory Paulson

The Agricultural Science Department offers vocational curriculums in agriculture, animal technology and horticulture, leading to an Associate of Applied Science degree. A one-year certificate of completion also is available in agriculture or horticulture.

Agriculture/Horticulture

The aims of the Agriculture and Horticulture programs are to prepare vocational students for careers in agriculture, horticulture and related service occupations; to offer supplemental instruction for individuals already employed; and to provide avocational instruction in agriculture or horticulture.

The vocational curriculums are based on necessary competencies identified by industry and reviewed by advisory committees.

Students learn facts and skills necessary for entry-level and technical employment. Instructional facilities, including the labs, greenhouse, gardens, land lab and campus grounds, are used for demonstrations, skill building and evaluation.

The Agriculture and Horticulture curriculums lead to Associate of Applied Science degrees or one-year certificates.

Graduates and former students of the LBCC Agriculture/Horticulture program have obtained employment in arboriculture (tree care), agricultural production and services, floriculture, greenhouse operation and management, landscape contracting and maintenance, and grounds maintenance of parks, schools and institutions. Other positions filled by graduates include golf course maintenance and golf course superintendent, retail and wholesale nursery production and sales and plant propagation.

Associate of Applied Science in Agriculture

General Education Requirements 20

See graduation requirements for Associate of Applied Science degree

Major Requirements 58

Fall - First Year

8.125 Soils I	3
8.131 Pest Management	3
8.165 Plant Science	4
AG 251 Computer Applications	3

Winter

8.126 Soils II	3
8.130 Ag Chemicals	4
8.138 Irrigation Systems	3

Spring

8.167 Forage Crops	3
CRS 201 Principles of Crop Science	4
SLS 100 Soils and Man	3

Fall - Second Year

CH 101 General Chemistry	4
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Winter

ARE 211 Farm & Ranch Mgmt	5
CH 102 General Chemistry	4

Spring

1.201 CWE Seminar	1
1.280 CWE Agriculture	11

Electives 15

Business, Humanities, Industrial, Spanish or Animal Technology courses

Associate of Applied Science in Horticulture

General Education Requirements 20

See graduation requirements for Associate of Applied Science degree

Major Requirements 62

Fall - First Year

8.125 Soils I	3
8.140 Landscape Maintenance	3
8.165 Plant Science	4
AG 251 Computer Applications	3

Winter

8.126 Soils II	3
8.135 Turf Management I	3
8.138 Irrigation Systems	3

Spring

8.136 Turf Management II	3
8.168 Plant ID	3
SLS 100 Soils and Man	3

Fall - Second Year

8.131 Pest Management	3
8.169 Tree ID	3
CH 101 General Chemistry	4

Winter

8.130 Ag Chemicals	4
8.132 Arboriculture I	3
8.141 Landscape Planning	3
CH 102 General Chemistry	4

Spring

8.133 Arboriculture II	3
8.137 Plant Propagation	4

Electives 9

Additional courses or approved CWE.
Recommended: Business, math, science, industrial, communication skills, drafting, graphics, Spanish.

One-year certificate in Agriculture

Major Requirements 33

Fall

8.125 Soils I	3
8.131 Pest Management	3
8.165 Plant Science	4
AG 251 Computer Applications	3

Winter

8.126 Soils II	3
8.130 Ag Chemicals	4
8.138 Irrigation Systems	3

Spring

8.167 Forage Crops	3
CRS 201 Principles of Crop Science	4
SLS 100 Soils and Man	3

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

One-year Certificate in Horticulture

Major Requirements 35

Fall

8.125 Soils I	3
8.140 Landscape Maintenance (offered alternate years) or	3
8.169 Tree Identification (offered alternate years)	3
8.165 Plant Science	4
AG 251 Computer Applications	3

Winter

8.126 Soils II	3
8.132 Arboriculture I (offered alternate years) or	3
8.135 Turf Management I (offered alternate years)	3
8.138 Irrigation Systems	3

SCIENCE & TECHNOLOGY

Spring

8.133 Arboriculture II (offered alternate years) or .	3
8.136 Turf Management II (offered alternate years)	3
8.137 Plant Propagation	4
8.168 Plant ID	3
SLS 100 Soils and Man	3

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

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Animal Technology

LBCC is the only community college in the Willamette Valley with an Animal Technology program. The program uses the community as a natural instructional laboratory and provides students with knowledge and skills useful in returning to the farm, in working in production livestock occupations, in entering into livestock related fields or in transferring to four-year institutions to continue study.

The Animal Technology courses are designed to provide a maximum of practical experience through hands-on laboratory sessions. For those already employed in specific agricultural fields, skills can be upgraded. Students in the program also have an opportunity to participate in competitive collegiate livestock judging.

The program has an open door policy so that students interested in a particular aspect of the program may enroll for any portion of the program. The institution supplies an adequate line of equipment and tools that are utilized during lab sessions.

The Animal Technology curriculum leads to an Associate of Applied Science degree.

Associate of Applied Science in Animal Technology

General Education Requirements20

See graduation requirements for Associate of Applied Science degree

Major Requirements54-56

☐ Production Courses Option(8)

(Select two)	
8.152 Beef Production	4
8.153 Sheep Production	4
8.154 Swine Production	4
ANS 221 Introductory Horse Science	4

☐ Economics Option(3-5)

(Select one)	
8.171 Farm Business Analysis	3
ARE 211 Farm & Ranch Mgmt	5

Fall - First Year

8.125 Soils I	3
AG 251 Computer Applications	3

Winter

8.126 Soils II	3
8.150 Animal Genetics	4

Spring

8.167 Forage Crops	3
ANS 231 Livestock Evaluation	3

Fall - Second Year

8.142 Agricultural Sales & Marketing	3
<input type="checkbox"/> Biology or Chemistry Option	(4)

BI 101 General Biology	4
CH 101 General Chemistry	4

Winter

8.144 Animal Nutrition	4
8.156 Livestock Diseases I	3

☐ Biology or Chemistry Option(4)

BI 102 General Biology	4
CH 102 General Chemistry	4

Spring

8.157 Livestock Diseases II	3
ANS 211 Feeds & Feeding	3

Electives14-16

Additional courses or approved CWE.

90

Animal Technology/Horse Management Degree Option

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.

Associate of Applied Science in Animal Technology: Horse Management Option

General Education Requirements20

See graduation requirements for Associate of Applied Science degree.

Major Requirements58

Fall - First Year

AG 251 Computer Applications	3
ANS 121 Intro to Animal Science	4
ANS 221 Intro to Horse Science	4

Winter

8.144 Animal Nutrition	4
8.150 Animal Genetics	4

Spring

8.167 Forage Crops	3
ANS 211 Feeds and Feeding	3

Fall - Second Year

8.142 Agriculture Sales and Marketing	3
8.159 Training the Foal	2

☐ Biology or Chemistry Option(4)

BI 101 General Biology	4
CH 101 General Chemistry	4

Winter

8.156 Livestock Diseases I	3
8.163 Schooling the Horse I	2
8.177 Horse Breeding Management	3

☐ Biology or Chemistry Option(4)

BI 101 General Biology	4
CH 101 General Chemistry	4

Spring

8.157 Livestock Diseases II	3
8.164 Schooling the Horse II	2
8.171 Farm Business Analysis	3
8.178 Horse Science Practicum	3

Electives12

90

BIOLOGICAL SCIENCES

Faculty:

Stephen Lebsack, Department Chairman
Carolyn Lebsack, Richard Liebaert,
Robert Ross

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 general education lab science requirement for an Associate of Arts or a bachelor's degree. (2) Students who require specific biology courses in order to earn a degree or certificate. Students in the Associate Degree Nursing program, Dental Assisting program and agriculture programs are required to take such courses as Human Anatomy and Physiology, Integrated Basic Science, Nutrition or Microbiology. (3) Science majors in fields such as forestry, fisheries and wildlife, agriculture or premedicine, 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 Zoology, General Botany or Wildlife Conservation. (4) Students who have an avocational interest in biology and take courses such as Natural History, Oceanography 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.

CIVIL ENGINEERING AND DRAFTING TECHNOLOGY

Faculty:

Frank Christensen, Department Chairman
Lann Richardson

Civil Engineering Technology

The Civil Engineering Technology program offers technical-level training in drafting, surveying, problem solving and computer programming skills. Students enrolling in the two-year vocational program may learn essential technical skills allowing them to work with civil engineers in the planning, designing and construction of highways, bridges, dams, buildings, process facilities and other industrial structures. Tasks performed by civil engineering technicians include layout and detail drafting, specification writing, surveying, inspection, programing and supervision of other technicians.

Students expecting to graduate in two years should have a strong interest in design, mathematics, sciences and conceptualization. They should have sufficient mathematical and writing skills to enroll in MT 101 College Algebra - Technical and WR 121 English Composition. Upon entering the Civil Engineering Technology program, students are expected to achieve a minimum "C" grade in each required course. These courses are to be taken in the specified sequence. Students also should be prepared to purchase the basic drafting tools and equipment, at an approximate cost of \$100.

The Civil Engineering Technology curriculum leads to an Associate of Applied Science degree. An additional examination is required to become a Certified Engineering Technician.

Associate of Applied Science in Civil Engineering Technology

General Education Requirements 16-20

See graduation requirements for Associate of Applied Science degree.

MT 101 College Algebra - Technical may substitute for math requirement.

SP 112 Fundamentals of Speech is required.

Major Requirements 84

Fall - First Year

4.128 Drafting Fundamentals	4
MT 101 College Algebra - Technical (substitutes for general ed requirement)	4
MT 173B Microcomputer Basic	3
P 201 General Physics	5

Winter

4.131 Drafting I	4
MT 102 Trigonometry - Technical	4
P 202 General Physics	5

Spring

4.132 Drafting II	4
4.133 Production Methods & Materials	4
MT 106 Elementary Calculus - Technical	4
MT 174 B Microcomputer Adv. BASIC	3

Fall - Second Year

4.148 Practical Descriptive Geometry	3
6.200 Surveying I	3
6.202 Statics	3
6.218 Intro to Sanitary Engineering	3

Winter

6.203 Strength of Materials	3
6.205 Civil Drafting I	3
6.217 Intro to Soil Mechanics	2
WR 227 Tech Report Writing	3

Spring

6.201 Surveying II	4
6.206 Civil Drafting II	3
6.223 C.A.D.D.	4
6.224 Drafting/Engineering Design Projects	3
CWE/Tech Projects Projects	3

100-104

Drafting Technology

The two-year Drafting Technology program is a technical curriculum designed to assist students in acquiring basic attitudes, skills and knowledge necessary to successfully enter drafting occupations.

The first year of study provides a sound general background; the second year provides broader coverage of subject selection while permitting the student to work with such specialties as civil, mechanical, electronic, architectural and technical illustration.

All entering drafting technology students planning to complete the program within a two-year period are advised, as a minimal requirement, to have a ninth-grade reading level and be prepared to register for 6.550 Practical Geometry.

Upon entering the Drafting Technology program, students are expected to achieve a minimum "C" grade in each required course. These courses are to be taken in the specified sequence.

Students new to the subject area should be prepared to purchase the basic tools of the profession at an approximate cost of \$150.

The Drafting Technology curriculum leads to an Associate of Applied Science degree.

Associate of Applied Science in Drafting Technology

General Education Requirements 16-20

See graduation requirements for Associate of Applied Science degree.

6.550 Practical Geometry may substitute for math requirement.

Major Requirements 79

Fall - First Year

4.128 Drafting Fundamentals	4
4.131 Drafting I	4
6.550 Practical Geometry (substitutes for general ed requirement)	4

Winter

4.132 Drafting II	4
MT 101 College Algebra - Technical	4

Spring

4.133 Production Methods & Materials	4
MT 102 Trigonometry - Technical	4
MT 173B Microcomputer: BASIC	3
WR 227 Tech Report Writing	3

Fall - Second Year

4.141 Advanced Drafting I	4
4.148 Practical Descriptive Geometry	3
6.200 Surveying I	3
6.214 Technical Physics	4

Winter

4.142 Advanced Drafting II	4
4.149 Applied Mechanics	3
6.205 Civil Drafting I	3
6.215 Technical Physics	4

Spring

4.143 Advanced Drafting III	4
6.206 Civil Drafting II	3
6.223 C.A.D.D.	4
6.224 Drafting/Engineering Design Projects	3
CWE/Tech Projects	3

SCIENCE & TECHNOLOGY

ELECTRONICS ENGINEERING TECHNOLOGY

Faculty:

Kent Hansen, Department Chairman
John Sweet, Dale Trautman

The Electronics Engineering Technology Department offers a two-year program that prepares students for occupations as electronics 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.

Department staff actively promote effective industrial relations and seek out prospective student employers. Former students have been employed by Tektronix, Intel, Applied Theory, Hewlett-Packard, White's Electronics, General Instruments, City of Corvallis, Neptune MicroFloc, Lafayette Electronics, GE Medical Systems, Oregon Digital and Intellex.

Other options available include further education at Oregon State University and Oregon Institute of Technology.

An agreement with OIT allows an electronics graduate to enter OIT and pursue either the bachelor of science in Electronic Engineering Technology (BSEET) or Industrial Management (BSIM). The BSEET program provides additional training for an engineering technologist-type assignment, and the BSIM program training prepares students for a middle management position in industry. Both of these degrees 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 MT 101 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 16-20

See graduation requirements for Associate of Applied Science degree.

MT 101 College Algebra - Technical substitutes for math requirement.

Major Requirements 95

Fall - First Year

1.150 Technical Reading Skills	1
6.214 Tech Physics	4
6.316 Intro to Electronics	1
6.320 Fundamentals of Electronics	4
6.343 Electronics Lab Skills I	1
MT 101 College Algebra - Technical (substitutes for general ed requirement)	4

Winter

6.215 Tech Physics	4
6.321 DC/AC Circuit Analysis	8
MT 102 College Trigonometry - Technical	4

Spring

4.124 Tech Drawing I	2
6.216 Tech Physics	4
6.322 Semiconductors	8
MT 106 Elementary Calculus - Technical	4

Fall - Second Year

6.323 Analog Circuits	6
6.346 Digital Circuits I	5
MT 173P Microcomputers - Pascal	4

Winter

6.324 Electronic Communications	5
6.344 Electronic Lab Skills II	1
6.347 Digital Circuits II	5
MT 175 Micro Assembly Program	3

Spring

6.325 Integrated Systems	6
6.338 Tech Electricity III	3
6.349 Basic Microprocessors	5
WR 227 Tech Report Writing	3

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ENGINEERING TRANSFER

Advisor:

Wally Reed, Math Department

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 Arts degree in Pre-engineering. The curriculum for this degree program features a broad base of general engineering courses, a solid foundation in mathematics and the physical sciences and core requirements in general education.

The degree program curriculum generally exceeds the requirements for admission to the professional school of engineering at most Oregon institutions.

Students entering the program with solid high school backgrounds in physics, chemistry and trigonometry can expect to complete the program in two years. Students who need to pick up college algebra or trigonometry after their arrival on campus must expect to spend more than two years in the program.

Associate of Arts in Pre-Engineering

Major Requirements 104*

Fall - First Year

CH 201 General Chemistry	4
EC 201 Principles of Economics	3
EGR 101 Engineering Orientation	2
MT 200 Calculus	4
PE Activity Course	1
WR 121 English Composition	3

Winter

CH 202 General Chemistry	4
EC 202 Principles of Economics	3
EGR 102 Engineering Orientation	3
MT 201 Calculus	4
PE Activity Course	1
SP 112 Fundamentals of Speech	3

Spring

CH 203 General Chemistry	4
EC 203 Principles of Economics	3
EGR 103 Engineering Orientation	3
MT 202 Calculus	4
PE Activity Course	1

Fall - Second Year

EN 104 Intro to Literature	3
EGR 201 Electrical Fundamentals	4
EGR 211 Statics	4
MT 203 Calculus	4
P 211 General Physics	5

Winter

EN 105 Intro to Literature	3
EGR 202 Electrical Fundamentals	4
EGR 212 Dynamics	4
HE 250 Personal Health or	3
PE 231 Lifetime Wellness	3
P 212 General Physics	5

Spring

EN 106 Intro to Literature	3
MT 221 Applied Differential Equations	4
P 213 General Physics	5
WR 227 Technical Report Writing	3

*Students should select from the list of approved electives those courses that are required for admission, at the professional level, to the institution of their choice. In any case, electives must be used to bring the credit total to a minimum of 108 credits. Oregon State University will accept a maximum of 108 transfer credit hours. Approved electives include:

CS 211 Introduction to Computer Science
CS 212 Techniques for Computer Programming
CS 213 Introduction to Symbolic Programming: Fortran
EGR 203 Electrical Fundamentals
EGR 213 Strength of Materials
MT 204 Vector Calculus
MT 214 Statistics for Scientists and Engineers
MT 241 Elementary Linear Algebra

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MATHEMATICAL SCIENCES

Faculty:

Ron Mason, Mike Morgan, Wally Reed,
Bill Siebler, Lynn Trimpe, Bob Ulrich,
Betty Westfall

Mathematical Sciences is a service department to the various technical and occupational programs of the college. The department also offers a full complement of developmental courses and a comprehensive curriculum of transfer mathematics through the first two years. The department operates a mathematics laboratory which features a testing facility and individualized instruction in mathematics at the developmental level. The department also operates a computing facility which supports science-oriented instruction in BASIC, Assembly Language and FORTRAN.

PHYSICAL SCIENCES

Faculty:

Steve Rasmussen, Department Chairman
David Benson, John Kraft,
Raymond David Perkins

The Physical Science Department offers transfer courses in physics, chemistry, astronomy and general science subjects. The department has excellent teaching laboratories and lecture rooms, plus an analytical instrument room. Non-transfer technical physics courses are offered for students in vocational programs. A two-year program in laboratory science is offered for students pursuing vocational careers as physical science or biological science laboratory technicians.

Laboratory Science

Advisor:

David Benson

The Laboratory Science program provides training for those planning careers in science and science-related laboratories. Specific career opportunities include analytical, biological, environmental and agricultural testing; metals production and testing; pulp and paper products; food processing; academic research and governmental laboratory positions. Laboratory workers assist engineers, scientists and government agencies in basic research development, quality control and monitoring work. Course work develops practical and theoretical knowledge of science laboratory procedures.

The Laboratory Science curriculum leads to an Associate of Arts degree.

Associate of Arts in Laboratory Science

General Education Requirements45

See graduation requirements for Associate of Arts degree.

P 201, 202, 203, required for Math/Science Group requirements

Major Requirements52

Fall - First Year

CH 104 General Chemistry5

Winter

CH 105 General Chemistry5

Spring

CH 106 General Chemistry5

Fall - Second Year

MT 100 Intermediate Algebra4

MT 173B Micromputers-BASIC3

☐ Biological Sciences Option

(Select one)(4)

Option selected should be taken for entire three-term sequence.

BO 201 General Botany4

ZO 201 General Zoology4

Winter

MT 101 College Algebra4

CH 234 Quantitative Analysis4

☐ Biological Sciences Option

(Select one)(4)

BO 202 General Botany4

ZO 202 General Zoology4

Spring

MT 102 Trigonometry4

CWE6

☐ Biological Sciences Option

(Select one)(4)

BO 203 General Botany4

ZO 203 General Zoology4

WATER/WASTEWATER TECHNOLOGY

Faculty:

John W. Carnegie, Department Chairman
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.

The one-year Water/Wastewater Plant Operations program prepares students for employment as water or wastewater treatment plant operators. A firm background is provided in chemistry and microbiology laboratory procedures required for plant operations. Students are required to complete 4.204 Math III or 1.110 Elements of Algebra.

The 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.

The seven-term Water/Wastewater Technology program prepares its graduates to work at the technician level in either the water or wastewater treatment fields. The course work develops graduates qualified as plant operators, engineering technicians and technical representatives for various manufacturing concerns. A firm foundation in chemistry and microbiology laboratory procedures and fluid hydraulics is provided, as well as specialized courses in maintenance, management, supervision and advanced operations.

The Water/Wastewater Technology curriculum requires enrollment for seven consecutive terms. Due to the technical nature of the field, students must be prepared to enroll in MT 101 College Algebra - Technical during winter term of their sophomore year.

Students in both the one-year certificate program and the two-year associate degree program must complete an in-plant practicum during the summer 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 4.202 Math II or 1.110 Elements of Algebra and WR 115 Introduction to Writing by fall term of their first year.

(Continued on next page)

SCIENCE & TECHNOLOGY

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 10

See Graduation requirements for Associate of Applied Science degree.

MT 101 College Algebra - Technical substitutes for math requirement.

HE 112 Emergency First Aid is required; must be completed during first year.

Major Requirements 87

Fall - First Year

- 6.190 Intro to W/W Operations 7
6.193 Intro to Aquatic Chem & Micro 4

Winter

- 4.100 Blueprint Reading 2
6.180 W/W Mechanics I 2
6.192 Wastewater Systems 7
6.194 Basic Aquatic Chem & Micro 4

Spring

- 6.181 W/W Mechanics II 2
6.191 Water Systems Operation 7
6.195 Intermediate Aquatic Chem & Micro 4

Summer

- 6.168 In-Plant Practicum 12

Fall - Second Year

- 6.154 Process Control-I 3
6.164 Water Sources 4
6.182 W/W Mechanics II 2
MT 101 College Algebra-Technical 4

Winter

- 6.155 Process Control-II 3
6.166 Water Purification 4
6.235 Applied Hydraulics 4

Spring

- 6.165 Water Distribution 3
6.197 Solids Handling 3
6.198 Instrumentation 4
WR 227 Technical Report Writing 3

Electives 4

Four (4) credits to be selected from an approved laboratory science course. (These electives satisfy general ed elective requirements.)

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One-year Certificate in Water/Wastewater Plant Operations

Major Requirements 63

Fall

- 4.202 Math II 4
6.190 Intro to W/W Operations 7
6.193 Intro to Aquatic Chem & Micro 4
WR 115 Intro to Writing 3

Winter

- 4.100 Blueprint Reading 2
6.180 W/W Mechanics I 2
6.192 Wastewater Systems 7
6.194 Basic Aquatic Chem & Micro 4
4.204 Math III 4

Spring

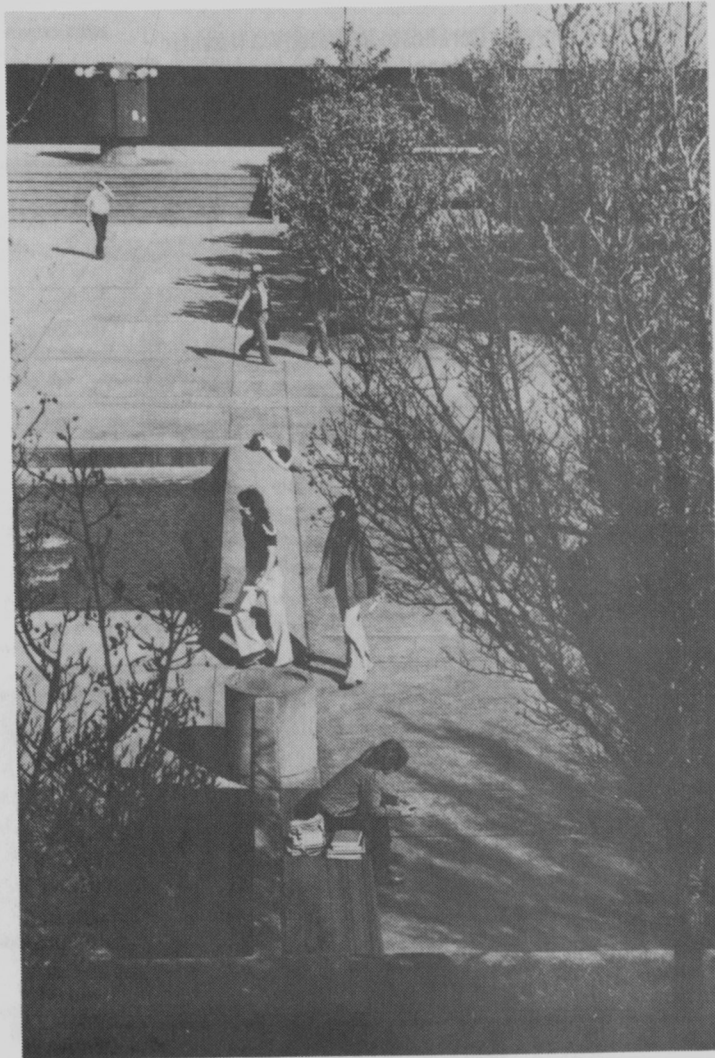
- 6.181 W/W Mechanics II 2
6.191 Water Systems Operations 7
6.195 Intermediate Aquatic Chem & Micro 4
HE 112 Emergency First Aid 1

Summer

- 6.168 In-Plant Practicum 12

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STUDENT DEVELOPMENT DIVISION

Director: Robert Talbott



Developmental programs are offered by the college to help students achieve their educational, career and personal goals. Both academic advising and personal and career counseling are provided by trained counselors and placement personnel.

Students who need additional help with course work can receive free, individualized tutoring or, for some courses, supplemental instruction is offered. Many testing services, such as the General Education Development (GED) test and the College Level Exam Program (CLEP) test, also are provided.

Courses are offered to help adults with basic learning skills in study skills, math, reading, writing, vocabulary and spelling. Those wanting to earn a high school diploma or learn English as a second language will find courses available.

Other courses include career planning, tutor training, stress management and special vocational and related training for the disadvantaged and handicapped person.

DEVELOPMENTAL EDUCATION CENTER

Faculty:

Laurel Bible, Katherine Clark, Carroll Flaherty, Carolyn Gardner, Russell Gregory, Paula Grigsby, Candy Johnson, Jan Krabbe, Charles Mann, Susan Van Leare.

The Developmental Education Center provides a cluster of services designed for students, staff and community residents. Because it offers such broad services, the center forms a bridge between instructional areas and students services. These developmental or growth programs provide for:

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

The Developmental Education Center maintains an open-door policy. All students are encouraged to take advantage of center offerings and may do so with or without earning credit. Many courses are individualized so students may begin or end studies at any time during the quarter.

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

Adult General Education Programs

A variety of classes and programs are available to adults who do not have a high school diploma. Instruction is available both days and evenings at the campus in Albany and at the Benton, Lebanon and Sweet Home Community Education centers. The college also will attempt to locate volunteer instructors, tutors or self-study materials to help adults who, due to illness, disability, incarceration or other reasons beyond their control, are unable to attend regularly scheduled classes.

To be eligible for these classes, a person must be at least 16 years of age and no longer enrolled in school (see exception in "High School Continuation"). Persons who are under age 18 must present from their local school district a signed release from compulsory attendance as provided for by ORS 339.30.

Adult Basic Education

The ABE program provides classes to teach reading, writing, vocabulary, spelling and math for students. There is no tuition charge for ABE classes.

Adult High School Diploma

LBCC is authorized by the state of Oregon to issue a 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 in LBCC college-level and non-credit classes or by attending high school classes offered through the Student Development Division office and the Community Education centers. In some cases, adults may obtain high school credits through assessment of life experiences.

Information about the Adult High School Diploma program is available through the Student Development Division office or the Community Education centers. Admission applications and information are available from the Admissions office.

Disabled Student Services

This program is designed to assist students who have disabilities. Assistance may include assessment, tutoring, interpreters, notetakers and/or special classes.

Students in the program must meet particular enrollment requirements. Specific information is available at the Disabled Student Services office.

English as a Second Language (ESL)

For adults whose first or native language is not English, instruction is available in reading, writing and speaking the English language. The course emphasizes vocational and "survival" skills in using and understanding English.

Instruction is provided at beginning, intermediate and advanced levels. The beginning level instruction is free. A tuition charge may be assessed for advanced levels.

General Education Development (GED) Studies

GED classes are designed for adults who want to prepare for the GED high school equivalency examination. The classes also are available for those who want to improve their general knowledge and skills in the subject areas offered. Areas of study include writing, math, reading, comprehension of literature, social studies and science.

There is no tuition charge for GED studies, but students must purchase some texts and study materials.

High School Continuation

High School Continuation is a cooperative program with area schools for high school students who want to accelerate their program or make up credit deficiencies.

To be eligible for admission to the program, students must be age 16 or over, currently enrolled in high school and referred by their high school administrator or counselor.

GUIDANCE SERVICES

Faculty:

Rosemary Bennett, Bob Boss, Ann Marie Etheridge, Blair Osterlund, Diane Watson

Guidance Services courses are taught by student services staff, including counselors and placement personnel. Courses taught by the counseling staff help students increase self-understanding and make career decisions. Placement personnel teach seminars in resume' writing and job search skills.

COURSE DESCRIPTIONS

COURSE
DESCRIPTION LIST

Numerical Courses

Courses marked with the following symbols may be applied toward fulfilling General Education Requirements:

- ◆ Computer Competency
- Humanities/Art
- Math/Science
- Social Sciences

0.611 WORD PROBLEMS

(2 class hrs/wk 1 cr)

Deals exclusively with the major types of word problems found in algebra. Many exercises involving 10 types of problems are explained in the text and performed by the student. Note: Five-week class.

**0.747 ACADEMIC ENGLISH
INTERNATIONAL STUDENTS**

(6 class hrs/wk 3 cr)

Introduces intermediate-level international students to academic English, the language of the college classroom. Reviews grammar and emphasizes vocabulary development, reading and writing; it also introduces listening and note-taking skills. Prerequisite: Placement by testing or referral.

**1.103 OCCUPATIONAL SPEECH
COMMUNICATION**

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

Emphasizes oral communication skills for vocational/technical students, including telephone usage, interviewing, personal interaction, public speaking and information-sharing and problem-solving situations that may occur on the job.

1.109 PRE-BUSINESS MATH

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

Prepares students for 2.515 Business Mathematics. Includes a review of fundamental operations with whole numbers, fractions, decimals and percentages. Note: A minimum competency level is required to pass this course.

1.110 ELEMENTS OF ALGEBRA

(4 class hrs/wk 1-4 cr) F/W/Sp/Su

Develops the basic operations with algebraic expressions and methods for solving linear equations. Introduces rational expressions, factoring, graphing and solving quadratic equations by factoring. Designed for the student who has no previous algebra or needs a review of elementary algebra. Note: A minimum competency level is required to pass this course.

1.122 LEARNING STRATEGIES

(2-3 class hrs/wk 0-2 cr) F/W/Sp

Teaches "how to learn" strategies to learning disabled students. Acquaints students with techniques, principles and rules for learning across different content situations and settings. Designed specifically for the L.D. student and is divided into five areas: Study Skills, Reading Skills, Listening Skills, Writing Skills and Thinking Skills.

1.125 STUDY SKILLS

(3 class hrs/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.

**1.126 DEVELOPMENTAL
ENGLISH: INDIVIDUALIZED**

(3 class hrs/wk 0-3 cr) F/W/Sp/Su

Helps students master pre-writing skills. Students learn to identify subjects and verbs and to use appropriate sentence structure, subject-verb agreement, pronouns, punctuation and capitalization. These skills are applied in writing exercises.

1.128 READING INDIVIDUALIZED

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

Uses a core group of skills and materials to help students improve their reading skills but allows students to work with individually paced instruction at their own vocabulary and reading levels.

**1.129 SPEED AND POWER
READING**

(3 class hrs/wk 1-3 cr)

Helps students improve their reading rate and their reading ability. Prerequisite: Testing placement or instructor approval.

1.130 DEVELOPMENTAL ENGLISH

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

Helps students improve sentence structure and usage in an interactive classroom environment. Pre-writing skills are improved through the study of subjects and verbs, sentence structure, correct usage, punctuation and capitalization. Students practice these skills in writing exercises.

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.

**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.

1.135 DEVELOPMENTAL READING

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

Helps students improve their reading skills. Comprehension, sentence reading, main ideas, context clues, word structure and vocabulary development are emphasized along with other reading skills. Taught in an interactive classroom environment.

**1.150 TECHNIQUES OF READING/
STUDYING**

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

Covers vocabulary and comprehension skills. Courses are designated for vocational programs and emphasize the materials used in the respective program.

1.154 SPELLING INDIVIDUALIZED

(3 class hrs/wk 0 cr) F/W/Sp

Identifies students' specific problem areas and provides individual program for students to work on those areas. Spelling improvement is taught through structural analysis, spelling principles and use of weekly word lists. Students work at their own pace.

1.162 SUPPLEMENTAL INSTRUCTION

(3-4 class hrs/wk 0 cr) F/W/Sp
Assists students in mastering course concepts and increases their competence in reading, reasoning and study skills. Specialists (SI leaders) attend course lectures where they take notes and complete assigned readings. These leaders schedule and conduct three or four 50-minute SI sessions each week at times convenient for the majority of students in the course.

1.201 CWE SEMINAR

(1 class hrs/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. Course may be repeated for up to 4 credits.

1.204 CAREER ORIENTATION METALLURGY

(3 class hrs/wk 1 cr)
Introduces the broad areas and job assignments of metallurgical technicians. Job assignments will not be studied in detail but will be investigated as a process of sampling, enabling the student to investigate future work.

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.

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.

2.500 BUSINESS ORIENTATION

(2 class hrs/wk 1 cr) F/W
Introduces various career opportunities in the business field through films, speakers and field trips. Note: Five-week class.

◆ 2.512 MICROCOMPUTER TECHNIQUES

(5 class hrs/wk 2 cr) F/W
Students learn and utilize proper data entry techniques, including (a) proper posture, (b) ergonomic equipment and furniture, (c) ergonomic work environment, (d) proper document handling and (e) exercise. Use these techniques to input typical business applications, including payroll, accounts receivable, inventory, etc. Some speed and accuracy building on 10-key numeric pad and top-row numbers. Note: Five-week class. Prerequisite: 25 wpm by touch on alphabetic keyboard.

2.513 MICROCOMPUTER SKILL BUILDING: NUMBERS

(5 class hrs/wk 2 cr) F/W/Sp/Su
Student uses computers to build speed and accuracy on two different numeric keyboards—top row numbers and 10-key numeric pad. Uses a wide variety of special drills to improve on each keyboard arrangement. Note: Five-week class; course may be repeated for credit. Prerequisite: OA 121A Typing I Keyboarding or minimum 25 wpm by touch.

● 2.515 BUSINESS MATH WITH CALCULATORS

(5 class hrs/wk 1-5 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: 1.109 Pre-Business Math or equivalent.

2.516 INTRODUCTION TO BUSINESS STATISTICS

(4 class hrs/wk 4 cr) F
Introduces the methods and terminology used in statistical reports generated in business and industry. Topics include descriptive statistics; probability; binomial, normal, "t-" and chi-square distributions; linear regression and correlation; and hypothesis testing. Prerequisite: 1.110 Elements of Algebra.

2.517 DATA ENTRY CONCEPTS

(3 class hrs/wk 3 cr) Sp
Covers concepts involved in data entry on a computer. Topics include hardware, software, ergonomics, spreadsheets, data base management systems, word processing concepts, integrated software packages and selecting appropriate software.

2.518 BUSINESS 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.

◆ 2.519 DATA ENTRY PRACTICUM

(5 class hrs/wk 3 cr) Sp
Provides students with practice in producing a variety of data entry jobs at acceptable standards of speed and accuracy on a microcomputer. Requires ability to follow written documentation and source documents and to meet work deadlines. Also includes skillbuilding on alphabetic and numeric keyboards. Prerequisite: 2.512 Microcomputer Techniques or 2.555 Data Entry on a Microcomputer and 40 wpm typing speed.

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. Prerequisite: 2.527 Transcribing Machines I; 5.630 Medical Terminology I; OA 202A WordPerfect: Advanced or 2.664 WordStar.

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. Prerequisite: 2.524 Medical Transcription I; 5.633 Medical Terminology II; OA 202A WordPerfect: Advanced or 2.664 WordStar.

2.527 TRANSCRIBING MACHINES I

(5 class hrs/wk 2-3 cr) F/W/Sp/Su
Provides the opportunity to develop an entry-level job skill on the transcribing machine. Prerequisite: OA 122 Typing II or equivalent; WR 115 Introduction to Writing or 2.588 Editing Skills for Information Processing; 1.131 Spelling or equivalent.

COURSE DESCRIPTIONS

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: 2.527 Transcribing Machines I; OA 202A WordPerfect: Advanced or 2.664 WordStar.

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. Prerequisite: 2.527 Transcribing Machines I; 5.633 Medical Terminology II; OA 202A WordPerfect: Advanced or 2.664 WordStar.

2.530 PRACTICAL ACCOUNTING I

(5 class hrs/wk 3 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, sales, promissory notes and inventories.

2.531 PRACTICAL ACCOUNTING II

(5 class hrs/wk 3 cr) W/Sp
Continues 2.530 Practical Accounting I, with an explanation of the accounting cycle to include special journals, ledgers and business forms. Emphasizes accounting for a partnership. Prerequisite: 2.530 Practical Accounting I.

2.532 PRACTICAL ACCOUNTING III

(5 class hrs/wk 3 cr) Sp
A third course in the Practical Accounting sequence, includes entries requiring analysis and interpretation, unearned and accrued items, depreciation of assets, the voucher system, payroll records, property sales and taxes. Emphasizes accounting for a corporation. Prerequisite: 2.531 Practical Accounting II.

◆ 2.533 COMPUTERIZED ACCOUNTING

(3 class hrs/wk 3 cr) F/W/Sp
Provides hands-on computer experience in accounting applications, general ledger, accounts receivable, accounts payable, payroll and financial statements. Prerequisite: 2.530 Practical Accounting I.

2.535 PAYROLL ACCOUNTING

(3 class hrs/wk 3 cr) F/W/Sp
Provides practice in all aspects of payroll, including a study of the state and federal laws affecting payroll, preparing payroll tax returns and reports, and recording accounting entries that involve payroll.

2.551 OFFICE COMMUNICATIONS

(6 class hrs/wk 3 cr) F/W/Sp
Shows students how good communication works for the individual on a day-to-day basis. Stresses written communications, oral communications and listening skills. Prerequisite: WR 115 Introduction to Writing or 2.588 Editing Skills for Information Processing; OA 121B Basic Production Typing or equivalent.

◆ 2.555 DATA ENTRY ON THE MICROCOMPUTER

(6 class hrs/wk 4 cr) W
Teaches the use of a comprehensive software package to enter realistic data entry jobs into a microcomputer. Course covers use of command, append, edit, delete, insert and verify modes. Projects include entering class schedules, employee payroll, semester grade reports, invoice sales, mailing labels, survey data and university registration. Students also build speed and accuracy on alphabet and embedded 10-key and reverse 10-key arrangements. Prerequisite: OA 121A Typing I Keyboarding or minimum 25 wpm by touch on alphabet.

◆ 2.569 FIRST COURSE IN COMPUTERS

(2 class hrs/wk 2 cr) F/W/Sp/Su
Provides a hands-on introduction to the microcomputer and includes basic computer operations, the operating system and simple programs in the BASIC language.

◆ 2.571 DATA PROCESSING I: MACHINE LOGIC

(12 class hrs/wk 6 cr) F
Introduces the computer, programming languages and data processing mathematics, emphasizing how computers work and their place in modern business society. Course introduces tasks that a computer programmer must perform and provides means to program a modern computing system. Topics include input-output, arithmetic statements, transfers and control statements, arrays, and subprograms. Computer programs will be developed by the student using a procedure- or problem-oriented language.

◆ 2.572 DATA PROCESSING II: ADVANCED LOGIC

(12 class hrs/wk 6 cr) W
Provides additional work in problem-oriented language and introduction to an assembler language, with additional topics from data processing mathematics introduced as needed. The second phase stresses the need for accurate and complete documentation within the data processing function. Program flowcharting is used to solve and then document several involved logical processes. Prerequisite: 2.571 Data Processing I: Machine Logic.

◆ 2.573 DATA PROCESSING III: PL/I

(12 class hrs/wk 6 cr) Sp
Study of the high-level structured language of PL/I and the use of VSAM (Virtual Storage Access Methods) files for business application programming. Prerequisite: 2.572 Data Processing II: Advanced Logic or instructor approval.

◆ 2.581 DATA PROCESSING IV: SYSTEMS ANALYSIS & DESIGNING

(12 class hrs/wk 6 cr) F
Continues with the introduction of industry standards for systems analysis and design and the practical application of these techniques in a business case study. Prerequisite: 2.573 Data Processing III: PL/I.

◆ 2.582 DATA PROCESSING V: ADVANCED CONCEPTS

(12 class hrs/wk 6 cr) W
Prepares students for entry into an operational programming environment. With minimal assistance, students learn another computer language, are introduced to assembler language on a microcomputer and write programs for use in an interactive environment. Students also learn CICS and SQL/DB2. Prerequisite: 2.581 Data Processing IV: Systems Analysis Design.

2.585 DATA PROCESSING PRACTICUM (DPMA)

(2 class hrs/wk 2 cr)
Develops leadership and management skills in the data processing profession and provides for self-improvement by students in conjunction with the international professional organization of Data Processing Management Association (DPMA). Prerequisite: Current student in Computer Programming or Computer Science.

◆ **2.587 INTRODUCTION TO WORDSTAR**

(4 class hrs/wk 1 cr) F/W/Sp/Su
Provides basic introduction to WordStar, a computer software word processing package. Includes operating the terminal; basic text editing; reading, copying and moving blocks; basic print commands; and some formatting with dot commands. Note: Five-week class. Prerequisite: OA 201A Keyboarding or equivalent.

2.588 EDITING SKILLS: INFORMATION PROCESSING

(3 class hrs/wk 3 cr) F/W/Sp
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. Prerequisite: Placement Test score for WR 115 Introduction to Writing and current enrollment in OA 201A Keyboarding.

2.589 READING & CONFERENCE: DATA PROCESSING

(1-20 class hrs/wk 1-10 cr) F/W/Sp
Subject areas of particular interest to the student or areas where the student needs additional work can be covered within this course, with topics at the discretion of the instructor and student. Prerequisite: Instructor approval.

2.590 READING & 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.

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: 2.532 Practical Accounting III or BA 202 Principles of Accounting III or instructor approval.

2.596 PROFESSIONAL ACCOUNTING II

(3 class hrs/wk 3 cr) W
Continues the Intermediate Accounting sequence. Covers advanced concepts and procedures of valuation for various types of assets and liabilities, including special problems related to investments, plant, property and equipment, consolidations and corporate accounting. Prerequisite: 2.595 Professional Accounting I.

2.597 PROFESSIONAL ACCOUNTING III

(3 class hrs/wk 3 cr) Sp
Continues the Intermediate Accounting sequence. Emphasizes fund flow analysis, financial errors, preparing statements from incomplete data, correcting errors in prior year statements and price level changes. Prerequisite: 2.596 Professional Accounting II.

2.610 CLERICAL OFFICE PROCEDURES

(6 class hrs/wk 3 cr) Sp
Includes instruction in telephone techniques, job interviewing, word processing applications and office procedures. Students do projects integrating all office skills and techniques. Prerequisite: 2.551 Office Communications; OA 122 Typing II; WR 115 Introduction to Writing or 2.588 Editing Skills; OA 202A WordPerfect: Advanced.

2.613 ON-THE-JOB TRAINING FOR SECRETARIES

(3-36 class hrs/wk 1-12 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.

2.644 CIVIL SERVICE PREPARATION

(5 class hrs/wk 1 cr) F/W/Sp/Su
Provides intensive study for the Civil Service tests given for secretarial employment, covering alphabetizing, spelling, arithmetic, number series, English usage and reasoning. Note: Five-week class.

2.647 ADMINISTRATIVE MANAGEMENT

(3 class hrs/wk 3 cr) F
Includes office managerial topics, such as office layout and equipment, supervision of office personnel and human resources, and office ergonomics.

2.652 FILING

(5 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.

◆ **2.653 AUTOMATED OFFICE CONCEPTS**

(3 class hrs/wk 3 cr) F/W
Introduces and discusses terminology and concepts concerning the automated office, such as word processing, automated records management (micrographics), microcomputers and reprographics.

◆ **2.656 INFORMATION PROCESSING PRACTICUM**

(5 class hrs/wk 3 cr) F/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. Prerequisite: OA 202A WordPerfect: Advanced or 2.664 Wordstar and OA 122 Typing II.

◆ **2.656A INFORMATION PROCESSING PRACTICUM: MEDICAL**

(5 class hrs/wk 3 cr) Sp
Self-directed course designed to give the student practical hands-on microcomputer experience. Student is required to prepare typical documents that are encountered in the medical environment. Prerequisite: 2.664 WordStar or OA 202A WordPerfect: Advanced and OA 122 Typing II.

◆ **2.656B INFORMATION PROCESSING PRACTICUM: LEGAL**

(5 class hrs/wk 3 cr) W
Self-directed course designed to give the student practical hands-on microcomputer experience. The student assumes he/she is employed in a legal office. He/she is responsible for organizing his/her work efficiently, prioritizing, making formatting decisions, and meeting deadlines. Prerequisite: 2.527 Transcribing Machines I; OA 202A WordPerfect: Advanced; OA 122 Typing II.

2.657 WHEELWRITER 5 TYPEWRITER

(4 class hrs/wk 1 cr) F/W/Sp/Su
Course designed to train students who have basic typing skills to use the electronic typewriter. Features of the wheelwriter 5 electronic typewriter are explained. Note: Five-week class. Prerequisite: OA 122 Typing II or equivalent.

COURSE DESCRIPTIONS

2.658 BUILDING TYPING ACCURACY

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

Presents a typing skill building class developed by Cortez Peters, Jr. This is an individualized diagnostic/prescriptive method for developing accuracy in typewriting.

Note: Five-week class. Prerequisite: OA 121A Typing Keyboarding or equivalent.

2.659 BUILDING TYPING SPEED

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

Presents typing skills building class developed by Cortez Peters, Jr. This is an individualized diagnostic/prescriptive method for developing speed in typewriting while maintaining a high degree of accuracy. Note: Five-week class. Prerequisite: 2.658 Building Typing Accuracy.

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. Prerequisite: 2.527 Transcribing Machines I; 2.675 Legal Office Procedures and Terminology I.

◆ 2.664 WORDSTAR

(5 class hrs/wk 1-3 cr) W/Sp

Provides instruction in the operation of WordStar—a computer software word processing package. Includes operation of the computer terminal, text editing, formatting text with dot commands, advanced tabular formatting, Spell Star and Mail Merge. Prerequisite: OA 121B Basic Production Typing or equivalent.

◆ 2.666 IBM DISPLAYWRITER

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

Teaches operation of the IBM Displaywriter to do computer-based word processing. Includes edit, edit table, print, global search and replace, and automatic word wrap. Prerequisite: OA 122 Typing II or equivalent.

2.670 MEDICAL OFFICE PROCEDURES

(6 class hrs/wk 3 cr) Sp

Stresses the specifics of working in a medical office, including insurance, medical records, administrative office procedures, receptionist techniques and communications. Prerequisite: OA 122 Typing II; WR 115 Introduction to Writing or 2.588 Editing Skills for Information Processing.

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.

2.672 INTRODUCTION TO MEDICAL CODING

(3 class hrs/wk 3 cr) Sp

An introductory course for the beginning coder. Students learn to accurately apply the ICD-9-CM coding classification system used in hospitals and medical offices and to understand its statistical and reimbursement applications. Prerequisite: 6.530 Medical Terminology I.

2.674 ABBREVIATED KEYBOARDING

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

Teaches abbreviated program and WordPerfect on computers. A knowledge of WordPerfect is not needed. Word abbreviations are typed on the computer. A gain of about 20 wpm in typing skill should be achieved. Prerequisite: OA 122 Typing II.

2.675 LEGAL TERMINOLOGY & 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, general legal terminology, laws, court systems and legal research. Prerequisite: OA 121A Keyboarding or equivalent.

2.676 LEGAL TERMINOLOGY & OFFICE PROCEDURES II

(6 class hrs/wk 3 cr) Sp

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. Office accounting collection procedures and bankruptcies also are explained and projects are typed for these areas. Prerequisite: OA 121B Basic Production Typing or equivalent, 2.588 Editing Skills for Information Processing.

2.677 LEGAL TERMINOLOGY & OFFICE PROCEDURES III

(6 class hrs/wk 3 cr) F

Emphasizes practice of what students learned in earlier courses by doing three simulations. In addition, information concerning real property, probate, employment and business entities is learned and projects are typed. Prerequisites: OA 122 Typing II or equivalent; 2.588 Editing Skills for Information Processing.

2.682 DESKTOP PUBLISHING

(4 class hrs/wk 3 cr)

Extends traditional word processing to encompass the use of page-layout documents for the office. Students work with WordPerfect graphics and Page-Maker, as well as other software.

2.683 COMPUTERIZED RECORDS MANAGEMENT

(4 class hrs/wk 3 cr)

Introduces students to filing and data base management, both manually and using data base software; records control; records retention; and equipment, including hardware and software as well as setting up an electronic workstation.

3.128 FUEL INJECTION SYSTEM

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

Studies fuel injection theory and component repair. Fuel system components are studied, tested, repaired and adjusted, emphasizing inline, opposed piston and pressure-timed pumps and a variety of injectors and governors. Turbo and superchargers and cooling system maintenance is included.

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.

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.

3.131 HEAVY EQUIPMENT SERVICE & 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.

3.132 PNEUMATIC BRAKING & ACCESSORY SYSTEMS

(3 class hrs/wk 2 cr) F
Covers truck and heavy equipment pneumatic systems and brake systems. Pneumatic theory application is stressed. Pneumatic systems components are tested, repaired and adjusted. Alignment of heavy trucks is included.

3.134 INDUSTRIAL FLUID POWER

(5 class hrs/wk 3 cr) W
Provides background in hydraulic and pneumatic systems mechanics, their components and the operation and function of each.

3.167 OFFSET PRESS

(6 class hrs/wk 4 cr) W
Introduces to the theory and practice of offset lithography. Includes press operation; ink and water systems; the Pantone system of ink mixing; use of presensitized, electrostatic and direct-image plates; and safety procedures. Projects are assigned and critiqued. Prerequisite: AA 174 Screen Printing; 3.169 Negative Imposition and Platemaking.

3.168 ADVANCED OFFSET PRESS

(6 class hrs/wk 4 cr) Sp
Emphasizes offset lithography skills in multicolor reproduction, ink matching plate and blanket packing, and close register presswork. Students take a job through all production phases, using skills learned in previous courses. Prerequisite: 3.167 Offset Press.

3.169 NEGATIVE IMPOSITION AND PLATE MAKING

(6 class hrs/wk 4 cr) F
Teaches preparation of line and halftone negatives for offset reproduction; single and multiple color imposition; single and multiple page imposition; use of screen tints to produce intermediate color values; color proofing techniques; and production of additive and subtractive plates for the offset press. Prerequisite: AA 120 Layout and Pasteup; AA 263 Process Camera.

3.171 COPYWRITING FOR DESIGNERS

(1 class hrs/wk 1 cr) F
Introduces copywriting for advertising and promotion, with emphasis on practical writing exercises. Students study advertising strategy and persuasion theory, as well as basic grammar, style and language use.

3.195 AUTO BODY SKILLS LAB

(6 class hrs/wk 3 cr) F/W/Sp/Su
Provides additional skills and knowledge in auto rebuilding and refinishing practices through individualized, hands-on instruction. On a space-available basis, the study skills lab offers opportunity for special learning activities and additional credit.

3.198 INDUSTRIAL TECHNICAL SEMINAR: LEADERSHIP

(1 class hrs/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 workshop and special technical projects.

3.290 INDUSTRIAL SKILLS LAB I

(7 class hrs/wk 3 cr) F/W/Sp
A required course for Automotive and Heavy Equipment Mechanics majors, covers those competencies and basic skills required for the first year. Topics covered are safety, hand tool usage and identification, precision measurement, metric measurement, use of hand operated pullers, fasteners, terminology and torque values for mechanics.

3.291 INDUSTRIAL SKILLS LAB II

(7 class hrs/wk 3 cr) F/W/Sp
A required course for those Automotive/Heavy Equipment Mechanics majors needing skills and/or knowledge in engine basics (A,B,C's) of bearings and bearings service, gaskets, seals and sealants, lubrication factors and the use of shop service manuals.

3.292 INDUSTRIAL SKILLS LAB III

(7 class hrs/wk 3 cr) F/W/Sp
A required course for those Automotive and Heavy Equipment Mechanics majors needing skills and/or knowledge in the following course content areas: tubing, fittings and hoses, and power tools terminology and usage.

3.293 INDUSTRIAL SKILLS LAB IV (RHAC)

(3-7 class hrs/wk 1-3 cr)
Required for Refrigeration/Heating/Air Conditioning majors. Covers RHAC applications such as fittings usage; flare, sweat and braze fittings; refrigeration cycle; common pipe and pipe fittings; copper and aluminum tubing connections; fundamentals of soldering and brazing techniques; common fasteners used in RHAC; electrical components; alternating current fundamentals; meter usage; Ohm's law; electrical conductors; and conduit applications.

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. Corequisite: Industrial Skills Lab.

3.296 SUSPENSION/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. In addition, a comprehensive study of disc and drum braking systems and their components is included. Corequisite: Industrial Skills Lab.

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. Corequisite: Industrial Skills Lab.

3.298 AUTO TUNE-UP

(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, the oscilloscope, emission test equipment and the dynamometer, to find malfunctions and make necessary repairs for optimum engine performance.

COURSE DESCRIPTIONS

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.

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.

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.

3.390 MACHINE TOOL I

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

Instructs beginning student in the basic operation of the drill press, vertical mill and engine lathe. All tools and materials are furnished, with the exception of one 6-inch scale and approved safety glasses.

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: 3.390 Machine Tool I.

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: 3.391 Machine Tool II.

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: 3.392 Machine Tool III.

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: 3.393 Machine Tool IV.

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: 3.394 Machine Tool V.

3.403 MANUFACTURING TECHNOLOGY I

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

Provides introductory information for the student seeking a machinist career. Emphasizes safe operation of basic machine tools, including the drill press, engine lathe, vertical milling machine, saws and grinders. Elementary blueprint reading, precision measurement, manufacturing processes and shop math is introduced as a base for courses that follow. Corequisite: 3.415 Machine Tool Skills Lab.

3.404 MANUFACTURING TECHNOLOGY II

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

Involves more advanced engine lathe work. Vertical milling machine operations and surface plate inspection procedures are introduced. Tool selection, cutting speeds and feed rates are emphasized. Prerequisite: 3.403 Manufacturing Technology I or instructor approval; 4.128 Drafting Fundamentals; 4.200 Math I or equivalent or instructor approval. Co-requisite: 3.415 Machine Tool Skills Lab.

3.405 MANUFACTURING TECHNOLOGY III

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

Expands and updates previously acquired skills with right angle trigonometry employed in set-ups. Projects typically require the use of two or more machine tools. Various horizontal milling operations are frequently involved. Prerequisite: 3.404 Manufacturing Technology II; 4.202 Math II or equivalent. Corequisite: 3.415 Machine Tool Skills Lab.

3.406 MANUFACTURING TECHNOLOGY IV

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

Provides advanced lathe and milling machine training, including dividing heads on rotary tables and simple tracer lathe work, with emphasis on industry-accepted metal removal rates. Production of ferrous and non-ferrous alloys, iron and steel is studied. Assigned projects require use of the surface grinder and other abrasive metal removal techniques. Prerequisite: 3.405 Manufacturing Technology III; 4.204 Math III or equivalent. Corequisite: 3.415 Machine Tool Skills Lab.

3.407 MANUFACTURING TECHNOLOGY V

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

Includes projects that require using a combination of machine tools to produce items such as spur gears and racks. Emphasizes precision, with tolerances much closer than in previous terms. Metal processing is covered, including heat treating, hardening, tempering and annealing. Prerequisite: 3.406 Manufacturing Technology IV. Corequisite: 3.415 Machine Tool Skills Lab.

3.408 MANUFACTURING TECHNOLOGY VI

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

Extends engine lathe and milling machine skills, with emphasis on quality and speed. Includes an introduction to cylindrical grinding, tool and cutter grinding, and jig boring. Prerequisite: 3.407 Manufacturing Technology V; MT 173B Microcomputers: BASIC. Corequisite: 3.415 Machine Tool Skills Lab.

◆ **3.409 COMPUTER INTEGRATED MANUFACTURING I**

(2 class hrs/wk 2 cr) F

Provides basic programming instruction. Programs are written for CNC mills and CNC lathes using computer assisted Computer Aided Manufacturing (CAM) programs.

◆ **3.410 COMPUTER INTEGRATED MANUFACTURING II**

(2 class hrs/wk 2 cr) W

Continues CIM instruction. More complicated parts are programmed. Reviews right angle trigonometry for both cutter path offsets and setup procedures. Prerequisite: 3.409 Computer Integrated Circuits I.

◆ **3.411 COMPUTER INTEGRATED MANUFACTURING III**

(4 class hrs/wk 2 cr) Sp

Advanced Computer Integrated Manufacturing course. Parts are constructed that require both the computer generated tool paths for the CNC machines and conventional machining. Prerequisite: 3.410 Computer Integrated Manufacturing II.

◆ **3.412 MACHINE TOOL PROGRAMMING I**

(2 class hrs/wk 2 cr) F

Covers the fundamentals of programming and the procedures for preparing programs and their tapes for numerically controlled milling machines. Conventional Word Address Programming language is taught.

◆ **3.413 MACHINE TOOL PROGRAMMING II**

(2 class hrs/wk 2 cr) W

Covers the fundamentals of programming and the procedures for programming a CNC Lathe. Conventional Word Address Language is used on Fanuc controlled machine. Prerequisite: Instructor approval.

◆ **3.414 MACHINE TOOL PROGRAMMING III**

(2 class hrs/wk 2 cr) Sp

Introductory course on programming the Hurco CNC Mill in the Hurco interactive language and Fanuc FAPT interactive language on a lathe.

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.

3.442 INDUSTRIAL TECHNICAL SOCIETY SEMINAR

(1 class hrs/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.

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.

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.

3.446 METALS INVESTIGATION & 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.

3.447 METALLURGY FOR MECHANICS

(2 class hrs/wk 2 cr) W

Introduces metallic structure, including its composition and properties, how it might be recognized, what could be done to improve or hinder its function, and how simple evaluation can be made to determine its ability to perform.

3.448 WELDING PROCESSES

(3 class hrs/wk 2 cr) F

Course is designed to acquaint students with the fundamentals of different welding processes currently practiced in industry. Course work will be divided into theory and hands-on experience.

◆ **3.450 COMPUTER APPLICATIONS INDUSTRIAL TECH.**

(1 class hrs/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.

3.511 AUTO BODY BASICS

(20 class hrs/wk 10 cr) F

Introduces correct shop procedure; cleanliness; and care, use and safety of tools and equipment. Includes types and use of sandpaper and grinding discs; operation and maintenance of paint guns; masking, priming, sealing and panel painting; procedures of metal working; assembly and disassembly of components; preparation of vehicle surfaces; use of plastic material; and application of primer, spray paint and surface finishes.

3.512 AUTO BODY PROCEDURES

(20 class hrs/wk 10 cr) W

Covers procedures for repairing areas of impact, including pulling out, shrinking and restressing metal areas; sheet metal corrections; and damage correction planning. Includes principles of heat correction to metal, filing, picking and metal finishing. Prerequisite: 3.511 Auto Body Basics or instructor approval.

3.513 MINOR COLLISION REPAIR

(20 class hrs/wk 10 cr) Sp

Teaches minor collision damage repair, including alignment of doors, fenders, hood and trunk lids; reforming; curvature of metal; repairing holes in panels and sections; and welding of torn and damaged areas. Also introduces door and panel replacement, including sectioning, sanding, priming, painting and diagnosing and correcting water and dust leaks. Prerequisite: 3.512 Auto Body Procedures or instructor approval.

3.514 FRAME AND UNIBODY REPAIR

(20 class hrs/wk 10 cr) F

Covers principles of conventional and unitized frame member construction and alignment; straightening frame damage; replacing necessary members; tramming, heating, and methods of damage correction; principles of steering; geometry; and front system alignment of sheet metal. Prerequisite: 3.513 Minor Collision Repair.

3.515 MAJOR COLLISION REPAIR

(20 class hrs/wk 10 cr) W

Covers unitized body repair and major collision rebuilding of vehicle structure, including fabrication and major section replacement. Also covers panel replacement, custom styling, fabrication, and appearance reconditioning (including replacement of glass, moulding, hardware, headlinings and interior trim). Prerequisite: 3.514 Frame and Unibody Repair.

COURSE DESCRIPTIONS

3.516 ADVANCED SHOP PROCEDURES

(20 class hrs/wk 10 cr) Sp

Covers detailing final repairs and employer-employee relations; principles of estimating all collision damage, including retail labor rates, flat rate time and judgment items; final preparation for occupational employment; principles of insurance claim handling techniques, including policy coverages and types of loss; instruction in types of payment forms; and adjustor/shop management relationships.

3.527 ALTERNATIVE ENERGY SOURCES

(6 class hrs/wk 4 cr) F

Provides studies involving research and comparative analysis of available energy sources, such as solar, wind and mini-hydro.

3.529 MOBILE AIR CONDITIONING

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

Covers the fundamental principles of auto and heavy equipment air conditioning systems. Emphasizes basic design and components of the A/C systems and the function, adjustment, service and testing of the components.

3.552 TRADE AND ELECTRICAL COMPONENTS I

(4 class hrs/wk 3 cr) F

An entry-level course that emphasizes specific trade electrical components and equipment. Safety and basic functions and applications of individual electrical components and equipment are covered.

3.553 TRADE AND ELECTRICAL COMPONENTS II

(4 class hrs/wk 3 cr) W

Exposes students to the basic function and application of individual electrical components and equipment. Test meter use and equipment maintenance also are stressed. Prerequisite: 3.552 Trade and Electrical Components I.

3.580 INTRODUCTION TO REFRIGERATION/HEATING/AIR CONDITIONING

(9 class hrs/wk 6 cr) F

Conveys theories and principles of the heating and refrigeration technology, including safety and tube types, soldering, piping and handling.

3.583 PRINCIPLES OF REFRIGERATION

(9 class hrs/wk 6 cr) W

Deals with domestic refrigeration system operations, components and electrical diagrams in a lecture/laboratory setting.

3.584 SHEET METAL BASICS

(6 class hrs/wk 4 cr) W

Introduces the use of hand tools, layout procedures, machine forming and fastening procedures.

3.585 PRINCIPLES OF HEATING

(9 class hrs/wk 6 cr) Sp

Covers the usage, repair and maintenance of residential heating systems in lecture and laboratory. Includes instruction in types of controls, heat pumps, advanced troubleshooting and repair.

3.586 MECHANICAL INSTALLATION PROCEDURES

(6 class hrs/wk 4 cr) Sp

Provides the basic procedures involved in equipment installation, covering domestic refrigeration, freezers, air conditioners and commercial split systems.

3.587 OPERATION PRINCIPLES OF AIR CONDITIONING

(9 class hrs/wk 6 cr) W

Introduces psychrometrics, which increase ability to analyze and understand air conditioning technology. Practical aspects of design, sizing, maintenance and troubleshooting are emphasized.

3.588 PNEUMATIC CONTROLS

(6 class hrs/wk 4 cr) F

Introduces the pneumatic control systems and pneumatic to electric control interfacing.

3.589 DIAGNOSIS SERVICE AND REPAIR

(9 class hrs/wk 6 cr) Sp

Provides practical experience in troubleshooting and decision making for repairs. Lecture/lab approach includes repair and rebuilding experiences in simulated live situations.

3.590 CONTROL APPLICATION

(6 class hrs/wk 4 cr) W

Examines the functions and operations of electro-mechanical systems.

3.591 COMMERCIAL AND INDUSTRIAL REFRIGERATION

(9 class hrs/wk 6 cr) Sp

Introduces commercial and industrial refrigeration systems and control circuits through lecture and lab. Includes instruction in trouble-shooting methods, specific repairs and the use of charts and graphs.

3.592 SYSTEMS DESIGN

(6 class hrs/wk 4 cr) Sp

Promotes the use of problem-solving techniques and ingenuity in new product development and application. Includes tube sizing and installation. Lecture/lab course.

4.100 BLUEPRINT READING: GENERAL

(3 class hrs/wk 1-2 cr) F/W/Sp

Provides job-related skills in interpreting scale drawings and symbols and in preparing idea-explanation sketches. An individualized course for vocational students within occupational programs.

4.100A BLUEPRINT READING: METALS

(3 class hrs/wk 1-2 cr)

Provides job-related skills in interpreting industrial drawings and symbols and in preparing idea-explanation freehand sketches. Topics include dimensions, tolerances, threads, holes, material specifications, notes, lists detail, assembly and fabrication drawings. Individualized course for students in metalworking occupational programs.

4.100B BLUEPRINT READING: WATER/WASTEWATER

(3 class hrs/wk 1-2 cr)

Provides job-related skills in interpreting water/wastewater treatment plant drawings. Topics include architecture; building construction; plot plan; and electrical, plumbing, heating, ventilation and air conditioning plans for treatment plants. Individualized course for students in water/wastewater occupational program.

4.100C BLUEPRINT READING: RHAC

(3 class hrs/wk 1-3 cr)

Provides job-related skills in interpreting industrial drawings and symbols and in preparing idea-explanation freehand sketches. Print-reading topics include line language, measurements and dimensioning, sketching, section views, architectural symbols and drawings, auxiliary views, electrical wiring symbols, piping and ducting and heating and refrigeration symbols. Individualized course for students in Refrigeration, Heating and Air Conditioning occupational programs.

4.117 GEOMETRIC TOLERANCING

(3 class hrs/wk 2 cr)

An intermediate-level course for drafters, technicians and engineers. Covers the application of modern dimensioning and tolerancing. Geometric dimensioning and tolerancing provides uniform international interpretation of engineering drawings. Course utilizes updated and expanded practices of the latest (1982) issue of the American National Standards Institute on dimensioning and tolerancing. The U.S. standard employs the symbology of the International Standards Organization. Prerequisite: 12 college credits in drafting.

4.120 FUNDAMENTALS OF SPECIFICATIONS

(3 class hrs/wk 3 cr) Sp

Acquaints students with preparing and interpreting manufacturing and fabrication specifications. Practical problems are assigned relating classwork to industry.

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: 1.110 Elements of Algebra.

4.123 ILLUSTRATION

(6 class hrs/wk 4 cr)

Introduces the techniques and skills involved in graphic production of illustrations for brochures, catalogs and service manuals. Includes production of detailed isometric drawings; exploded assembly drawings; and pencil, ink and color assignments. Prerequisite: 4.124 Technical Drawing I or instructor approval.

4.124 TECHNICAL DRAWING I

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

Provides instruction and drafting practice related to basic graphic communication and interpretive needs of industrial, occupational and technical students.

4.128 DRAFTING FUNDAMENTALS

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

Introduces the basic attitudes, knowledge and skills required of an engineering technician or drafter. Course builds skills and knowledge in line language, lettering and technical sketching; the use of drafting equipment, print machines and various drafting media; and basic types of drawing. Corequisite: 6.550 Practical Geometry.

4.129 TECHNICAL DRAWING II

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

Continues the development of graphic communication areas covered in Technical Drawing I. Prerequisite: Technical Drawing I.

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.

4.131 DRAFTING I

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

Provides basic skills and knowledge in drafting techniques. Includes the use and application of drafting instruments, dimensioning techniques, orthographic projection, pictorial drawings, fasteners and machine finishes. Prerequisite: 4.128 Drafting Fundamentals. Corequisite: MT 101 College Algebra - Technical; WR 115 Introduction to Writing.

4.132 DRAFTING II

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

Continues work on concepts introduced in 4.131 Drafting I. Emphasizes auxiliary views, section views, tolerances, inking and metric dimensioning. Prerequisite: 4.131 Drafting I. Corequisite: MT 102T Trigonometry; Technical.

4.133 PRODUCTION METHODS & MATERIALS

(5 class hrs/wk 4 cr) Sp

Fundamental course in the materials and processes used in the construction and manufacturing industries, providing familiarity with terminology, tools, equipment, standards and materials. Prerequisite: 4.131 Drafting I; WR 121 English Composition.

4.139 INTRODUCTION TO CAD

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

A course for drafters, technicians and engineers in the application and functions of computer-aided drafting. Emphasizes hands-on operation of several software/hardware applications of CAD systems. Prerequisite: 12 college credits in drafting or instructor's approval.

4.141 ADVANCED DRAFTING I

(6 class hrs/wk 4 cr) F

Advanced course in the preparation of various machine working drawings. Emphasizes speed and accuracy in preparation of layouts, assembly and detail drawings. Prerequisite: 4.132 Drafting II. Corequisite: MT 102T Trigonometry; Technical; 4.133 Production Methods & Materials; 4.148 Practical Descriptive Geometry.

4.142 ADVANCED DRAFTING II

(6 class hrs/wk 4 cr) W

Advanced course in the preparation of various architectural working drawings. Emphasizes construction details, planning, site layout and architectural styles. Prerequisite: 4.132 Drafting II; 4.133 Production Methods & Materials.

4.143 ADVANCED DRAFTING III

(6 class hrs/wk 4 cr) Sp

Advanced course in the preparation of various electronics drawings and schematics. Emphasizes component recognition, graphic symbols, drawing types and drafting techniques used in the electronics industry. Prerequisite: 4.132 Drafting II; 4.133 Production Methods & Materials; 6.215 Technical Physics.

4.148 PRACTICAL DESCRIPTIVE GEOMETRY

(4 class hrs/wk 3 cr) F

Course in spatial graphics for the drafting and engineering technician. Includes design problems incorporating auxiliary views, true length of lines, true size and shape of angles-planes, and points of intersection. Development from point-line-plane through the use of revolution and auxiliary projection is included. Prerequisite: 4.132 Drafting II. Corequisite: MT

COURSE DESCRIPTIONS

4.149 APPLIED MECHANICS

(3 class hrs/wk 3 cr) W

Basic course in elementary statics and engineering mechanics for drafting technicians. Emphasizes graphical and analytical solutions to engineering problems, vector analysis and processes for problem solving. Prerequisite: 6.214 Technical Physics; MT 102T Trigonometry-Technical.

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.

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: 4.151 Welding I.

4.153 WELDING III

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

Advanced course for non-welding majors, designed for a higher degree of welding competency in trade applications. Standard welding practices, welder qualifications and industrial standards are covered as related subjects. Prerequisite: 4.152 Welding II or instructor approval.

4.154 WELDING SEMINAR

(2-8 class hrs/wk 1-4 cr) F/W/Sp

Open-entry/open-exit course providing skills upgrading.

4.156 ADVANCED METALS PRINT READING

(3 class hrs/wk 2 cr) Sp

An advanced engineering drawing interpretation course for metallurgy technology students. Emphasizes engineering drawing standards, dimensioning, tolerancing, material specification and standard engineering notations. ANSI Y14 standards are cited in all cases for graphic symbols and engineering dimensioning and tolerancing. Prerequisite: 4.124 Technical Drawing I, 4.129 Technical Drawing II or instructor's approval.

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 non-destructive evaluation, elementary principles of measurement, methodology test equipment, instrumentation and analysis of data.

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 non-destructive evaluation, elementary principles of measurement, methodology test equipment, instrumentation and analysis of data.

4.163 MATERIALS TESTING III

(4 class hrs/wk 3 cr) Sp

Surveys testing techniques, including bend, elevated temperature, non-metallic creep, flare and burst, corrosion of coated surfaces and reliable conversion of test data to identify related mechanical properties.

4.200 MATHEMATICS I

(4 class hrs/wk 1-4 cr) F/W/Sp/Su

Provides a thorough review of arithmetic, including fundamental operations with whole numbers, fractions, decimals, percentages and measurement. Provides a basis for 4.202 Math II or 1.110 Elements of Algebra. Note: A minimum competency level is required to pass this course.

● 4.202 MATHEMATICS II

(4 class hrs/wk 1-4 cr) F/W/Sp

Develops skills for solving problems in various occupations. Covers measurement and conversion, integers, algebra, equations, ratio and proportion. Note: A minimum competency level is required to pass this course. Prerequisite: 4.200 Math I or equivalent.

● 4.204 MATHEMATICS III

(4 class hrs/wk 1-4 cr) F/W/Sp

Introduces occupational formulas and related applied problems in geometry, graphs, right triangle trigonometry, logarithms and exponents. Note: A minimum competency level is required to pass this course. Prerequisite: 4.202 Math II or equivalent.

4.220, 4.221 INTEGRATED BASIC SCIENCE I, II (DENTAL)

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

Integrated science course for dental assistant students. 4.220, general principles of anatomy and physiology and anatomy and physiology of the head and the teeth; 4.221, anatomy and physiology of the head and teeth, embryonic development of the mouth and teeth, microbiology and pharmacology.

4.240 BASIC ARC WELDING

(14 class hrs/wk 6 cr) F

Introduces arc welding practices on mild steel of various thicknesses and joint configurations in all positions.

4.241 INTERMEDIATE ARC WELDING

(14 class hrs/wk 6 cr) W

Builds on skills learned in 4.240 Basic Arc Welding, including arc welding of mild steel and special ferrous and non-ferrous alloys. Employs the manual arc, TIG and MIG processes.

4.242 BASIC OXYACETYLENE WELDING

(8 class hrs/wk 4 cr) F

Introduces oxyacetylene welding practices on mild steel of various thicknesses and joint configurations in all positions.

4.243 WELDING PROJECTS I

(8 class hrs/wk 4 cr) W

Lecture/laboratory course in fundamentals of welding fabrication and repair. Introduces basic procedures in planning, sketching, cost evaluation, ordering, layout, metal preparation, tack-up and final welding. Prerequisite: 4.240 Basic Arc Welding; 4.242 Basic Oxyacetylene Welding.

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: 4.247 Interpreting Metal Fabrication Drawings.

4.246 ADVANCED ARC WELDING

(14 class hrs/wk 6 cr) Sp
Provides continuation of 4.241 Intermediate Arc Welding. Prepares students for welder certification in the manual arc and semi-automatic processes.

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. Prerequisite: 4.202 Math II.

4.250 WELDING PROJECTS II

(8 class hrs/wk 4 cr) Sp
Continues 4.243 Welding Projects I. Provides a more in-depth approach to welding design, fabrication and repair. Prerequisite: Instructor approval.

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.

4.255, 4.256, 4.257 FABRICATION & REPAIR PRACTICES I, II, III

(14 class hrs/wk 6 cr) 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.

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: 1.110 Elements of Algebra or equivalent.

5.233 DENTAL PROCEDURES III

(2 class hrs/wk 2 cr)
Familiarizes students with the dental specialties, such as endodontics, oral surgery, periodontics and pedodontics.

5.400 HOME HEALTH AIDE

(20 class hrs/wk 4 cr) F/W/Sp
Combines structured classroom work, laboratory demonstrations and practice, guest speakers and limited observation in an adult residential facility. Note: Four-week class. Prerequisite: CNA certification.

5.406 NURSING ASSISTANT

(20 class hrs/wk 5 cr) F/W/Sp
The Nursing Assistant program is a 100-hour course combining lecture as well as clinical experiences. Includes instruction in basic anatomy, physiology, nutrition and therapeutic health measures. Students are instructed in the basic nursing skills necessary to provide care for the convalescing patient and patients in long-term care facilities.

5.453 DENTAL PATHOLOGY

(2 class hrs/wk 2 cr) Sp
Studies common pathological diseases, injured and normal tissue and developmental anomalies. Prerequisite: 4.220, 4.221 Integrated Basic Science I, II.

5.461 DENTAL RADIOLOGY I

(2 class hrs/wk 2 cr) F
The first of a three-term sequence introducing the principles and hazards of radiation, including safety factors, processing of film, operation of x-ray equipment and anatomical landmarks.

5.462 DENTAL RADIOLOGY II

(3 class hrs/wk 2 cr) W
Continues and reviews 5.461 Dental Radiology I. Introduces x-ray techniques and patient considerations, emphasizing production of x-rays using manikins and patients. Prerequisite: 5.461 Dental Radiology I.

5.463 DENTAL RADIOLOGY III

(2 class hrs/wk 1 cr) Sp
Provides a concentrated clinical application of dental radiographic procedures. Prerequisite: 5.462 Dental Radiology II.

5.484 DENTAL MATERIALS I

(4 class hrs/wk 3 cr) W
Course 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.

5.485 DENTAL MATERIALS II

(4 class hrs/wk 3 cr) Sp
Continues 5.484 Dental Materials I, covering materials used in prosthodontic and laboratory procedures such as impression materials, plaster materials and waxes.

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.

5.489 EXPANDED DUTIES II

(3 class hrs/wk 2 cr) Sp
Continues Expanded Duties I (5.488), covering the remaining expanded functions with emphasis on laboratory and practical application in the clinic.

5.491 DENTAL OFFICE RECORDS

(1 class hrs/wk 1 cr) Sp
Introduces dental office records, patient reception, appointment scheduling, record maintenance, financial arrangements, coordination and supply control.

5.492 OFFICE EMERGENCIES

(1 class hrs/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.

5.494 CLINICAL PRACTICE I

(5 class hrs/wk 3 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.

COURSE DESCRIPTIONS

5.495 CLINICAL PRACTICE II

(5 class hrs/wk 3 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: 5.494 Clinical Practice I.

5.496 CLINICAL PRACTICE III

(5 class hrs/wk 3 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: 5.495 Clinical Practice II.

5.497 DENTAL HEALTH EDUCATION I

(1 class hrs/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.

5.498 DENTAL HEALTH EDUCATION II

(1 class hrs/wk 1 cr) W

Second course in a three-term sequence. Emphasizes nutritional information applied to good oral health, including nutrients, basic four food groups, food diaries and nutritional analysis. Principles learned in 5.497 Dental Health Education I are applied in the campus clinic. Prerequisite: 5.497 Dental Health Education I.

5.499 DENTAL HEALTH EDUCATION III

(1 class hrs/wk 1 cr) Sp

Third 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.

5.500 ORAL ANATOMY

(2 class hrs/wk 2 cr) F

Covers anatomy and histology of the teeth and their supporting structures and the function of oral structures.

5.510 OFFICE PRACTICUM

(24 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.

5.517 DENTAL RECORDS

(3 class hrs/wk 3 cr)

Provides an overview of all aspects of dental recordkeeping, including charting, daily records, soft tissue findings, radiographs, patient information and medical histories. Also deals with the laws governing dentistry, the Oregon Dental Practice Act, ethics of dentistry and how they relate to all members of the dental team.

5.518 DENTAL BUSINESS PROCEDURES

(3 class hrs/wk 3 cr)

Covers dental business procedures, including scheduling, business record maintenance, financial arrangements, inventory control, recall programs, insurance, collections and disbursements. Also includes communication skills for dealing with fellow dental office personnel as well as the public. Includes staff meetings, patient correspondence, professional correspondence, use of the telephone in communicating with patients and public speaking.

5.519 DENTAL TERMINOLOGY

(1 class hrs/wk 1 cr)

Covers dental terminology, which is fundamental to understanding the dentist diagnosis, treatment and completion of insurance forms and other correspondence.

5.520 DENTAL ANATOMY

(2 class hrs/wk 2 cr)

Studies the anatomy of the teeth and their supporting structures and the function of oral structures.

5.521 DENTAL PROCEDURES I

(2 class hrs/wk 2 cr)

Introduces the basic dental procedures, including exam, x-ray and simple operative procedures. Also covers concepts and principles of dental health, including oral hygiene, preventive dentistry, nutrition and communication with patients.

5.522 DENTAL PROCEDURES II

(2 class hrs/wk 2 cr)

Familiarizes students with dental procedures in the operator and relates those procedures to front office duties.

5.625 CLINICAL OFFICE PROCEDURES I

(4 class hrs/wk 4 cr) F

Surveys the requirements and qualities for success as a medical assistant. Includes medical techniques, methods and procedures for assisting the physician with examination; medical surgical aseptic procedures; obtaining vital signs; care of equipment and supplies; and drugs and solutions. Prerequisite: 5.630 Medical Terminology I.

5.630 MEDICAL TERMINOLOGY I

(3 class hrs/wk 3 cr) F

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.

5.633 MEDICAL TERMINOLOGY II

(3 class hrs/wk 3 cr) W

Continues 5.630 Medical Terminology I; emphasizes terminology related to body systems. Prerequisite: 5.630 Medical Terminology I.

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: 5.633 Medical Terminology II.

5.711 NURSING I

(13 class hrs/wk 6 cr) F

Introduces the role of the nurse in meeting the needs common to patients of all ages. Includes fundamentals, obstetrics, growth and development tasks for all ages, beginning communication, and physical and mental illness for all ages, with emphasis on problem solving. Independent learning tasks, demonstrations, audio-visual aids, discussion and lecture are used in the classroom. A supervised campus lab is required. Supervised clinical practice is provided, with pre- and post-conferences to evaluate planned patient care. Note: Must be taken in sequence. Individually scheduled tutorial sessions are offered in addition to published schedules. Prerequisite: one-year of high school chemistry within past 5 years or CH 130 Elementary Physiological Chemistry.

5.712 NURSING II

(15 class hrs/wk 8 cr) W

Second course in sequence; continues introduction to the role of the nurse. Note: Must be taken in sequence.

5.713 NURSING III

(17 class hrs/wk 9 cr) Sp

Third course in sequence; continues introduction to the role of the nurse. Note: must be taken in sequence.

5.721, 5.722, 5.723 NURSING IV, V, VI

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

Continues study of major illnesses, from pediatrics to geriatrics, including complications of pregnancy. Gives consideration to scope, prevention, diagnosis, treatment and psycho-social aspects of illness, with emphasis on decision making. Includes deviations from normal growth and development that predispose to illness; rehabilitative aspects of nursing care and available community agencies; and basic concepts of personality, behavior and psychological processes, ranging from "normal" to "abnormal." Additional topics include legal aspects and trends in nursing, community health, leadership skills and specialty nursing areas. Note: Must be taken in sequence. Available only to second-year nursing students.

5.726, 5.727 NURSING IN CONTEMPORARY SOCIETY I, II

(1 class hrs/wk 1 cr) W/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 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.

5.730 TRANSACTIONAL ANALYSIS IN HEALTH CARE

(8 class hrs/wk 1 cr) W

Helps students develop the ability to communicate with patients and other health care workers in more meaningful and purposeful ways. Using the principles of Transactional Analysis, the participants practice skills that help them interact in a positive and assertive manner with increased awareness of feelings and understanding of behavior.

5.732 DRUG ADMINISTRATION

(2 class hrs/wk 2 cr) F

Introduces the major drug classifications, drug administration skills, calculating drug dosages, legal aspects of drug administration and use of drug information resources. Includes general topics in pharmacology, such as drug metabolism and adverse reactions. Note: Available only to admitted ADN students.

5.737 NURSING TRANSITIONS

(1 class hrs/wk 1 cr) F

Designed to offer incoming freshman 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.

◆ 6.154 PROCESS CONTROL I

(4 class hrs/wk 3 cr) F

Deals with the theory and practice of activated sludge process control. Includes discussions of sludge quality, solids balance, respiration rate, nitrification/denitrification, bulking problems and solutions, waste sludge control and return sludge control. Laboratory time includes sludge quality tests, filament identification and respiration rate determination.

6.155 PROCESS CONTROL II

(4 class hrs/wk 3 cr) W

Second course of the two course sequence on biological process control. Focuses on monitoring techniques and computer-aided data interpretation on attached growth systems: trickling filter, rotating biological contacters, activated biofilters and trickling filter-solids contact. Special topics, including biological nitrogen and phosphorous removal, are covered.

6.158 SANITARY SEMINAR

(1-3 class hrs/wk 1-3 cr)

Covers water and wastewater concepts, including chemistry, microbiology, mathematics, hydraulics and practical operational procedures.

6.164 WATER SOURCES

(4 class hrs/wk 3 cr) F

Studies surface and groundwater sources. Included for surface water: water rights, classification, selection and management of watersheds, water quality measurement, collection and storage. Included for groundwater: search, measurement and flow. Emphasis on dealing with the water source as a basic ecological system that includes the study of geology, soils, vegetations, wildlife and aquatic habitat.

6.165 WATER DISTRIBUTION

(4 class hrs/wk 3 cr) Sp

Basic course in the techniques of installing, operating and maintaining water distribution systems. Includes materials selection, population projections, fire hydrant repair, repair of broken lines, cross-connection control programs, meter installation and water quality management.

6.166 WATER PURIFICATION SYSTEMS

(6 class hrs/wk 4 cr) W

Studies theory and operation of water purification, including mixing, sedimentation, coagulation and flocculation, filtration (via single and mixed media), water softening and removal of nuisance organisms and materials.

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 prerequisite courses are combined with on-the-job training by both plant supervisory personnel and LBCC visiting instructors. Prerequisite: HE 112 First Aid; instructor approval.

6.180 WATER/WASTEWATER MECHANICS I

(6 class hrs/wk 2 cr) W

First course of a three-term sequence dealing with basic mechanical skills. Covers hand tools, threaded fasteners, packing, lubrication, gaskets, gauges, identification of small plumbing fittings and connecting PVC pipes. These skills are then applied to repair and maintain valves, fire hydrants and chlorine stations.

6.181 WATER/WASTEWATER MECHANICS II

(6 class hrs/wk 2 cr) Sp

Second course in a three-term sequence dealing with basic mechanical skills. Covers steel and copper pipe, precision instruments, gears, belts, chains, control panels and motors. These basic skills are then used to repair and maintain centrifugal and piston pumps.

6.182 WATER/WASTEWATER MECHANICS III

(6 class hrs/wk 2 cr) F

A three-term sequence dealing with basic mechanical skills. Covers basic electrical fundamentals, use of electrical measurement devices, contactors, transformers, starters and motor control circuitry.

COURSE DESCRIPTIONS

6.190 INTRODUCTION: WATER/ WASTEWATER OPERATIONS

(12 class hrs/wk 7 cr) F

Introduces water and wastewater treatment plant operations, including basic hydraulics and flow measurements, water sources, water treatment and distribution, wastewater collection and pre-treatment.

6.191 WATER SYSTEMS OPERATION

(12 class hrs/wk 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: 6.190 Introduction to Water and Wastewater Operations; 4.202 Math II.

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: 6.190 Introduction to Water and Wastewater Operations; 4.202 Math II.

6.193 INTRODUCTION TO AQUATIC CHEMISTRY/ 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.

6.194 BASIC AQUATIC CHEMISTRY & MICROBIOLOGY

(8 class hrs/wk 4 cr) W

Continues 6.193 Introduction to Aquatic Chemistry and Microbiology. Applies basic concepts to common water and wastewater analytical techniques, including pH, temperature, dissolved oxygen, alkalinity, hardness, solids, microscopic identification, total plate count and total coliform. Prerequisite: 6.193 Introduction to Aquatic Chemistry and Microbiology.

6.195 INTERMEDIATE AQUATIC CHEMISTRY & MICROBIOLOGY

(8 class hrs/wk 4 cr) Sp

Continues Basic Aquatic Chemistry and Microbiology. Basic concepts are applied to common water and wastewater analytical techniques, including activated sludge, biochemical oxygen demand, chlorine residual and fecal coliforms. Prerequisite: 6.194 Basic Aquatic Chemistry and Microbiology.

6.197 SOLIDS HANDLING

(3 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.

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.

6.200 SURVEYING I

(4 class hrs/wk 3 cr) F

Basic course in surveying techniques. Includes fundamentals of chaining and leveling, use of basic surveying instruments and office procedures. Practical application of procedures and instruments is provided through appropriate field problems. Prerequisite: 4.132 Drafting II; MT 102T Trigonometry: Technical.

6.201 SURVEYING II

(6 class hrs/wk 4 cr) Sp

Advanced course in surveying practice for civil engineering technicians; stresses practical problems in cadastral, route and construction surveying. Emphasizes field work and calculations, as well as application of contemporary computer software and computational devices.

6.202 STATICS

(3 class hrs/wk 3 cr) F

A basic course for technicians. Involves analysis of forces on structures in equilibrium. Emphasizes problem solving and problem-solving techniques. Prerequisite: MT 102 Trigonometry - Technical; P 201 Physics.

6.203 STRENGTH OF MATERIALS

(3 class hrs/wk 3 cr) F

An algebra-based, mechanics of materials course. Emphasizes analysis of stresses and strains produced in structural elements under typical loading conditions. From this analysis, students design beams, trusses, columns and footings using standard techniques and practices. Prerequisite: MT 106 Introduction to Calculus - Technical; 6.202 Statics.

6.205 CIVIL DRAFTING I

(6 class hrs/wk 3 cr) W

Introduces drafting practices and problems related to the civil engineering field. Emphasizes land survey drawings, legal descriptions, mapping and residential design. Prerequisite: 4.132 Drafting II; 6.200 Surveying I.

6.206 CIVIL DRAFTING II

(6 class hrs/wk 3 cr) Sp

Advanced course in drafting related to the civil engineering field. Emphasizes preparing drawings for constructing a variety of structures. Includes discussions of piping systems, highway structures, dams, roads, bridges and other structures as an introduction to civil engineering structures. Prerequisite: 4.132 Drafting II; 4.133 Production Method and Materials.

6.211 PRINCIPLES OF ROAD DESIGN

(4 class hrs/wk 2 cr)

Introductory course in road construction and design. Emphasizes calculations for earthwork, drawings for construction and techniques for layout. Prerequisite: 6.205 Civil Drafting I; 6.217 Introduction to Soil Mechanics; 6.218 Introduction to Sanitary Engineering.

6.214, 6.215, 6.216 TECHNICAL PHYSICS

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

Introductory course for students in technical fields, such as drafting, electronics engineering and metallurgy, who need a background in physical principles. 6.214, mechanics; 6.215, electricity, magnetism and heat; 6.216, wave motion, sound, light, optics, elementary atomic and nuclear physics. Note: Must be taken in sequence. Prerequisite to 6.214: 6.550 Practical Geometry. Prerequisite to 6.215: MT 101T College Algebra - Technical.

6.217 INTRODUCTION TO SOIL MECHANICS

(2 class hrs/wk 2 cr) W

Provides an overview of soil characteristics, physical properties and mechanical load-carrying characteristics. Emphasizes calculations and procedures for sampling soil. Prerequisite: 6.203 Strength of Materials.

6.218 INTRODUCTION TO SANITARY ENGINEERING

(3 class hrs/wk 3 cr) F

Introduces Sanitary Engineering, a technical-level course designed to present basic concepts of water/wastewater engineering. Topics include water quality, water resource management, water and wastewater treatment, water distribution, sanitary sewer systems and hydraulics. Prerequisite: P 202 General Physics.

6.220 ENERGY SYSTEMS MANAGEMENT

(3 class hrs/wk 3 cr)

An entry-level course in energy use and management deals with energy cost comparison, structural energy efficiency, energy-sources cost analysis, energy alternatives and solar system planning and design. Heat loss, heat gain and system efficiencies are covered.

6.222 FUNDAMENTALS OF CAD IN DRAFTING/ENGINEERING

(6 class hrs/wk 3 cr) FWSp

Introductory course for students with minimal drafting skills; promotes student progress in the use of basic drafting fundamentals and introductory CAD applications. Topics include standard drafting fundamentals, basic CAD operations and CAD system configurations.

6.223 C.A.D.D.

(6 class hrs/wk 4 cr) Sp

Advanced course for drafting/civil engineering technicians. Uses computer methods and CAD system techniques for analytical problem solutions and design/drafting graphics production. Prerequisite: 4.148 Practical Descriptive Geometry; MT 173B Microcomputers: BASIC.

6.224 DRAFTING/ENGINEERING DESIGN

(6 Class hrs/wk 3 cr) Sp

Advanced course for drafting/engineering technicians, with emphasis on the design process and practical design experience of civil and manufacturing problems. Students develop engineering designs using contemporary techniques and practices and produce data, drawings and presentations using reference material and problem-solving techniques. Prerequisite: Department approval or four terms completed in Civil Engineering or Drafting Technology.

6.235 APPLIED HYDRAULICS

(4 class hrs/wk 4 cr) W

A practical course enabling use and understanding of common flow charts for flow and head loss calculations to make open channel flow calculations and to read and use pump curves. Application is made to water distribution and sewage collection systems. Corequisite: MT 102T Trigonometry: Technical.

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.

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: 6.293 Introduction to Metallurgy or instructor approval.

6.278 BASIC METALLURGY

(5 class hrs/wk 2 cr) Su

Introduces ingredients required to make alloys and the machinery processes necessary to help those alloys behave more efficiently.

6.281 NON-DESTRUCTIVE TESTING I

(5 class hrs/wk 3 cr) F

Introduces theory and applied techniques of liquid penetrant and magnetic particle inspection; industrial applications as an integral part of metals fabrication; and development, testing and inspection processes in quality control.

6.282 NON-DESTRUCTIVE TESTING II

(5 class hrs/wk 3 cr) W

Continues 6.281 Non-Destructive Testing I. Emphasizes ultrasonic and eddy current methods of testing and inspection.

6.283 NON-DESTRUCTIVE TESTING III

(5 class hrs/wk 3 cr) Sp

Continues 6.282 Non-Destructive Testing II. Emphasizes x-ray and gamma ray testing and inspection.

6.284 RADIOGRAPHY

(6 class hrs/wk 4 cr) Sp

Introduces production problems and non-destructive testing using short wave-length energy from x-rays or radioactive isotopes to penetrate metal to reveal the presence of discontinuities.

6.285 ULTRASONICS

(6 class hrs/wk 4 cr) W

Introduces production problems and non-destructive testing that employs high frequency sound waves to determine metallic qualities.

6.293 INTRODUCTION TO METALLURGY

(6 class hrs/wk 4 cr) F

Surveys metallurgical principles, including raw material requirements for metals-processing furnaces and refractories, fabrication of metal products, destructive evaluation and non-destructive testing.

6.294 PROCESS METALLURGY

(6 class hrs/wk 4 cr) Sp

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 101, 102 General Chemistry.

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. Prerequisite: 6.276 Physical Metallurgy or instructor approval.

COURSE DESCRIPTIONS

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.

6.316 INTRODUCTION TO ELECTRONICS

(1 class hrs/wk 1 cr) F

Preparatory course designed to help the student better understand his or her role in electronics. The Electronics Program, Cooperative Work Experience and job placement will be outlined and discussed. Note: All electronics career students are required to take this course.

6.320 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: MT 101 College Algebra: Technical; 6.214 Technical Physics.

6.321 DC/AC CIRCUIT ANALYSIS

(12 class hrs/wk 8 cr) W

Continues 6.320 Fundamentals of Electronics; 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 presented. Prerequisite: 6.320 Fundamentals of Electronics or instructor approval; MT 101 College Algebra: Technical. Corequisite: MT 102 College Trigonometry: Technical; 6.214 Technical Physics.

6.322 BASIC SEMICONDUCTORS

(12 class hrs/wk 8 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. Prerequisite: 6.321 DC/AC Circuit Analysis or instructor approval; MT 102 College Trigonometry: Technical.

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: 6.322 Basic Semiconductors or instructor approval.

6.324 ELECTRONIC COMMUNICATIONS

(9 class hrs/wk 6 cr) W

General survey of communications. Begins with oscillators and tuned circuits; continues through AM, FM and microwave transmitters and receivers; ends with fiber optics and opto-electronics. Prerequisite: 6.323 Analog Circuits or instructor approval.

6.325 INTEGRATED SYSTEMS

(9 class hrs/wk 6 cr) Sp

Provides a general survey of electronic integrated systems and robotics, including switching power supplies, transducers, signal conditioning, data recording and control loops. Prerequisite: 6.324 Electronic Communications or instructor approval.

6.330 VOCATIONAL ELECTRICITY

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

Introduces basic electrical safety, meter use and DC theory. Emphasizes avoidance of hazardous situations and correct, basic power tool repair.

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.

6.336 TECHNICAL ELECTRICITY I

(4 class hrs/wk 3 cr) F

Introduces basic electrical theory, safety and DC meter use. Designed to prepare the student for basic electrical troubleshooting required in other industrial trades. Prerequisite: 1.110 Elements of Algebra.

6.337 TECHNICAL ELECTRICITY II

(4 class hrs/wk 3 cr) W

Introduces basic AC measurements and calculations. Includes basic theory and practical application of AC motors, alternators and motor controls. Prerequisite: 6.336 Technical Electricity I; 4.204 Math III.

6.338 TECHNICAL ELECTRICITY III

(4 class hrs/wk 3 cr) Sp

Studies the operational theory of motors, generators, transformers, batteries and industrial motor controls. Provides entry-level and technical information required for the electrical trades. Prerequisite: 6.336, 6.337 Technical Electricity I and II; 6.550 Practical Geometry.

6.343 ELECTRONIC LAB SKILLS I

(2 class hrs/wk 1 cr) F

Basic course in electronic lab skills. Covers concepts of safety, VOM usage, component identification, wire terminal and component soldering, circuit board loading, wire wrap and circuit board desoldering.

6.344 ELECTRONIC LAB SKILLS II

(2 class hrs/wk 1 cr) W

Electronic lab skills course in oscilloscope and function generator usage, printed circuit board layout, fabrication, loading and soldering. Includes a term project in which a power supply is fabricated per schematic and tested per specification. Prerequisite: 6.343 Electronic Lab Skills I.

6.346 DIGITAL CIRCUITS I

(9 class hrs/wk 5 cr) F

Analyzes and applies basic digital circuits, covering gates through counters. Prerequisite: 6.322 Basic Semiconductors or instructor approval.

6.347 DIGITAL CIRCUITS II

(9 class hrs/wk 5 cr) W

Covers theory and application of digital concepts based primarily in integrated circuits, covering counters through basic digital computing systems. Prerequisite: 6.346 Digital Circuits I or instructor approval.

6.349 BASIC MICROPROCESSORS

(6 class hrs/wk 5 cr) Sp

Introduces the student to the structure and programming concepts used to develop functional systems with current microprocessors and peripheral component technology. Prerequisite: 6.347 Digital Circuits II or consent of instructor.

● 6.550 PRACTICAL GEOMETRY

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

Presents applied, intuitive geometry for students who did not take geometry in high school. Prerequisite: MT 100 Intermediate Algebra.

6.554 TECHNICAL FIELD PROJECTS

(1-9 class hrs/wk 1-3 cr)

Provides an in-depth study of particular aspects of electronics as determined by individual student's interests. Prerequisite: 6.322 Basic Semiconductors.

7.180 SUPERVISED PLACEMENT

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

Students work in child development lab setting under direction of instructor. Assignments may include material preparation, skill training or specific care tasks. Weekly class session permits students from various placements to share common learning experiences and tie placement activity to training objectives.

♦ **8.100 COMPUTERS IN AGRICULTURE**

(3 class hrs/wk 2 cr)

A computer literacy course for vocational agriculture students. Introduction to Basic programming.

8.125 SOILS I

(4 class hrs/wk 3 cr) F

Provides necessary soil science background for work with fertilizers, irrigation, drainage and other management practices. Physical, chemical and biological properties of the soil are discussed in relation to plant growth.

8.126 SOILS II

(4 class hrs/wk 3 cr) W

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.

8.130 AGRICULTURE 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.

8.131 PEST MANAGEMENT

(4 class hrs/wk 3 cr) F

Includes the classification, anatomy, growth, life history, recognition and control principles of selected weeds, diseases and insect pests.

8.132 ARBORICULTURE I

(4 class hrs/wk 3 cr) W

Introduces ornamental horticulture, including how to plant, train, prune, protect and repair trees. Note: Course is offered alternate years only. Offered 1988-89.

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 1988-89.

8.134 ADVANCED AGRICULTURAL CHEMICALS

(4 class hrs/wk 3 cr) W

Presents the use and safety requirements of agricultural chemicals, beyond the scope of 8.130 Agriculture Chemicals. Prepares students to take the State Pesticide Consultant Exam.

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 1989-90.

8.136 TURF MANAGEMENT II

(4 class hrs/wk 3 cr) Sp

Provides opportunity to adapt and apply principles and theories taught in 8.135 Turf Management I. Includes business practices and procedures and field trips to observe common practices, maintenance and management of turf areas. Note: Course is offered alternate years only. Offered 1989-90.

8.137 PLANT PROPAGATION

(5 class hrs/wk 4 cr) Sp

Introduces the principles, methods, techniques and facilities used to propagate ornamentals.

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.

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 1989-90.

8.141 LANDSCAPE PLANNING

(5 class hrs/wk 3 cr) W

Surveys basic layout and design, site utilization and orientation of landscape facilities. Includes landscape contours, grading, trees, shrubs, floral selection, utilization and fertilization.

8.142 AGRICULTURAL SALES AND MARKETING

(3 class hrs/wk 3 cr) F

Covers all aspects of sales and marketing of agricultural products, including crops, commercial and purebred livestock, horses and ornamental plants. The commodities futures market, telemarketing and other specialized outlets are also included.

8.144 ANIMAL NUTRITION

(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.

8.147 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.

8.148 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: 8.147 Livestock Selection Techniques.

COURSE DESCRIPTIONS

8.150 ANIMAL GENETICS AND SELECTION

(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.

8.152 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.

8.153 SHEEP PRODUCTION

(5 class hrs/wk 4 cr) W

Fundamentals of modern sheep production, including sheep breeds, nutrition, reproduction, diseases and parasites, wool evaluations, marketing and modern management practices.

8.154 SWINE PRODUCTION

(5 class hrs/wk 4 cr) Sp

Introduces modern swine production, including swine breeds, marketing, breeding, feeding, production testing, diseases and parasites, and production problems.

8.156 LIVESTOCK DISEASES I

(4 class hrs/wk 3 cr) W

Covers the nature of livestock diseases caused by living organisms, including common infectious diseases, diagnosis, treatment and prevention. Modern drugs and medications, immunology and basic microbiology also are included.

8.157 LIVESTOCK DISEASES II

(4 class hrs/wk 3 cr) Sp

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.

8.158 ARTIFICIAL INSEMINATION

(5 class hrs/wk 4 cr) Sp

Includes agricultural 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.

8.159 GROUND TRAINING THE HORSE

(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, handling the feet and preparation for halter competition. In addition, grooming, safety and use of equipment is taught.

8.163, 8.164 SCHOOLING THE WESTERN HORSE I, II

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

Provides hands-on training in which the student actually breaks and trains a horse for riding. The student learns the fundamentals of horse training, including longeing, driving, biting, riding, reining and backing. Equipment, safety and horse "psychology" also are taught.

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.

8.166 VEGETABLE TECHNOLOGY

(4 class hrs/wk 3 cr)

Applied study in the major vegetable crops. Emphasizes cultural practices such as fertilization, irrigation, cultivation, pest control, harvesting, marketing and cost analysis.

8.167 FORAGE CROPS

(4 class hrs/wk 3 cr) Sp

Emphasizes practices that produce maximum economic returns for land devoted to hay, pasture or range. Includes establishment and management, fertilization, pest control, rotations, irrigations and renovation.

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.

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 1988-89.

◆ 8.171 FARM BUSINESS ANALYSIS

(3 class hrs/wk 3 cr) Sp

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.

8.174 BEGINNING WESTERN EQUITATION

(3 class hrs/wk 1 cr) F

Teaches the fundamentals of Western riding, including safety, equipment, saddling, mounting, the aids, balance and control.

8.175 INTERMEDIATE WESTERN EQUITATION

(3 class hrs/wk 1 cr) Sp

Emphasizes and reinforces skills learned in beginning course. Polishes the use of the aids and stresses skilled movements with the horse and proper seat position. Prerequisite: 8.174 Beginning Western Equitation or instructor approval.

8.177 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.

8.178 HORSE SCIENCE PRACTICUM

(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 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.

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. Note: Fourteen-week class.

8.310, 8.311, 8.312 FOODSERVICE PRACTICUM I, II, III

(18 class hrs/wk 5-6 cr) F/W/Sp
The Food Service Practicum classes I, II, and III take the student through 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, Grill and Sandwich, 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 - 8.337 Stations and Tools; 8.336 Food Service and Sanitation.

8.321, 8.322, 8.323 ADVANCED COOKING MANAGEMENT I, II, III

(20 class hrs/wk 6 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.

8.336 FOODSERVICE SANITATION

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

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.

8.341 SOUPS AND SAUCES

(10 class hrs/wk 2 cr) W
Provides study and practice in the art of classical and modern sauce and soup making from varied national and ethnic cuisines. Note: Three-week class.

8.345 SERVICE TECHNIQUES

(5 class hrs/wk 1 cr) W
Teaches the skills of dining room service by a combination of lecture, demonstrations and role playing. In addition, students learn the fundamentals of banquet service, wine service and building customer relations. Note: Two-week class.

8.350, 8.351, 8.353 BANQUETS & BUFFET LAB A, B, C, D

(3 class hrs/wk 1 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.

8.354 BANQUETS & 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.

8.368 CREATING THE MENU

(10 class hrs/wk 1 cr) F
Covers history of the menu, styles of menus, consideration of nutrition, work load, flow of goods and sales. Note: One-week class.

8.373 COSTING

(10 class hrs/wk 1 cr) F
Teaches theory and practice of determining food cost for restaurant and institutional cooking. Note: One-week class.

8.402 BAKING FUNDAMENTALS

(8 class hrs/wk 1 cr) F
Provides knowledge and use of bakery tools and equipment. Techniques in production and finishing; forming rolls; using the pastry bag; baking yeast and quick breads, cakes, cookies and pies are covered. Students recognize and learn causes of common faults in baked goods. Note: Two-week class.

8.404 CHEESE, EGGS & BREAKFAST COOKERY

(10 class hrs/wk 1 cr) F
Uses demonstration, lecture, and hands-on experience to take students through fundamentals of purchasing, storing, cooking and serving of cheese, eggs, omelettes, potatoes, pancakes, crepes, cereals, coffee and tea. Note: Two-week class.

8.405 SEAFOOD & POULTRY COOKING

(10 class hrs/wk 1 cr) W
Covers purchasing, storing and preparing the major types of seafood and poultry through a combination of lectures and hands-on experience. Note: Two-week class.

8.407 PANTRY

(10 class hrs/wk 1 cr) F
Introduces basic preparation and presentation of salads, dressings, hot and cold sandwiches, appetizers, beverages and garnishes. Includes selecting and preparing greens and fruits. Stresses production and planning organization of the work station for peak efficiency. Note: Two-week class.

8.409 MEAT COOKERY

(6 class hrs/wk 3 cr) Sp
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. Note: Eight-week class.

8.411 VEGETABLE COOKERY

(8 class hrs/wk 1 cr) F
Covers purchasing, preparing and serving of green, red, white and yellow vegetables, as well as potatoes, grains, legumes and pastas, through demonstration and practice. Note: Two-week class.

COURSE DESCRIPTIONS

8.414 GARDE MANGER

(8 class hrs/wk 1 cr) W

Covers history of food presentation and chareuterie, 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.

8.415 ADVANCED BAKING & PASTRY

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

Provides practice in "roll-in" doughs, cake decorating, petit fours, chocolate and candy making, as well as advanced cake and tortes, breads, and icing, with an emphasis on fine techniques and speed. Note: Four-week class.

8.418 BEVERAGE OPERATIONS & SERVICES

(4 class hrs/wk 2 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. Note: Five-week class.

8.419 NUTRITION & SPECIAL DIETS

(6 class hrs/wk 1 cr) Sp

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. Note: Two-week class.

◆ **9.038 MICROCOMPUTERS: INTRODUCTION**

(3 class hrs/wk 1 cr)

Teaches beginning students to operate a computer and develop good work habits. Allows practice with a variety of software and computers. Stresses hands-on experience. Note: Five-week course.

9.048A WORDPERFECT SELF-STUDY

(2 class hrs/wk 1 cr)

Covers the basics of word processing. Learn to use WordPerfect on IBM-compatible computers. No experience necessary.

◆ **9.048E LOTUS FOR BEGINNERS**

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

Enables students to become proficient in uses of Lotus 1-2-3. Course gives working knowledge of spreadsheet, data management and graphics capabilities through practical hands-on experience. Note: Eight-week class.

◆ **9.048K LOTUS 1-2-3 MACROS**

(15 class hrs/wk 1 cr) W/Sp

Presents advanced applications of Lotus 1-2-3. Instruction in macro programming to automate spreadsheet, data base and graphic applications Note: Five-week class.

◆ **9.048L INTRODUCTION TO MS-DOS**

(3 class hrs/wk 1 cr)

Introduces the computer operating systems with emphasis on file management, directories and subdirectories, batch files and menu development. Note: Five-week class.

9.148 PREPARATION FOR WELDER CERTIFICATION

(8 class hrs/wk 4 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: 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.

9.153 WELDING III

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

Advanced course for non-welding majors. Teaches a higher degree of welding competency in trade applications. Standard welding practices, welder qualifications and industrial standards are covered as related subjects. Prerequisite: 9.152 Welding II or instructor approval.

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.

9.313 EMERGENCY MEDICAL TECHNICIAN I

(9 class hrs/wk 8 cr) F/Sp

Presents a basic training program, with classroom theory, practice exercises and clinical experience, in problems encountered by ambulance personnel. Includes overall role and responsibilities of the emergency medical technician in emergency care and operational aspects of the job; develops skill in lifesaving techniques and emergency treatment short of that rendered by physicians or by paramedical personnel under direct supervision of a physician; and develops skill in use and care of necessary equipment. Note: Currently consists of evening lectures, a choice of evening and daytime labs, clinical experiences and field experiences.

9.314 EMERGENCY MEDICAL TECHNICIAN II

(9 class hrs/wk 7 cr) W/Su

Upgrades skills of basically trained EMTs, providing a second step in a career development pattern. Includes advanced training in certain aspects of intravenous therapy and airway management. The course introduces pharmacology and drug administration as defined in the scope of practice for EMT IIs. Note: Currently consists of evening lectures, a choice of evening and daytime labs and clinical experiences. In addition to class hours specified above, additional hours are required for the off-campus clinical. Prerequisite: 9.313 Emergency Medical Technician I.

9.315A EMERGENCY MEDICAL TECHNICIAN III A

(9 class hrs/wk 7 cr) F

The first class in the EMT III sequence for Emergency Medical Technicians. Provides advanced training in the assessment, patho-physiology and pre-hospital treatment of cardiovascular emergencies. In addition, techniques covered include electrocardiographic monitoring, defibrillation and drug treatment of dysrhythmias. Note: Currently consists of evening lectures and daytime or evening labs and clinical experiences. Additional hours are required for off-campus clinical. Prerequisite: 9.314 Emergency Medical Technician II.

9.315B EMERGENCY MEDICAL TECHNICIAN III B

(9 class hrs/wk 7 cr) W

Completion of the EMT III course. Emphasizes the management of respiratory disorders and medical emergencies and it familiarizes the student with advanced techniques of airway management. Note: Currently consists of evening lectures and daytime or evening labs and clinical experience. Additional hours are required for off-campus clinical. Prerequisite: 9.315A Emergency Medical Technician III-A.

9.316 EMERGENCY MEDICAL TECHNICIAN IV A & B

(12 class hrs/wk 10 cr) Sp/Su

Prepares the Emergency Medical Technician for satisfactory completion of the Paramedic Certification Examination given by the Board of Medical Examiners. Provides advanced skills for assessing and caring for patients with central nervous system disorders, emergencies associated with childbirth, pediatric problems, rescue techniques and crisis intervention. Note: Currently consists of evening lectures, daytime and evening labs and clinical experiences. In addition to class hours specified above, additional hours are required for the off-campus clinical. Prerequisite: 9.315 Emergency Medical Technician III.

9.320 CPR INSTRUCTOR

(8 class hrs/wk 1 cr)

Reviews CPR skills and introduces methods and techniques of CPR instruction. Includes doing lesson plans; using an instructor's manual; evaluating students; and processing forms, records and American Heart Association authorization. Prerequisite: Current American Heart Association CPR card.

9.321 FIRST RESPONDER RECERTIFICATION

(8 class hrs/wk 1 cr)

Course for first responders in a medical emergency. Includes three hours of cardiopulmonary resuscitation, three hours of prevention and control of shock and two hours of other related materials concerning medical emergencies.

9.340 EMT RECERTIFICATION

(8 class hrs/wk 0 cr)

Provides continuing education hours required for on-going state certification of EMTs. This course provides a review of EMT concepts or in-depth presentations of shock, diabetes, orthopedic emergencies, neurological assessment, respiratory assessment, hazardous materials, burns, lifting and moving, terminology, heart attack, stroke, respiratory emergency, emergency childbirth and skill reviews.

9.413 MEDICAL LAW AND ETHICS

(3 class hrs/wk 1 cr)

A three-session workshop designed for medical assistants, receptionists and other medical office personnel. Provides a review of medical law and ethics, through three lectures, with question and discussion time planned for each consecutive session. Note: Three-week class. Available only to employees in these health fields.

9.419 MINI PHYSICAL ASSESSMENT WORKSHOP

(8 class hrs/wk 1 cr)

Provides the practicing RN with skills necessary to assess the chest and abdomen. Includes a review of related anatomy and physiology, physical examination techniques used in assessing the thorax and abdomen, integration of common 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 NURSE REFRESHER COURSE

(20 class hrs/wk 10 cr)

Course designed for registered nurses who have not practiced for the past five years or for RNs or LPNs who would like to increase their knowledge. This course meets the State Board of Nursing requirements for re-entry into nursing. Note: If not currently licensed in the state of Oregon, student is required to apply for licensing prior to enrollment.

9.426 CORONARY CARE NURSING

(7 class hrs/wk 4 cr)

Provides information for the RN in the coronary care unit. Emphasizes recognition and treatment of cardiac arrhythmia and emergency procedures such as cardiopulmonary resuscitation and electrical resuscitation. Reviews normal and abnormal anatomy and physiology of the heart, diagnostic methods and treatment of cardiovascular disease. Principles of cardiac monitoring and electrocardiography are applied.

9.555 INDUSTRIAL SAFETY I

(3 class hrs/wk 3 cr)

Stresses supervisor's role, including basic principles, safety training, employee participation, enforcement, human factors in safety and protective equipment.

9.556 INDUSTRIAL SAFETY II

(3 class hrs/wk 3 cr)

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

9.557 INDUSTRIAL SAFETY III

(3 class hrs/wk 3 cr)

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

9.585, 9.586 ALTERNATING CURRENT I, II

(1-5 class hrs/wk 1-3 cr)

Introduces Alternating Current theory and application, giving the student knowledge and theories relating to concepts of AC. Students acquire basic skills in oscilloscope, function generator, AC power supplies and frequency counter. Alternating Current II is a continuation giving the student additional concepts and theories relating to complex AC circuits. Prerequisite: 9.588 Direct Current II.

COURSE DESCRIPTIONS

9.587, 9.588 DIRECT CURRENT I, II
(1-5 class hrs/wk 1-3 cr)

Introduces electricity and electronics, giving the student knowledge and use of basic theories and laws relating to Direct Current electricity. Includes safety, soldering and basic use of DC power supplies, volt-ohm meters and digital volt meters. Direct Current II is a continuation giving the student knowledge of more laws relating to Direct Current, including network theorems and complex resistive circuits.

◆ **9.606O APPLEWORKS**

(4 class hrs/wk 3 cr)

Explores integrated software using Appleworks. Students learn to do word processing, spreadsheets and data base management with the same program on Apple IIe computer.

◆ **9.607I DATA BASE-DBASE III+**

(3 class hrs/wk 2 cr)

Introduces the student to data base management. Students receive hands-on experience with Dbase III+. Topics include: setting up files, records, sorting, editing, sequencing and printing. Note: Eight-week class.

◆ **9.607J WORDPERFECT FOR USERS**

(2 class hrs/wk 1 cr)

For those who know about word processing and want to become proficient in WordPerfect. Note: Eight-week class.

9.607K DESKTOP PUBLISHING ON THE MACINTOSH

(6 class hrs/wk 3 cr)

Studies the use of word processing (MacWrite), technical drawing (MacDraw), page layout (PageMaker), and communications (Microphone) software on the Macintosh computer. Students learn the use of the LaserWriter printer as a typesetter.

◆ **9.607L WORDPERFECT ADVANCED**

(3 class hrs/wk 1 cr) W

Surveys advanced features of WordPerfect. Previous knowledge of WordPerfect required. Covers merge capabilities, macros, control of printer, columnar typing, database and more. Note: Three-week class.

9.607N ADVANCED DBASE III+

(4 class hrs/wk 1 cr)

Structured programming using dBase III+. Provides hands-on experience designing, documenting and writing programs. Covers fundamentals of command file programming, file handling, designing user-friendly screens and menus, and debugging programs. Previous knowledge of dBase III required. Note: Three-week class.

9.649 M.O.S. INTEGRATED CIRCUIT LAYOUT

(7 class hrs/wk 6 cr) W

Covers principles of layout for silicon gate M.O.S. integrated circuits. Interpretation of schematics, cell design and chip organization. Adapted to the development of layout skills, and electrical theory is minimized.

9.669 DIGITAL PRINCIPLES III

(6 class hrs/wk 5 cr)

Covers medium- and large-scale integrated digital circuit concepts aimed primarily at microprocessors and support hardware.

9.672 DIGITAL PRINCIPALS 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 SEMICONDUCTORS I

(6 class hrs/wk 3 cr)

Fundamental course in semiconductors. Includes practical theory of semiconductor diodes, zener diodes, special application and bipolar transistor operations.

9.673A 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.

◆ **9.695 PROGRAMMING IN BASIC**

(4 class hrs/wk 3 cr)

Introduces BASIC language and its use in writing programs. Course is designed for writing your own programs. Use of purchased software is not covered.

9.713 THE ELECTRONIC CALCULATOR

(2 class hrs/wk 1 cr)

Covers touch operation of the display calculator and its use in business practices, such as invoices, inventory extensions, mark downs, sales slips, cash discounts, interest, payroll and income taxes.

◆ **9.718 COMPUTERS FOR OFFICE WORKERS**

(3 class hrs/wk 1 cr)

A beginning course to help students gain a working knowledge of computers in the office. Emphasizes hands-on loading and executing word processing, spreadsheets and data base programs, among others. Note: Five-week class.

9.722 COMPUTER INTERFACES

(4 class hrs/wk 2 cr)

Teaches students how to use computer input/output devices, including HP1B, RE-232, HP1L, modem, speech output and recognition, and GPIO.

9.754 CLERICAL FILING

(2 class hrs/wk 2 cr)

Provides a working knowledge of the most critical filing situations in a business office.

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.

9.859 ADVANCED FARRIER SKILLS

(27 class hrs/wk 1-14 cr)

Course for experienced farriers; concentrates on improving shoeing quality and speed and expanding number of specialty shoeing requirements a farrier can meet. Concentrates on lameness, building shoes, corrective shoeing and shoeing for specialty horses. Prerequisite: Completion of an approved farrier program and/or practicing or reviewing farrier.

9.934 EARLY CHILDHOOD EDUCATION FALL WORKSHOP

(8 class hrs/wk 1 cr)

Ideas and energy to start a new year of working with young children are the goals of this workshop sponsored by Linn-Benton Chapter of the Oregon Association for the Education of Young Children and the Council for Children. This day-long workshop is especially designed for early childhood educators, primary teachers, preschool and day care center staff, family day care providers, classroom aides and all others who work with young children.

◆ 9.944 LEARNING WITH LOGO

(15 class hrs/wk 1 cr)

LOGO is a computer language simple enough for children to learn yet sophisticated enough to challenge adults. The purpose of this class is to use LOGO as a tool to enhance the parent/child relationship. This course reviews existing implementations of LOGO for a variety of microcomputers and explores one (Terrapin for Apple and Commodore 64) in depth. Parents sign up for the credit class.

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.

9.949A, 9.949B, 9.949C LIVING AND LEARNING WITH YOUR TWO-YEAR OLD I, II, III

(3 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.

9.950A, 9.950B, 9.950C LIVING AND LEARNING WITH YOUR KINDERGARTENER I, II, III

(5 class hrs/wk 3 cr)

A kindergarten cooperative designed to meet the needs of parents and their kindergartener. 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.

9.951A, 9.951B, 9.951C LIVING AND LEARNING WITH YOUR PRESCHOOLER I, II, III

(2-5 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.

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 families have and the means of increasing personal growth for both parents and adolescents. Note: Five-week class.

9.956 STEPPARENTING

(2 class hrs/wk 1 cr)

Discusses stepparenting from several vantage points: current stage of the family, the spouses and the children. Emphasizes the strengths of this family type with acknowledgement of how to deal with weaknesses and losses in a realistic manner. Note: Five-week class.

9.957 SINGLE PARENTING

(2 class hrs/wk 1 cr)

Addresses the unique challenges, satisfactions and frustrations of heading a single parent family. Using a discussion format, students cover personal and family values clarification, time management, dating, remarriage, legal aspects, budget and credit information, basic child development, discipline and child care selection. Note: Five-week class.

9.962C PARENT-TOT GYM

(1 class hrs/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.

9.962D PEG: EFFECTIVE PARENTING

(2 class hrs/wk 1 cr)

Designed for parents of school age children. Emphasizes effective communication skills, mutual problem solving and appropriate and responsible behavior. Parents are given recognition for their strengths and skills. Note: Eight-week class.

9.962E FAMILY MATH

(4 class hrs/wk 0 cr)

Provides activities designed to develop problem-solving skills. Emphasizes working together. The materials used involve an active hands-on approach. Topics include arithmetic, geometry, measurement, estimation and logical thinking, probability and statistics. Note: Two-week class.

9.962G KIDS, PARENTS AND COMPUTERS

(1.5 class hrs/wk 0 cr)

Acquaints children and parents with the power of the computer as a tool for learning. Emphasizes decision making, problem solving and communication. Note: Six-week class.

9.962N FAMILY CHILD CARE: FIRM FOUNDATION

(2 class hrs/wk) 0 credit

Presents an introductory overview of the components of high-quality family child care. Caregivers learn how to provide quality care and have the opportunity for self-assessment as they apply new concepts and skills.

9.962O PREPARING FOR THE DRUG (FREE) YEARS

(2 class hrs/wk) 0 credit

Parents learn how to confront the problem of alcohol/drug use in our society by making clear to their children the parents' vision of a happy and healthy life, free from problems with drugs.

COURSE DESCRIPTIONS

9.965, 9.966, 9.967 LIVING AND LEARNING WITH YOUR CHILD WITH SPECIAL NEEDS I,II,III

(3 class hrs/wk 2 cr) Sp

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.

9.971 PARENT 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 co-sponsor the conference.

9.981 BALANCING THE WORK-FAMILY LIFESTYLE

(2 class hrs/wk 0 cr)

Classes for family members who maintain a household and either do 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 week class.

9.982 CHILD ABUSE: A COMMUNITY CONCERN

(12 class hrs/wk 1 cr)

Focuses on various aspects of the child abuse issue. Topics may include identification and investigation of child abuse, the importance of a community team approach to the problem, treatment and other positive solutions to the problem. Note: Two-day workshop.

9.994 FOSTER PARENT ORIENTATION

(2.5 class hrs/wk 1 cr)

Provides basic orientation to individuals about the foster care program. Basic rules and regulations for foster care are covered.

9.995 FOSTERING THE SEXUALLY ABUSED CHILD

(2.5 class hrs/wk 1 cr)

Covers the dynamics of sexual abuse, how it relates to children and how to help them cope with the trauma.

9.996 FOSTERING DISCIPLINE

(2.5 class hrs/wk 1 cr)

Explores new methods of behavior management for children.



Alpha-Numerical Courses

Courses marked with the following symbols may be applied toward fulfilling General Education Requirements:

- ◆ Computer Competency
- Humanities/Art
- Math/Science
- Social Sciences

AA 104 INTRODUCTION TO GRAPHIC COMMUNICATIONS

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

Introduces mass communication through journalism, graphic design and printing technology. Students are exposed to terminology, techniques and career opportunities in each of these areas.

AA 120 LAYOUT AND PASTEPUP PROCEDURES

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

Introduces terminology; practice of layout and paste-up techniques, including use of headlines, body copy, line cuts and halftones; imposition; screened prints; and preparation of mechanical art. Prerequisite or Corequisite: AA 104 Introduction to Graphic Communications.

AA 174 SCREEN PRINTING

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

Provides practice in screen printing techniques, using hand-cut paper lacquer and aqua stencils, tusche and glue, and photostencil materials. Also covers various types of ink for printing on glass, textiles, plastics and paper.

AA 221 GRAPHIC DESIGN I

(6 class hrs/wk 3 cr) F

Examines the relation of aesthetic concept to practical problems, with investigations into contemporary trends, methods and techniques. Layout and design for publication and advertising art direction are of primary emphasis. Lettering and inking skills are stressed. Matting, papers and presentation also are included. Prerequisite: AA 120 Layout and Pasteup Procedures; AA 224 Typographical Design; AA 229 Typesetting; AA 263 Process Camera; AA 137 Illustration.

AA 222 GRAPHIC DESIGN II

(6 class hrs/wk 3 cr) W

The study and development of marks, symbols, logos, design systems and corporate identity programs. Examines the design's adaptability, application, practicality and integrity. Prerequisite: AA 221 Graphic Design I.

AA 223 GRAPHIC DESIGN III

(6 class hrs/wk 3 cr) Sp

A course in color and black and white illustration/design. Emphasizes individual work and study. Prerequisite: AA 222 Graphic Design II.

AA 224 TYPOGRAPHICAL DESIGN

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

Introduces letterforms to develop fundamental awareness of type and typographic design. Studies the evolution of typography, art of calligraphy, hand-built letterforms and transfer lettering and emphasizes typography as a working tool. Prerequisite or Corequisite: AA 104 Introduction to Graphic Communications.

AA 225 PACKAGING AND THREE-DIMENSIONAL DESIGN

(6 class hrs/wk 3 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. Prerequisite: AA 224 Typographical Design; AA 237 Illustration; AA 263 Process Camera; AA 120 Layout and Pasteup Production.

AA 226 TYPOGRAPHICAL DESIGN II

(6 class hrs/wk 3 cr) F

Continues the study, use and design of letterforms. Emphasizes creating original type variations and form manipulation. Prerequisite: AA 120 Layout and Pasteup Procedures; AA 224 Typographical Design; AA 229 Typesetting; AA 263 Process Camera.

AA 228 PORTFOLIO PREPARATION—PROFESSIONAL PRACTICES

(6 class hrs/wk 3 cr) Sp

Emphasizes re-evaluation of previously produced projects and 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; and business practices and ethics are covered. Intended for second-year graphic design students. Prerequisite: AA 222 Graphic Design II. Corequisite: AA 223 Graphic Design III.

◆ AA 229 TYPESETTING

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

Introduces operation of photo typesetting devices: production of headlines, body type, tabular matter and advertising composition. Prerequisite: AA 104 Introduction to Graphic Communications; minimum typing speed of 25 wpm.

AA 237 ILLUSTRATION I

(6 class hrs/wk 3 cr) Sp

Explores and develops skills in the use of various tools, materials and techniques through class projects. Conceptual development of illustration dealing with written materials is examined. The intent of the course is to make the student aware of illustrative possibilities and processes. Prerequisite: AA 104 Introduction to Graphic Communications; AR 131 Drawing I; AR 132 Drawing II. Corequisite: AR 133 Drawing III.

AA 238 ILLUSTRATION II

(6 class hrs/wk 3 cr) W

Continues class projects to explore and develop skills in the use of various illustrational tools and materials. Conceptual development of illustration dealing with written material is stressed. Prerequisite: AA 237 Illustration I.

AA 239 ILLUSTRATION III

(6 class hrs/wk 3 cr) Sp

Projects explore further possibilities in illustration, including techniques of painting and themes surrounding figures and their analogies to other 3-D forms. Prerequisite: AA 238 Illustration II.

AA 263 PROCESS CAMERA

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

Teaches function and use of the process camera for making line and halftone negatives and diffusion transfer positives. Covers related darkroom techniques, including outline type and color imaging. Prerequisite: AA 104 Introduction to Graphic Communications; JN 134 Introduction to Photography.

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.

COURSE DESCRIPTIONS

- AA 299 SPECIAL PROJECTS**
(2-10 class hrs/wk 1-5 cr) F/W/Sp
In coordination with the instructor, students select projects that will provide practical experience within the major field. Note: May be repeated for a maximum of 12 credits. Prerequisite: Instructor approval.
- ◆ **AG 251 COMPUTER APPLICATIONS IN AGRICULTURE**
(4 class hrs/wk 3 cr) FW
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.
- AG 280 CWE AGRICULTURE/HORTICULTURE**
(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/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.
- **AN 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.
- **AN 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.
- **AN 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.
- **AN 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.
- AN 198 RESEARCH TOPICS**
(1 class hrs/wk 1 cr)
Intended primarily for the anthropology or archaeology major to help develop skills in independent research. The student is required to review, in-depth, current knowledge on an anthropological or archaeological topic of personal interest. Prerequisite: WR 123 English Composition.
- **AN 210 SELECTED TOPICS IN SOCIAL ANTHROPOLOGY**
(3 class hrs/wk 3 cr)
Provides an in-depth examination of one or more selected anthropological topics such as marriage and kinship practices, religion and magic, and acquisition of sex roles. Prerequisite or Corequisite: AN 103 Introduction to Cultural Anthropology recommended.
- **AN 232 NATIVE NORTH AMERICANS**
(3 class hrs/wk 3 cr)
Offers topics of study about the earliest inhabitants of North America, including discussion of archaeological evidence of these first Americans, customs before white contact, westernization and contemporary issues.
- AN 280 CWE ANTHROPOLOGY/ ARCHEOLOGY**
(6-42 class hrs/wk 2-14 cr)
An instructional program designed to give students practical experience in supervised employment related to anthropology/archeology. 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.
- ANS 121 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 211 FEEDS & FEEDING**
(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: 8.144 Animal Nutrition.
- ANS 221 INTRODUCTORY HORSE SCIENCE**
(5 class hrs/wk 4 cr) F
Basic course in commercial horse production and management. Covers breeds, breeding systems, nutrition, reproduction, diseases and marketing outlets. Also develops basic skills in handling, foot care, feeding, selection and health management.
- 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.
- **AR 102 ART APPRECIATION**
(3 class hrs/wk 3 cr) F/W/Sp
Surveys the principal concerns of art and artists, ancient to modern times, through the study of media, methods, visual form and aesthetics. Primarily a lecture format with some related studio experiences focusing on process and experience, not on ability.
- **AR 115 BASIC DESIGN: COMPOSITION**
(6 class hrs/wk 3 cr) F/W
Introduces the values of black and white; concepts relating to shape; design structure, unity and proportion. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements.
- **AR 116 BASIC DESIGN: COLOR**
(6 class hrs/wk 3 cr) W/Sp
Studies the concepts of color, its properties, combination, relatedness, proportions and interaction. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 115 Basic Design I or consent of instructor.

➤ **AR 131 DRAWING I**

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

Provides a basic course in drawing, with an emphasis on understanding the drawing of simple forms. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education requirements.

➤ **AR 132 DRAWING II**

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

Continues AR 131 Drawing I, with an emphasis on composition and drawing complex forms. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 131 Drawing I or consent of instructor.

➤ **AR 133 DRAWING III**

(6 class hrs/wk 3 cr) Sp

Continues AR 132 Drawing II with an emphasis on drawing very complex forms, composition and form invention. Explores a variety of drawing techniques and materials. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 132 Drawing II or consent of instructor.

➤ **AR 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: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements.

➤ **AR 181 PAINTING: STILL LIFE**

(6 class hrs/wk 3 cr) W

Explores still-life painting, emphasizing composition, drawing and color. All paintings are done in oil. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 131 Drawing I or consent of instructor. Offered alternate years.

➤ **AR 182 PAINTING: PORTRAITURE**

(6 class hrs/wk 3 cr) W

Explores portrait painting, emphasizing composition, drawing and color. All paintings are done in oil. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 131 Drawing I or consent of instructor. Offered alternate years.

➤ **AR 184 WATERCOLOR: STILL LIFE**

(6 class hrs/wk 3 cr) F

Covers watercolor techniques and compositional ideas appropriate to subjects taken from still-life. Note: may be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 131 Drawing I or consent of instructor.

➤ **AR 186 WATERCOLOR: LANDSCAPE**

(6 class hrs/wk 3 cr) Sp

Presents watercolor techniques and compositional ideas appropriate to subjects taken from landscape. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 131 Drawing I or consent of instructor. Offered alternate years.

AR 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's approval.

➤ **AR 201, 202, 203 INTRODUCTION TO 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.) AR 201 Ancient Art, (visual art from prehistory up to the Middle Ages) PART I; AR 202 Art of the Middle Ages (up to Impressionism) PART II; AR 203 Twentieth Century Art, (Impressionism through the '80s) PART III.

➤ **AR 234 FIGURE DRAWING**

(6 class hrs/wk 3 cr) W

Introductory course in drawing the nude figure. Major emphasis is placed on its anatomy, form unity and development. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 131 Drawing I or instructor approval.

➤ **AR 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: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 154 Beginning Ceramics or instructor approval.

➤ **AR 274 PRINTMAKING: SERIGRAPHY**

(6 class hrs/wk 1-3 cr)

Offers studio practice in the expressive and technical principles of screen printing; emphasizes composition and color using various stencil processes to achieve an expressive visual form. Prerequisite: AA 174 Screen Printing and instructor approval.

AR 280 CWE FINE ARTS

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

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

➤ **AR 284 WATERCOLOR: ABSTRACTION**

(6 class hrs/wk 3 cr) Sp

Explores the special effects of watercolors and their application to subject matter and compositional ideas. Note: May be repeated for up to 6 credits. A maximum of 3 credits may be applied to the Humanities/Arts distribution of the General Education Requirements. Prerequisite: AR 131 Drawing I or consent of instructor. Offered alternate years.

COURSE DESCRIPTIONS

ARE 211 FARM AND RANCH MANAGEMENT

(5 class hrs/wk 5 cr) W

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.

AS 101 RUDIMENTS OF METEOROLOGY

(1 class hrs/wk 1 cr)

Provides a descriptive treatment of weather phenomena, including winds, air masses, fronts, clouds and precipitation. Note: Video course.

AS 111, 112, 113 AEROSPACE STUDIES I

(1 class hrs/wk 1 cr) 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

(1 class hrs/wk 1 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.

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 106 MARKETING MANAGEMENT ORGANIZATION DECA

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

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

◆ **BA 110A USING THE PERSONAL COMPUTER—INTRO & DOS**

(4 class hrs/wk 1 cr) F/W/Sp/Su

Covers the operations of the IBM PC Disk Operating System for the novice computer user. Note: Three-week class.

◆ **BA 110B USING THE PERSONAL COMPUTER—LOTUS**

(4 class hrs/wk 1 cr) F/W/Sp/Su

Introductory course on using LOTUS 1-2-3. Note: Three-week class.

◆ **BA 110C USING THE PERSONAL COMPUTER—DBASE III+**

(4 class hrs/wk 1 cr) F/W/Sp/Su

Introductory course providing instruction on using Data Base. Note: Three-week class.

◆ **BA 131 INTRODUCTION TO INFORMATION SYSTEMS**

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

Covers the application of computers to solve business problems. Emphasizes designing, developing and implementing management information systems as well as using application programs as professional tools.

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 200 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 201 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 200 Principles of Accounting I.

BA 202 PRINCIPLES OF ACCOUNTING III

(3 class hrs/wk 3 cr) Sp

Studies control accounting for departments and branches, cost accounting for manufacturing plants, income taxes and their effect on business decisions and analysis of financial statements. Prerequisite: BA 201 Principles of Accounting II.

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 211 FINANCIAL ACCOUNTING

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

Presents techniques of account construction and preparation of financial statements. Emphasizes application of problems of recording, measuring income, purchasing, sales, inventories, special journals and internal control of cash. Accounting systems and management control, concepts and principles of depreciation, merchandise inventory, evaluation, partnership and corporate accounting, capital stock, investments, and dividends are included.

COURSE DESCRIPTIONS

BA 212 MANAGERIAL ACCOUNTING

(4 class hrs/wk 4 cr) Sp/Su
Covers partnership accounting and corporation accounting. In addition, control accounting for departments and branches, cost accounting for manufacturing plants, income taxes and their effect on business decisions and analysis of financial statements are discussed. Prerequisite: BA 211 Financial Accounting.

BA 215 COST ACCOUNTING I

(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: 2.530 Practical Accounting I or BA 200 Principles of Accounting I.

BA 217 BASIC ACCOUNTING & FINANCIAL ANALYSIS

(3 class hrs/wk 3 cr)
A one-term course for students not majoring in business. Introduces the recording, summarizing, presenting and interpreting of accounting data. Emphasizes basic accounting principles and terminology, the accounting cycle and analysis of financial reports.

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: 2.531 Practical Accounting II or BA 201 Principles of Accounting II.

BA 223 PRINCIPLES OF MARKETING

(4 class hrs/wk 4 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 PERSONNEL MANAGEMENT

(3 class hrs/wk 3 cr) F/W
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 226 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 229 PERSONAL FINANCE

(3 class hrs/wk 3 cr)
Thoroughly studies home financing, installment buying, insurance, investments, wills and other phases of managing family finances.

BA 230 MANAGEMENT INFORMATION SYSTEMS

(3 class hrs/wk 3 cr) Sp
Describes data processing principles used for management and system analysis. Looks at the design of information systems and applies mathematical and analytical techniques to determine effective and efficient business decisions. Prerequisite: Two terms of accounting and two in computer science courses or permission of instructor.

BA 233 MARKETING RESEARCH

(3 class hrs/wk 3 cr)
Identifies and examines markets that exist in our economy. Includes an analysis of products, projected and perceived products and brand images.

BA 235 INTRODUCTION TO BUSINESS STATISTICS

(4 class hrs/wk 4 cr) F/W/Sp/Su
Presents a statistical analysis of business and economic data used in controlling an operation and in making sound business decisions. Special attention is given to assembling statistical inference and linear regression and correlation. Prerequisite: MT 162 Mathematics for the Biological, Management and Social Sciences.

BA 238 PRINCIPLES OF SALESMANSHIP

(3 class hrs/wk 3 cr) F
Covers the subject from the viewpoint of the sales-oriented firm. Includes characteristics of the customer, buying motives and approach, presentation, demonstration and overcoming objections in closing sales. Emphasizes advertising, preselling techniques, various media, copy illustration and layout.

BA 239 PRINCIPLES OF 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 242 INTRODUCTION TO INVESTMENTS

(3 class hrs/wk 3 cr)
Covers securities, investment concepts and economic trends for the private investor. Discusses investment objectives, portfolios, corporate securities and securities markets.

BA 249 RETAIL MERCHANDISING

(3 class hrs/wk 3 cr) W
Presents principles of efficient retail organization and management, including location and layout, types of store organization, personnel management, credit and collection, store protection and other operating activities.

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 250A CREATING A SMALL BUSINESS

(3 class hrs/wk 3 cr)
Gives each student the skill needed to develop a plan for a new or existing small business. Each student actually develops a business plan as the term project.

BA 250B SMALL-BUSINESS DECISION MAKING

(3 class hrs/wk 3 cr)
Enables students to analyze common small-business problems. Decision-making methods and skills are developed and then applied to small-business case studies selected from a wide variety of areas of concern to a small-business owner or manager.

BA 256 INCOME TAX PREPARATION

(3 class hrs/wk 3 cr) F
Covers the federal income tax laws, emphasizing the importance of adequate and suitable financial records. Helps the taxpayer compute required reports and taxes due. At class option, special interests, such as farming and manufacturing, may be discussed.

COURSE DESCRIPTIONS

BA 269 PRINCIPLES OF BANK OPERATION

(3 class hrs/wk 3 cr)

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

BA 270 MONEY AND BANKING

(3 class hrs/wk 3 cr)

Stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student. Emphasizes such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments and foreign exchange.

BA 271 ANALYZING FINANCIAL STATEMENTS

(3 class hrs/wk 3 cr)

Reviews basic accounting principles for those who have studied accounting and provides background for financial statement analysis by those with no accounting background. Course consists of two major sections: characteristics of financial statements and financial statement analysis. Prerequisite: BA 201 Principles of Accounting II.

BA 272 HOME MORTGAGE LENDING

(3 class hrs/wk 3 cr)

Presents subject from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. Includes the mortgage portfolio, mortgage plans and procedures and the mortgage loan officer's role in portfolio management.

BA 273 MARKETING FOR BANKERS

(3 class hrs/wk 3 cr)

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

BA 274 INTERNATIONAL BANKING

(3 class hrs/wk 3 cr)

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

BA 275 BANK MANAGEMENT

(3 class hrs/wk 3 cr)

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

BA 276 AGRICULTURAL FINANCE

(3 class hrs/wk 3 cr)

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

BA 278 LAW AND BANKING

(3 class hrs/wk 3 cr)

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

BA 279 BANK INVESTMENTS

(3 class hrs/wk 3 cr)

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

BA 282 TRUST FUNCTIONS AND SERVICES

(3 class hrs/wk 3 cr)

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

● **BI 101, 102, 103 GENERAL BIOLOGY**

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

Lab science courses, designed for non-majors. 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, Human Diseases, Principles of Biology, and Reproductive Strategies. BI 102: Animal Behavior, Foods, Human Body, Plants and People, and Principles of Biology. BI 103: Environmental Issues, Garden Ecology, Living Planet, Marine Biology, Oregon Ecology, Plant Diversity and Ecology, and Principles of Biology.

● **BI 164 NATURE PHOTOGRAPHY I**

(4.5 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 165 NATURE PHOTOGRAPHY II**

(4.5 class hrs/wk 3 cr)

Pursues each of the subject areas of BI 164 Nature Photography I in greater depth. Note: A 35mm SLR camera, flash unit, tripod and macro equipment are required.

● **BI 231, 232, 233 HUMAN ANATOMY & 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 system; BI 232, respiratory system, urinary system, fluid and electrolyte balance, endocrine system, blood and cardiovascular system; BI 233 lymphatic and immune systems, digestive system, metabolism, nervous system, senses and reproductive system. Prerequisite: CH 101, CH 201 General Chemistry or CH 130 Elementary Physiological Chemistry or equivalent or concurrent enrollment in any of these chemistry courses.

● **BI 234 MICROBIOLOGY**

(6 class hrs/wk 4 cr)

Introductory course in microbiology. 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**

(3 class hrs/wk 3 cr)

Surveys pathogenic bacteria and other pathogenic microorganisms. Covers characteristics of organisms, diseases they cause, their significance to human health and methods of control.

● **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**

(3 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.

● **BO 201, 202, 203 GENERAL BOTANY**

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

BO 201, surveys kingdoms Monera, Protista, Fungi and Plantae, with some emphasis on fossil plants. BO 202, morphology (structure), physiology (functions) and genetics of seed plants (mostly angiosperms, although gymnosperms are discussed when obviously different). BO 203, identification of flowering plants, both native and introduced weeds, including nomenclature and classification of important families, their floral morphology and vegetative characteristics. Modern problems and techniques in systematics also are discussed. Note: A recent background in high school-level science and mathematics is recommended for BO 201. Prerequisite to BO 202: BO 201 General Botany or instructor approval.

● **CH 100 INTRODUCTORY CHEMISTRY**

(5 class hrs/wk 4 cr) W

Introduces basic chemistry and laboratory skills. Designed for students preparing for CH 101 or CH 104 General Chemistry courses. Prerequisite: 1.110 Elements of Algebra or equivalent.

● **CH 101, 102 GENERAL CHEMISTRY**

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

Introductory two-quarter sequence for vocational students and students preparing for CH 201. Includes inorganic, nuclear, organic and biological chemistry with integrated laboratory experiments. Note: Must be taken in sequence. Prerequisite to CH 101: 1.110 Elements of Algebra or equivalent. Prerequisite to CH 102: CH 101 General Chemistry.

● **CH 104, 105, 106 GENERAL 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 and home economics. Prerequisite to CH 104: 1.110 Elements of Algebra or equivalent; high school physical science or equivalent. Note: Must be taken in sequence. Prerequisite to CH 105: MT 100 Intermediate Algebra and CH 104 General Chemistry. Prerequisite to CH 106: CH 105 General Chemistry.

CH 130 ELEMENTARY PHYSIOLOGICAL CHEMISTRY

(6 class hrs/wk 4 cr)

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 1.110 Elements of Algebra.

● **CH 201, 202, 203 GENERAL CHEMISTRY**

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

A three-term sequence for science and engineering students. Introduces physical and chemical aspects of inorganic and organic chemistry. Topics include atomic structure, chemical bonding, chemical equilibrium, rate of reaction, acids and bases, oxidation and reduction, nuclear chemistry, organic chemical compounds and polymers. Note: Must be taken in sequence. A calculator with scientific notation is required. Prerequisite to CH 201: CH 102 General Chemistry, high school chemistry or equivalent. Prerequisite to CH 202: MT 101 College Algebra.

● **CH 226, 227, 228 ORGANIC CHEMISTRY**

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

Introduces structures and reactions of carbon compounds, including hydrocarbons; compounds with functional groups containing oxygen, nitrogen, sulfur and halogen atoms; and compounds of biological interest. Note: Must be taken in sequence. Prerequisite to CH 226: Ch 104, 105, 106 or CH 201, 202, 203 General Chemistry sequence.

COURSE DESCRIPTIONS

● **CH 234 QUANTATIVE ANALYSIS**

(6 class hrs/wk 4 cr) F

Service course for students of biological and physical sciences. Includes theoretical and practical aspects of gravimetric, volumetric and instrumental methods of chemical analysis. Prerequisite: CH 104, 105, 106 or CH 201, 202, 203 General Chemistry sequence.

CH 280 CWE CHEMISTRY

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

An instructional program 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 100 SURVEY OF CRIMINAL JUSTICE SYSTEMS**

(3 class hrs/wk 3 cr)

Surveys the nature of crime and criminal responsibility, the criminal justice process and the professionals in the criminal justice system.

■ **CJ 101 INTRODUCTION TO CRIMINOLOGY**

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

Covers major types of criminal behavior, role of offenders, factors that contribute to the production of criminality or delinquency, changes of law in crime control and treatment processes.

■ **CJ 110 INTRODUCTION TO LAW ENFORCEMENT**

(3 class hrs/wk 3 cr) F

Exploration of theories, philosophies and concepts related to role expectations of law enforcement officers, with emphasis on patrol, traffic and public service responsibilities and their relationship to administration of the justice system.

■ **CJ 120 INTRODUCTION TO THE JUDICIAL PROCESS**

(3 class hrs/wk 3 cr) W

Surveys the justice process from arrest to returning the offender to society; the jurisdiction of city, county, state and federal police agencies; and the constitutional rights of individuals in America.

■ **CJ 130 INTRODUCTION TO CORRECTIONS**

(3 class hrs/wk 3 cr) Sp

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 criminal offenders within the community. Includes philosophy, historical development and contemporary functioning of the agencies and officers.

CJ 198 INDEPENDENT STUDY: RESEARCH TOPICS

(1 class hrs/wk 1 cr)

An in-depth examination of a selected criminal justice topic. Intended primarily for the Criminal Justice Program major who needs help in developing skills in independent research. Prerequisite: CJ 100 Survey of Criminal Justice System or CJ 101 Introduction to Criminology. Corequisite: WR 123 English Composition.

CJ 200 POLICE AND PUBLIC POLICY

(3 class hrs/wk 3 cr)

Explores in-depth the roles of administration of justice practitioners, concentrating on expectations among the various agencies and the public.

■ **CJ 201 JUVENILE DELINQUENCY**

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

Explores and analyzes violence and aggression as viewed from a biological, psychological and sociological perspective. Includes topics such as homicide, suicide, rape, assault, mob violence, terrorism and violence within the family.

CJ 210 INTRODUCTION TO CRIMINAL INVESTIGATION

(3 class hrs/wk 3 cr)

Introduces the fundamentals of criminal investigation theory and history, from the crime scene to the courtroom. Emphasizes techniques appropriate to specific crimes.

CJ 216 CRIMINAL JUSTICE MANAGEMENT

(3 class hrs/wk 3 cr)

Examines and analyzes traditional concepts, techniques, policies and operational systems in the police component of the criminal justice system. Special attention is given to contemporary methods of police administration.

■ **CJ 220 INTRODUCTION TO SUBSTANTIVE LAW**

(3 class hrs/wk 3 cr) W

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) Sp

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 225 CORRECTIONS LAW

(3 class hrs/wk 3 cr)

Examines past and present appellate court cases involving due process issues pertaining to prisoners, probationers and parolees.

■ **CJ 226 CONSTITUTIONAL LAW**

(3 class hrs/wk 3 cr) W

Studies the basic principles of the U.S. Constitution, with emphasis on leading Supreme Court cases and the Bill of Rights.

CJ 232 CORRECTIONS CASEWORK

(3 class hrs/wk 3 cr) Sp

Explores the philosophy and programs of juvenile and adult probation supervision, after care, parole, half-way homes, work and educational-release furlough, as well as executive clemency and interstate compact practices.

CJ 233 COMMUNITY-BASED CORRECTIONS

(3 class hrs/wk 3 cr) F

Covers the philosophy and programs of juvenile and adult probation supervision, after care, parole, half-way homes, work-and educational-release furlough, executive clemency and interstate compact practices. The dilemma of surveillance — custody/control factors vs. supervision/treatment — is investigated.

CJ 280 CWE CRIMINAL JUSTICE

(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 criminal justice. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

CRS 201 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.

◆ **CS 121 COMPUTER LITERACY**

(3 class hrs/wk 3 cr)

Introduces computers and computer applications. Course uses 20 half-hour television sessions as the principal instructional medium, combined with some practical hands-on experience with microcomputers.

◆ **CS 133B BEGINNING PROGRAMMING IN BASIC**

(4 class hrs/wk 3 cr)

Introduces algorithms, flow charts and basic programming concepts in high-level computer language—BASIC.

◆ **CS 133U INTRODUCTION TO COMPUTER PROGRAMMING - C**

(5 class hrs/wk 4 cr)

Introduces algorithms, program design, data structuring and programming concepts in the C language. The modern programming concepts of data abstraction, reusable code and portable, efficient data structures are emphasized.

◆ **CS 211 INTRODUCTION TO COMPUTER SCIENCE**

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

Presents structured program development using structured logic diagrams and the Pascal language. Prerequisite: BA 131 Introduction to Information Systems.

◆ **CS 212 TECHNIQUES FOR COMPUTER PROGRAMMING**

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

Studies data and its representation on a computer system, control structures and their use in design and implementation of computational algorithms to develop a mastery of the Pascal programming language. Prerequisite: CS 211 Introduction to Computer Science.

◆ **CS 213 INTRO TO SYMBOLIC PROGRAMMING: FORTRAN**

(5 class hrs/wk 4 cr)

Introduces the student to the structure of the language FORTRAN and the problem solution techniques required for mathematical formula interpretation. Prerequisite: BA 131 Introduction to Information Systems.

◆ **CS 215 COMPUTER ORGANIZATION**

(5 class hrs/wk 4 cr)

Introduces logical organization, computer hardware and machine language programming. Prerequisite: BA 131 Introduction to Information Systems and one other programming course.

◆ **CS 217 INTRODUCTION TO COBOL PROGRAMMING**

(5 class hrs/wk 4 cr)

Introduces the student to the task of developing commercial applications using structured design techniques, the syntax of the 74 and 85 ANSI standard COBOL language, the development of the structured design into the COBOL language program and the documentation of the completed program. Prerequisite: CS 211 Introduction to Computer Science or one major programming language.

◆ **CS 233B ADVANCED BASIC PROGRAMMING**

(5 class hrs/wk 4 cr)

Shows students how to design and to develop a variety of business applications on the microcomputer using the BASIC language. Prerequisite: CS 133B Beginning Programming in BASIC or knowledge of the BASIC language.

◆ **CS 233C ADVANCED COBOL**

(5 class hrs/wk 4 cr)

Provides advanced study of the COBOL language emphasizing the use of mass storage files with sequential and random access methods using VSAM (Virtual Storage Access Methods) for the IBM 4361 DOS/VM computer and data base file structures. Prerequisite: CS 217 Introduction to COBOL Programming or knowledge of COBOL Programming.

◆ **CS 233R RPG PROGRAMMING**

(5 class hrs/wk 4 cr) Sp

RPG is a language developed by IBM to simplify and expedite summary report generation from data files. RPG is used in this class to illustrate and perform the production of business problems. Students learn to code and execute RPG programs involving demand files, chain files, ESDS and KSDS files.

◆ **CS 240 C LANGUAGE AND UNIX**

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

Presents the C language and the UNIX operating system. Covers data structures, recursion, library use, the C-UNIX interface, filters, pipes, forks and modular design. Prerequisite: CS 212 Techniques for Computer Programming - Advanced Pascal 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.

■ **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. Course designed for students who have majors other than business or economics.

COURSE DESCRIPTIONS

■ **EC 201 PRINCIPLES OF ECONOMICS I**

(3 class hrs/wk 3 cr) F

Introduces American capitalism, national income accounting, employment theory and fiscal policy.

■ **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 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 213 PRINCIPLES OF ECONOMICS**

(4 class hrs/wk 4 cr) W

A microeconomics course. Covers supply and demand; prices and wages; market structures; the economic role of government; and the economics of energy, environment and poverty.

■ **EC 214 PRINCIPLES OF ECONOMICS**

(4 class hrs/wk 4 cr) Sp

A macroeconomics course. Covers theories of unemployment and inflation, money and banking, international trade, economic growth and alternative systems. Note: EC 213 Principles of Economics is not a prerequisite.

■ **EC 215 ECONOMIC DEVELOPMENT OF THE U.S.**

(3 class hrs/wk 3 cr)

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/Sp

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)

Applies economic principles to selected issues affecting the U.S. economy, including poverty, pollution and urbanization. Prerequisite: Instructor approval.

ED 123 TUTOR AND INSTRUCTIONAL PRACTICES

(2 class hrs/wk 1 cr) F/W

Provides student tutors with an understanding of how adults learn, how to improve college study skills and how to use instructional techniques. Prerequisite: Employment by LBCC tutorial program.

ED 200 INTRODUCTION TO EDUCATION

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

Provides an overview of public elementary and secondary education to serve as an introduction for students considering careers in education. Emphasizes the characteristics of careers in elementary or secondary teaching and special education to help students decide directions for their preparation and specialization.

ED 207 LEADERSHIP SEMINAR

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

Enhances leadership skills in a day-to-day interaction setting; for student government participants.

ED 208 COMMUNITY COLLEGE TUTORING

(1-5 class hrs/wk 1-3 cr) F/W/Sp/Su

Provides experience and instruction in tutoring students who are having difficulty with the content of particular disciplines.

ED 209 LEADERSHIP PRACTICUM

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

Assists students in developing their leadership potential through classroom discussion and field experience opportunities, both on the campus and in the community.

ED 210 RECERTIFICATION PRACTICUM

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

Assigns teachers who have been previously certified to an accredited school to reorient them with the methodology of teaching. The main objective is to enable the teacher to re-enter the classroom with current information and experience. Students also meet 10 hours during the term in seminar to discuss and assess their practicum.

ED 210A THEORY PRACTICUM IIA

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

Assigns students to an accredited school to develop competencies in the social foundations of education. The main objective is to help students assess their interests in and potential for making teaching their career. Students meet 10 hours during the term in seminar to discuss and assess their field experience.

EGR 101 ENGINEERING ORIENTATION

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

Engineering orientation course: develops skills in problem solving; introduces DC electric circuits. Prerequisite or Corequisite: MT 101 College Algebra.

◆ **EGR 102 ENGINEERING ORIENTATION**

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

Provides a science, engineering-oriented introduction to FORTRAN programming. Covers input/output, arithmetic statements, transfer and control statements, arrays and subprograms. Prerequisite: MT 101 College Algebra.

◆ **EGR 103 ENGINEERING ORIENTATION: COMPUTER APPLICATIONS**

(3 class hrs/wk 3 cr) Sp

Techniques and methods used in defining, solving and documenting engineering projects or problems. Prerequisite: EGR 102; Computer Orientation; MT 101 College Algebra.

EGR 115 ENGINEERING GRAPHICS

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

Introduces graphic communication, including multiview and pictorial representation, conceptual design, spatial analysis, engineering applications, graphic analysis and solutions, and industrial procedures. Prerequisite or Corequisite: MT 101 College Algebra.

EGR 201 ELECTRICAL FUNDAMENTALS

(6 class hrs/wk 4 cr) F

Covers fundamentals of operating electrical circuits, including resistive, inductive and capacitive elements driven by direct current signals. Prerequisite: MT 200 Calculus.

EGR 202 ELECTRICAL FUNDAMENTALS

(6 class hrs/wk 4 cr) W

Introduces operational amplifiers, steady-state power, resonance, three-phase circuits, mutual inductance, the phasor and frequency domains. Prerequisite: MT 201 Calculus; EGR 201 Electrical Fundamentals.

EGR 203 ELECTRICAL FUNDAMENTALS

(6 class hrs/wk 4 cr) Sp

Covers transfer function, Fourier series, Fourier transform, two port circuits, basic digital circuits, logic circuits and flip-flops, D/A and A/D conversion circuits. Prerequisite: MT 202 Calculus; EGR 202 Electrical Fundamentals.

EGR 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: Math 200 Calculus.

EGR 212 DYNAMICS

(4 class hrs/wk 4 cr) W

Studies 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. Prerequisite: EGR 211 Statics; Math 201 Calculus.

EGR 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. Prerequisite: EGR 211 Statics; MT 201 Calculus.

➤ EN 104 INTRODUCTION TO LITERATURE

(3 class hrs/wk 3 cr) F

Examines fiction through the study of the novel and the short story.

➤ EN 105 INTRODUCTION TO LITERATURE

(3 class hrs/wk 3 cr) W

Introduces Western drama from its origin in ancient Greece to today's theatre, stressing conventions of drama as both a literary and performing art.

➤ EN 106 INTRODUCTION TO LITERATURE

(3 class hrs/wk 3 cr) 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.

➤ EN 107, 108, 109 LITERATURE OF THE WESTERN WORLD

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

Discusses masterpieces of Western literature from the ancient world to the present. EN 107: The Classical Ages; EN 108: The Middle Ages to the Age of Reason; EN 109: 18th Century to the Present. Need not be taken in order.

EN 110 ACADEMIC ENGLISH INTERNATIONAL STUDENTS

(6 class hrs/wk 3 cr)

For advanced international students with moderately fluent spoken English who plan to attend an American college or university. Emphasizes reading, vocabulary development, types of writing assignments and classroom activities using spoken English. Students briefly explore the American university system, its performance expectations and cultural characteristics of academic English. Students develop study skills and review textbook organization. Prerequisite: Academic English for International Students Intermediate, placement by testing or referral.

➤ EN 112 SPECULATIVE LITERATURE

(3 class hrs/wk 3 cr)

Explores science fiction, fantasy and speculative futures through popular fiction. Discusses content, literary styles and techniques.

EN 115 EFFECTIVE READING

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

Helps the above-average reader improve comprehension, vocabulary, rate of reading and analytical skills. Entrance to the course is determined by Placement Test results or a designated level of achievement in Developmental Reading or Reading Individualized.

➤ EN 121 MYSTERY FICTION

(3 class hrs/wk 3 cr)

Provides reading and analysis of mystery novels, including history and criticism, plot, milieu, theme and style.

➤ EN 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 used in comedies, tragedies, histories and poems. Need not be taken in order.

➤ EN 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. EN 101, ballads through Milton; EN 102, Defoe through the Romantics; EN 103, Browning through Joyce. Need not be taken in order.

➤ EN 207, 208, 209 LITERATURE OF THE NON-WESTERN WORLD

(3 class hrs/wk 3 cr)

EN 207 Literature of Asia, representative works of poetry, prose and drama; EN 208 Literature of Africa, literary works of both tribal and colonial origin; EN 209 Literature of the Americas, works of Hispanic, Native American and Afro-American origin (excluding the U.S. and Canada). Need not be taken in order.

➤ EN 211 LITERATURE OF ATHLETICS

(3 class hrs/wk 3 cr)

Studies the literature of sports and its reflection of our culture and world. Focuses mostly on works of 20th century American writers. Special emphasis is placed on evolved myths of the athlete and of athletics.

➤ EN 222 IMAGES OF WOMEN IN LITERATURE

(3 class hrs/wk 3 cr)

Surveys various images of women as presented in literature. Examines the roles of women in contemporary cultures.

➤ EN 253, 254, 255 SURVEY OF AMERICAN LITERATURE

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

Analyzes representative U.S. authors and identifies major literary periods in order to understand and appreciate the literary expression of American culture. EN 253, beginning of American literature to Transcendentalism; EN 254, Transcendentalism through Realism and Naturalism; EN 255, Naturalism to the present. Need not be taken in order.

COURSE DESCRIPTIONS

► **EN 260 INTRODUCTION TO WOMEN WRITERS**

(3 class hrs/wk 3 cr)

Introduces major works of literature by women authors. Discusses history, writing and publication problems and appreciation of female insights into human experience in fiction, drama and poetry.

► **EN 275 BIBLE AS LITERATURE**

(3 class hrs/wk 3 cr)

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.

FN 225 NUTRITION

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

Introduces nutrients, their functions, sources, effects of deficiency and individual recommended daily allowances. Includes digestion and metabolism, socioeconomic influences, infant nutrition and obesity. Current areas of interest in nutrition and food fads are discussed. Note: A background in chemistry is recommended.

■ **GEO 105 NATURAL ENVIRONMENTS**

(3 class hrs/wk 3 cr) F

Surveys the physical environment, covering basic concepts of map interpretation, earth structure, land form processes, weather, climate, soils, natural vegetation and water resources.

■ **GEO 107 CULTURAL GEOGRAPHY**

(3 class hrs/wk 3 cr) Sp

Surveys man's major cultural characteristics and economic activities, as found in the United States and selected foreign countries. Emphasizes principles of economic development and resource utilization in advanced and developing nations.

■ **GEO 190 ENVIRONMENTAL STUDIES**

(3 class hrs/wk 3 cr)

Introduces representative problems in man's relationship with the environment; emphasizes Pacific Northwest.

■ **GEO 201, 202, 203 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. GEO 201, Middle East and Africa; GEO 202, Latin America; GEO 203, Asia.

■ **GEO 207 GEOGRAPHY OF OREGON**

(3 class hrs/wk 3 cr)

Presents a regional survey of Oregon landforms, climate, natural resources and history of settlement. Makes detailed examination of regions within the state, with emphasis on significant issues in environment and resource use.

GEO 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.

■ **GEO 290 ENVIRONMENTAL STUDIES**

(3 class hrs/wk 3 cr)

Introduces representative problems in man's relationship with the environment. Emphasizes significant problems occurring in the Pacific Northwest, but others, typical of the United States as a whole, are included.

● **GS 104, 105, 106 PHYSICAL SCIENCE**

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

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; GS 106, nuclear energy, astronomy, meteorology and earth science. Note: May not be taken if six or more hours of college-level chemistry or physics have been completed. Prerequisite: 1.110 Elements of Algebra or equivalent.

● **GS 107 OCEANOGRAPHY**

(5 class hrs/wk 4 cr) F

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 seafloor; physical and chemical properties of seawater, waves, tides, ocean circulation and currents; marine ecosystems; and ocean utilization.

● **GS 112 ASTRONOMY**

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

Covers rudiments of astronomy, including studies of the solar system, our galaxy and the universe.

● **GS 113 HISTORY OF SCIENCE**

(3 class hrs/wk 3 cr) W

Provides a brief introduction to science history, covering the important people and ideas contributing to the development of current scientific theories.

GS 199 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 Columbia River Biology, Malheur Ecology, Yaquina Bay Biology, Cascade Lakes Ecology and Crater Lake Ecology. 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 199A 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 280 CWE PHYSICAL SCIENCE

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

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

HD 100 COLLEGE SUCCESS SKILLS

(1-5 class hrs/wk 1 cr) F/W/Sp

Provides an overview of LBCC programs, services and degree requirements. Skills designed to promote college success are introduced.

HD 114 LIFE PLANNING FOR WOMEN

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

A supportive class for women seeking a new life direction. Includes the exploration of values, interests, abilities and realistic life choices.

HD 190 ASSERTIVENESS TRAINING

(1 class hrs/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 199 WOMEN AND WEIGHT

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

Examines the social and psychological implications of one's eating behavior. Students have an opportunity to develop more beneficial eating behaviors through managing stress and developing personal power.

HD 206 COPING SKILLS FOR STRESS

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

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 PLANNING

(3 class hrs/wk 3 cr)

Helps define career, develop personal awareness and practice decision making. A combination of lecture and group discussions teaches methods of career selection, emphasizing development as an on-going process.

HD 290 APPLIED ASSERTION

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

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.

HDF 199 EARLY CHILDHOOD LAB EXPERIENCE

(3-5 class hrs/wk 2-3 cr) F/W/Sp

Helps students develop self-confidence in working with preschool children by actively participating in the campus Parent-Child lab. Students increase their knowledge of child development and basic guidance techniques while working with and observing children.

HDF 200 HUMAN SEXUALITY

(3 class hrs/wk 3 cr)

Studies the anatomical, physiological and sociological aspects of human sexuality throughout the life cycle. Topics of study include contraception, sexual expression, sexually transmitted diseases, pregnancy, childbirth and related topics. Factual information on contemporary issues, such as unconventional sex, sexual violence and sexual problems, is presented. The course follows a gender-based focus and includes cross-cultural material.

HDF 222 PARTNER RELATIONSHIPS

(3 class hrs/wk 3 cr)

Focuses on interpersonal relationships in a changing society. Love, sexual standards, sexuality, expectations for partner relationships and communication are covered. In addition, the various pressures and stresses (societal, personal, economic, legal and interpersonal) are studied.

HDF 225 CHILD DEVELOPMENT

(3 class hrs/wk 3 cr)

Provides an introduction to basic issues and current research on growth and development of children within a family context. While concerned with human development through the middle childhood years, special emphasis is placed on the early years, including prenatal and infant development. The course is presented primarily through lectures, with occasional films and guest speakers.

HDF 226 GROWING YEARS

(3 class hrs/wk 3 cr)

Explores how and why children develop the way they do through "The Growing Years," a television course. Covers the interplay of biological factors, individual personality, social structure and other environmental forces that shape the growing child. Topics include prenatal influences through infancy, early and middle childhood, adolescence and, finally, the transition to adulthood.

HDF 233 INTERPERSONAL AND FAMILY DYNAMICS

(3 class hrs/wk 3 cr)

Develops competencies in interpersonal family communication and conflict resolution with the goal of facilitating successful family functioning.

HDF 240 CONTEMPORARY AMERICAN FAMILIES

(3 class hrs/wk 3 cr)

Studies the family as an influence in the socialization and general development of individuals. Contemporary family practices, styles and issues as developmental factors are discussed. New ways of approaching family roles are explored.

HE 112 EMERGENCY FIRST AID

(10 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: One-week class.

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 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 207 STRESS MANAGEMENT

(3 class hrs/wk 3 cr)

Helps students develop a clear understanding of the meaning of stress in their everyday life. Students learn how they react and adjust to stressors. Relaxation techniques are taught and practiced.

HE 250 PERSONAL HEALTH

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

Surveys health attitudes, outlooks and feelings as they affect the individual, community, nation and world. Emphasizes improving quality of health by providing reliable information to achieve a long and productive life.

HE 252 FIRST AID

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

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.

COURSE DESCRIPTIONS

HE 261 CARDIOPULMONARY RESUSCITATION

(9 class hrs/wk 1 cr)

Covers basic life support as taught by the American Heart Association. Note: One-week class.

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 INDIVIDUAL STUDY: WOMEN'S HEALTH

(3 class hrs/wk 3 cr) W

Explores the special health concerns of women throughout the life cycle, including physiological, psychological and social issues.

HEC 100 PERSPECTIVES IN HOME ECONOMICS

(1 class hrs/wk 1 cr)

Introduces home economics as a dynamic profession, worldwide in scope, that prepares students to work with individuals and families in a wide variety of business-, education- and human services-related careers. Students identify goals and competencies which serve as a basis for academic and career decisions.

HO 250 HONORS COLLOQUIUM

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

Introduces the methods of intellectual investigation and discourse through a sequence of readings, discussions and written assignments centered around a new theme each term and presented through case studies. An interdisciplinary course.

HS 207 ADULT CHILDREN OF ALCOHOLICS

(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 addiction was present.

HST 101, 102, 103 HISTORY OF WESTERN CIVILIZATION

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

Surveys the origin and development of contemporary Western civilization, emphasizing the influence of specific countries and historical periods. HST 101, Ancient to Medieval era; HST 102, Medieval era through French Revolution; HST 103, French Revolution to present.

HST 157 HISTORY OF THE MIDDLE EAST & 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.

HST 191 CHINA: SOCIETY AND CULTURE TO 1911

(3 class hrs/wk 3 cr)

Introduces Chinese society and culture from prehistoric times to founding of the Chinese Republic.

HST 192 HISTORY OF CHINA: 20TH CENTURY

(3 class hrs/wk 3 cr)

Examines the critical events, issues and personalities of twentieth century China.

HST 198 RESEARCH TOPICS

(3 class hrs/wk 1 cr)

Provides in-depth examination of a selected history topic. Intended primarily for the history major to help develop skills in independent research. Prerequisite: WR 123 English Composition.

HST 201, 202, 203 HISTORY OF THE UNITED STATES

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

Surveys the history of the United States of America. HST 201, Colonization to Jackson presidency; HST 202, Jackson presidency to WWI; HST 203, WWI to present.

HST 215 SOCIAL HISTORY OF OREGON

(3 class hrs/wk 3 cr)

Familiarizes students with the variety of social forces that have shaped Oregon over the last 150 years, emphasizing immigration patterns; changing modes of transportation from river, to rail, to highway; and prominent and not-so-prominent people and places in Oregon's past.

HST 220 LABOR HISTORY

(3 class hrs/wk 3 cr)

Examines the origins and growth of the labor movement in the U.S. from the colonial period through industrialization and up to the legitimization of organized labor in '30s and '40s. Stresses the impact of industrialization upon labor and its political, economic and ideological consequences.

HST 224 LABOR TODAY

(3 class hrs/wk 3 cr)

Examines the continuing interactions among unions, management and government and the changing conditions of work due to technological development and the globalization of production. Emphasizes the problems resulting from these interactions and from changes in current economy, such as wages and managerial authority.

HST 240 OREGON HISTORY

(3 class hrs/wk 3 cr)

Explores the historical events that influenced the 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.

HUM 100 INTRODUCTION TO HUMANITIES

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

Introduces students to the connections among arts, ideas and human experiences through study and experience of selected works. Emphasizes arts and ideas as reflections of influences on social and cultural change. Attendance at out-of-class activities is required.

IED 199 OUT OF THE FIERY FURNACE

(3 class hrs/wk 2 cr)

Surveys the industrial development of man's use of metals and the socio-economic impacts of the development of metals and materials technologies. Emphasizes the relationship of science technology and society.

IED 241 MECHANICAL POWER: INTERNAL COMBUSTION

(6 class hrs/wk 3 cr)

Provides knowledge of the operating theory of two-stroke cycle and four-stroke cycle small engines. Emphasizes usage of shop manuals and precision measuring tools during classtime. Also, basic ignition and carburetion theory are covered.

■ IS 250 WORLD VALUE SYSTEMS

(3 class hrs/wk 3 cr)

Introduces students to the origin, diffusion, evolution and present distribution of some of the major belief systems in the world and their implications for harmony and discord.

■ IS 251 POPULATION AND GLOBAL RESOURCES

(3 class hrs/wk 3 cr)

Introduces students to the world ecosystem from a global perspective, including qualitative and quantitative aspects of human populations and their resources and alternative strategies for coping with global imbalance.

■ IS 252 RICH/POOR NATIONS CONFLICT RESOLUTION

(3 class hrs/wk 3 cr)

Introduces students to differences in national economics, politics, social structures, cultures and world outlook. The central theme is how people seek to improve their quality of life.

JN 134 INTRODUCTION TO PHOTOJOURNALISM

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

Introduces black and white photography, including skills in exposure, camera handling, composition, developing and printing. Note: A limited number of cameras are available for check-out.

JN 215A JOURNALISM LAB

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

Provides supervised work on the college's student newspaper (The Commuter) in reporting, photography, editing or advertising. Note: Course serves as the lab for JN 216, 217, 218; may also be taken independently from those courses. Note: May be repeated for up to 6 credits.

JN 215B NEWSPAPER PRODUCTION LAB

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

Provides supervised work on the college's student newspaper (The Commuter) to gain practical experience in applying graphic arts skills. Note: May be repeated for a maximum of 6 credits. Prerequisite: AA 120 Layout and Pasteup Procedures; AA 263 Process Camera; or instructor approval.

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 while gaining reporting experience. Corequisite: JN 215A Journalism Lab.

JN 217 FEATURE WRITING

(3 class hrs/wk 3 cr) Sp

Covers journalistic writing with emphasis on backgrounding, depth reporting, interpretive writing and newer journalism forms. Students submit articles for actual publication, most often in the student newspaper. Corequisite: JN 215A Journalism Lab.

◆ JN 218 EDITING AND PAGE DESIGN

(3 class hrs/wk 3 cr) W

Introduces copy editing, page makeup, photo editing, headline writing and editorial decisionmaking. Includes electronic editing, page design and layout. Corequisite: JN 215A Journalism Lab.

JN 224 MASS MEDIA & SOCIETY

(3 class hrs/wk 3 cr) F

Introduces the history and development of mass media, including media impact on society, communication theory, philosophy of free expression and career opportunities. Emphasizes the information industry.

JN 225 INTRODUCTION TO ADVERTISING & PUBLIC RELATIONS

(3 class hrs/wk 3 cr) Sp

Provides an overview of advertising and public relations, including public information methods, copywriting, design, marketing, use of printing technology and historical and journalistic perspectives on the fields.

JN 234 INTERMEDIATE PHOTOGRAPHY

(3 class hrs/wk 2 cr) W

Introduces refinements in black and white photography, with emphasis on photojournalism techniques. Composition, lighting, exposure, darkroom techniques and approaches to documentary assignments are studied. Note: A limited number of cameras are available for check-out. Prerequisite: JN 134 Introduction to Photography or instructor approval.

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.

MP 105/205 COMMUNITY BIG BAND

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

Provides a performance-oriented class for traditional big band as well as modern and progressive jazz literature. Note: Each class may be repeated for up to 3 credits; audition may be required.

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 up to 3 credits.

MP 122/222 CONCERT CHOIR

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

Uses vocal music to present different problems and styles. Note: Each class may be repeated three times for credit.

MP 131/231 MADRIGALS-CHAMBER CHOIR

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

Studies and performs early to contemporary literature. Note: Each class may be repeated three times for credit.

MP 151 REHEARSAL AND PERFORMANCE

(2-6 class hrs/wk 1-3 cr)

Offers credit for music rehearsal directly related to Performing Arts Department performance. Note: Class may be repeated three times for credit.

COURSE DESCRIPTIONS

**MP 171/271 INDIVIDUAL LESSONS:
PIANO**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in piano.
Note: Requires additional tutorial fee.
Each class may be repeated three times for credit. Prerequisite: Instructor approval.

**MP 174/274 INDIVIDUAL LESSONS:
VOICE**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in voice.
Note: Requires additional tutorial fee.
Each class may be repeated three times for credit. Prerequisite: Instructor approval.

**MP 178/278 INDIVIDUAL LESSONS:
BASS**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in bass.
Note: Requires additional tutorial fee.
Each class may be repeated three times for credit. Prerequisite: Instructor approval.

**MP 180/280 INDIVIDUAL LESSONS:
GUITAR**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in guitar.
Note: Requires additional tutorial fee.
Each class may be repeated three times for credit. Prerequisite: Instructor approval.

**MP 181/281 INDIVIDUAL LESSONS:
FLUTE**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in flute.
Note: Requires additional tutorial fee.
Each class may be repeated three times for credit. Prerequisite: Instructor approval.

**MP 183/283 INDIVIDUAL LESSONS:
CLARINET**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in clarinet.
Note: Requires additional tutorial fee.
Each class may be repeated three times for credit. Prerequisite: Instructor approval.

**MP 184/284 INDIVIDUAL LESSONS:
SAXAPHONE**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in saxophone. Note: Requires additional tutorial fee. Each class may be repeated three times for credit. Prerequisite: Instructor approval.

**MP 186/286 INDIVIDUAL LESSONS:
TRUMPET**

(1 class hrs/wk 1 cr) F/W/Sp
Provides individual instruction in trumpet.
Note: Requires additional tutorial fee.
Each class may be repeated three times for credit. Prerequisite: Instructor approval.

MS 111 MILITARY SCIENCE I

(1 class hrs/wk 1 cr) F/W/Sp
Covers organization and purpose of ROTC; outline of ROTC and how ROTC functions as part of the Army.

**MS 112 MILITARY SCIENCE I:
ARMY OFFICER**

(1 class hrs/wk 1 cr)
Provides an overview of an Army officer, including leadership and management fundamentals; types of jobs available to Army officers.

**MS 113 MILITARY SCIENCE: LAND
NAVIGATION**

(1 class hrs/wk 1 cr)
Covers how to read a topographic map and use a magnetic compass; includes practical exercises.

MS 211 MILITARY SCIENCE II

(2 class hrs/wk 2 cr) F/W/Sp
Surveys the history of the American soldier from 1775 to present; weaponry and tactics of the American Army.

**MS 212 MILITARY SCIENCE II:
LEADERSHIP DEVELOPMENT**

(2 class hrs/wk 2 cr)
Presents a close look at effective leadership; includes practical exercises through use of case studies.

**MS 213 MILITARY SCIENCE II:
BASIC MILITARY OPERATION**

(2 class hrs/wk 2 cr)
Provides a short outline of basic U.S. tactics in a variety of situations, plus skills necessary to accomplish the missions.

● **MT 100 INTERMEDIATE ALGEBRA**

(4 class hrs/wk 4 cr) F/W/Sp/Su
Introduces rational algebraic expressions, radicals, factoring, inequalities, absolute value, logarithms, linear and quadratic equations. Note: A minimum competency level is required to pass this course. Prerequisite: 1.110 Elements of Algebra or equivalent.

● **MT 101 COLLEGE ALGEBRA**

(4 class hrs/wk 4 cr) F/W/Sp/Su
Introduces relations and linear, quadratic, exponential, polynomial and logarithmic functions. Includes theory of equations, linear inequalities, systems of equations, matrices and determinants. Prerequisite: MT 100 Intermediate Algebra and 6.550 Practical Geometry or equivalent.

● **MT 101T COLLEGE ALGEBRA:
TECHNICAL**

(4 class hrs/wk 4 cr) F
Mathematics for students in technical programs. Emphasizes solving applied problems. Reviews basic algebra, functions and graphs, systems of equations and quadratic equations. Includes an introduction to Trigonometry. Prerequisite: 6.550 Practical Geometry and MT 100 Algebra or equivalent.

● **MT 102 TRIGONOMETRY**

(4 class hrs/wk 4 cr) F/W/Sp/Su
Introduces circular functions, trigonometric functions, complex numbers, polar coordinates, right triangle trigonometry and identities. Prerequisite: MT 101 College Algebra or equivalent.

● **MT 102T TRIGONOMETRY:
TECHNICAL**

(4 class hrs/wk 4 cr) W
Emphasizes solving applied mathematical problems. Includes oblique triangle trigonometry, trigonometric identities and equations, complex numbers, exponential and logarithmic functions and analytic geometry. For students in technical programs. Prerequisite: MT 101 College Algebra: Technical or instructor approval.

● **MT 106 ELEMENTARY CALCULUS:
TECHNICAL**

(4 class hrs/wk 4 cr) Sp
Emphasizes solving applied mathematical problems. Includes differential and integral calculus. For students in technical programs. Prerequisite: MT 102T Trigonometry: Technical or equivalent.

● **MT 110 ANALYTIC GEOMETRY**

(4 class hrs/wk 4 cr) F/W/Sp/Su
Introduces conic sections, polar coordinates, polar graphs, vectors, translations and rotations. Prerequisite: MT 102 Trigonometry or equivalent.

● **MT 162 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 linear equations and inequalities, linear programming and the simplex method, probability and probability distributions, and an introduction to descriptive statistics. Prerequisite: MT 101 College Algebra.

- **MT 163 MATH 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: MT 101 College Algebra.
- ◆ **MT 173B MICROCOMPUTERS: BASIC**
(4 class hrs/wk 3 cr) F/W/Sp/Su
Introduces the BASIC language for computing devices and its use in solving problems related to the student's field of interest.
- ◆ **MT 173P MICROCOMPUTERS: PASCAL**
(5 class hrs/wk 4 cr) F
Introduces the use of computers and PASCAL language to solve problems related to the student's field of interest. Includes study of data types, input/output, structures, arrays, string manipulation and files.
- ◆ **MT 174B MICROCOMPUTERS: ADVANCED BASIC**
(4 class hrs/wk 3 cr) W
A continuation of MT 173B Microcomputers: BASIC, plus string operations, graphics, file handling and computer modeling. Prerequisite: MT 173B Microcomputers: BASIC or CS 133B BASIC Programming.
- ◆ **MT 175 MICROCOMPUTER ASSEMBLY PROGRAMMING**
(4 class hrs/wk 3 cr) F/W/Sp
Introduces microcomputer assembly level programming. Topics include use of registers, modes of addressing, arithmetic operations, use of the stack, screen processing and table processing. The 8086 microprocessor is used. Prerequisite: A high-level programming language such as BASIC, FORTRAN or PASCAL.
- ◆ **MT 191, 192, 193 MATH FOR ELEMENTARY TEACHERS**
(4 class hrs/wk 3 cr) F/W/Sp
Develops the basic mathematical concepts and understanding for teaching elementary and middle school mathematics. Topics covered include problem solving, whole numbers, computation, fractions, ratio, proportion, decimals, integers, measurement, probability, statistics and geometry. Note: Completion of the sequence satisfies the Computer Competency requirement. Prerequisite: MT 100 Intermediate Algebra. Must be taken in sequence or instructor approval.
- MT 199 SPECIAL STUDIES**
(1 class hrs/wk 1 cr) F/W/Sp
Presents selected topics in mathematics.
- **MT 200 CALCULUS**
(4 class hrs/wk 4 cr) F/W/Sp/Su
Traditional calculus sequence for students of mathematics, science and engineering. Includes differentiation, extrema, related rates, optimization problems, antidifferentiation, the definite integral, the fundamental theorem of calculus, numerical integration, areas and volumes of revolution. Prerequisite: MT 110 Analytic Geometry.
- **MT 201 CALCULUS**
(4 class hrs/wk 4 cr) F/W/Sp
Second course in traditional calculus sequence for students of mathematics, science and engineering. Includes applications of calculus to finding work, fluid pressure, centroids and arc length, as well as calculus of logarithmic and exponential functions, calculus of trigonometric functions, techniques of integration, improper integrals and an introduction to infinite series. Prerequisite: MT 200 Calculus.
- **MT 202 CALCULUS**
(4 class hrs/wk 4 cr) F/W/Sp
Third course in traditional calculus sequence for students of mathematics, science and engineering. Includes infinite series, parametric equations, polar coordinates, calculus of 2-space and 3-space vectors and an introduction to functions of several variables. Prerequisite: MT 201 Calculus.
- **MT 203 CALCULUS**
(4 class hrs/wk 4 cr) F/W/Sp
Fourth course in traditional calculus sequence for students of mathematics, science and engineering. Includes functions of several variables, multiple integration, line integrals, Green's Theorem, Stoke's Theorem, divergence theorem and an introduction to differential equations. Prerequisite: MT 202 Calculus.
- **MT 204 CALCULUS**
(4 class hrs/wk 4 cr) Sp
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: MT 203 Calculus.
- **MT 214 STATISTICS FOR SCIENTISTS & 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: MT 200 Calculus.
- **MT 221 APPLIED DIFFERENTIAL EQUATIONS**
(4 class hrs/wk 4 cr) Sp
Introduces ordinary differential equations, applications, series solutions to differential equations, and Laplace transforms. Prerequisite: MT 203 Calculus.
- **MT 233F FORTRAN AND NUMERICAL COMPUTATION**
(5 class hrs/wk 4 cr) Sp
Uses FORTRAN and numerical methods of problem solving applied to problems in math, science and engineering.
- **MT 241 ELEMENTARY LINEAR ALGEBRA**
(4 class hrs/wk 4 cr) F
Covers matrices, determinants, linear equations, vector spaces, eigenvalues, linear transformations and diagonalization. Prerequisite: MT 200 Calculus.
- MT 280 CWE MATHEMATICS**
(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su
An instructional program designed to give students practical experience in supervised employment related to mathematics. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.
- **MU 101 MUSIC FUNDAMENTALS I**
(3 class hrs/wk 3 cr) F/W/Sp
Presents fundamentals of music for the non-music major: music reading, simple chord structure, introduction to harmony, singing and selected instruments (recorder and piano).
- **MU 102 MUSIC FUNDAMENTALS II**
(3 class hrs/wk 3 cr)
Continues the study of music fundamentals; emphasizes the application of music theory to composition. Prerequisite: MU 101 Music Fundamentals I or equivalent.

COURSE DESCRIPTIONS

► **MU 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.

MU 131/132 GROUP PIANO

(2 class hrs/wk 2 cr)

Provides classroom instruction for the beginning piano student. Note: Must be taken in sequence. Prerequisite to MU 132: MU 131 Group Piano.

MU 134/135 GROUP VOICE

(2 class hrs/wk 2 cr)

Provides classroom instruction for the beginning voice student. Note: Must be taken in sequence. Prerequisite to MU 135: MU 134 Group Voice.

► **MU 161 MUSIC APPRECIATION**

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

Provides a general survey of many music styles, with emphasis on developing music listening skills.

► **MU 205 INTRODUCTION TO JAZZ**

(3 class hrs/wk 3 cr)

Emphasizes a listener's approach to the development of jazz through its various styles.

MU 280 CWE MUSIC

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

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

NS 111 NAVAL ORGANIZATION & ADMINISTRATION

(5 class hrs/wk 3 cr)

Presents a general introduction to the naval profession and to concepts of seapower. Instruction emphasizes the mission, organization and warfare components of the Navy and Marine Corps. Includes an overview of officer and enlisted ranks; rates, training and education; and career patterns. Also covers naval courtesy and customs, military justice, leadership and nomenclature. Exposes student to the professional competencies required to become a naval officer.

NS 112, 113 NAVAL SHIPS SYSTEMS

(5 class hrs/wk 3 cr) Sp

Provides detailed study of ship characteristics and types, including ship design, hydrodynamic forces, stability, compartmentation, propulsion, electrical and auxiliary systems, interior communications, ship control and damage control. Includes basic concepts in the theory and design of steam, gas turbine and nuclear propulsion. Also discussed are shipboard safety and firefighting.

NS 211, 212 NAVAL WEAPONS

(4 class hrs/wk 3 cr)

Outlines the theory and employment of weapons systems. Explores the processes of detection, evaluation, threat analysis, weapon selection, delivery, guidance and explosives. Fire control systems and major weapon types, including capabilities and limitations, are discussed. Physical aspects of radar and underwater sound are described in detail. Facets of command, control and communication are explored as a means of weapons system integration.

NS 213 SEAPOWER AND MARITIME AFFAIRS

(4 class hrs/wk 3 cr) Sp

Surveys U.S. naval history from the American Revolution to the present, with emphasis on major developments. Includes an in-depth discussion of the geopolitical theory of Mahan. Also covers present-day concerns in seapower and maritime affairs, including the economic and political issues of merchant marine commerce, the law of the sea, the Russian navy and merchant marine, and a comparison of U.S. and Soviet naval strategies.

OA 114 ALPHABETIC SHORTHAND

(5 class hrs/wk 3 cr) W

Provides a short and rapid method of writing both notes and verbatim dictation. Covers the theory of an abbreviated alphabetic system, including the dominant sound rule, high-frequency words, high-frequency letter groups, prefix and suffix rules, and phrasing and abbreviating principles. Emphasizes development of speed and accuracy in dictation and transcription.

OA 121A TYPING I: KEYBOARDING

(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. Basic techniques of the touch system on alphabetic keys, top-row number keys and 10-key pad numbers. Students use computer terminals. Individualized instruction; students may advance at their own rate. Note: Five-week class.

OA 121B BASIC PRODUCTION TYPING

(5 class hrs/wk 1-2 cr) F/W/Sp/Su

Continues the development of speed and accuracy. Introduces the typing of letters and manuscripts. Individualized instruction; students may advance at their own rate. Note: Five-week class. Prerequisite: OA 121A Typing Keyboarding or equivalent.

OA 122 TYPING II

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

Continues units on correspondence, tabulation, business forms, manuscripts, secretarial projects, speed and accuracy, and number proficiency. Provides individualized instruction; students advance at their own rate. Prerequisite: OA 121B Basic Production Typing or equivalent.

OA 123 TYPING V SKILL BUILDING

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

Emphasizes speed and accuracy, with special drills to work on numbers and remedial techniques. Note: This course may be repeated for credit. Prerequisite: OA 121A Typing Keyboarding or equivalent.

◆ **OA 201A WORDPERFECT: BEGINNING**

(4 class hrs/wk 1 cr) F/W/Sp/Su

Provides basics of using WordPerfect software for word processing. Includes fundamentals of using a PC compatible and printer operations. Students learn to type, edit and format documents. Note: Five-week class. Prerequisite: OA 121A Typing Keyboarding.

◆ **OA 202A WORDPERFECT: ADVANCED**

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

Adds to the student's basic skills in the use of WordPerfect software. Includes working with columns of text, macros, merge/sort, mailing lists and envelopes. Note: Five-week course. Prerequisite: OA 201A WordPerfect: Beginning or equivalent.

OA 214 APPLIED ALPHABETIC SHORTHAND

(6 class hrs/wk 3 cr) Sp

Provides a complete and extensive review of Alpha Hand shorthand, including all theory, alpha bits, phrases and shortcuts. Dictation covers vocabularies representative of various types of businesses. Emphasizes developing transcription skills, including correct forms, punctuation, capitalization and spelling. Prerequisite: OA 121B Basic Production Typing; OA 114 Alphabetic Shorthand (with a minimum of 60 wpm).

● **P 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. P 201, motion, forces, momentum, energy; P 202, heat, vibrations, wave motion, sound, light; P 203, electricity and magnetism, atomic and nuclear physics, special relativity. Note: Must be taken in sequence. Calculator with trigonometric functions, logarithms and scientific notation required. Prerequisite to P 201: MT 101 College Algebra. Prerequisite to P 202: MT 102 Trigonometry. Prerequisite to P 203: MT 102 Trigonometry.

● **P 211, 212, 213 GENERAL PHYSICS**

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

Presents calculus-based principles of physics for students in science engineering. P 211, linear motion, forces, momentum, energy, rotational motion, angular momentum, harmonic motion; P 212, fluid mechanics, waves, sound, thermodynamics, electricity; P 213, 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 functions, logarithms, scientific notation and linear regression required. Prerequisite to P 211: MT 200 Calculus; Corequisite to P 211: MT 201 Calculus. Prerequisite to P 212: P 211 General Physics, MT 201 Calculus; Corequisite to P 212: MT 202. Prerequisite to P 213: P 211, P 212 General Physics, MT 202 Calculus.

P 214 GENERAL PHYSICS

(7 class hrs/wk 5 cr)

Fourth term of P 211, P 212, P 213, P 214 sequence. Covers special relativity, quantum theory and structure of matter. Prerequisite: P 211, P 212, P 213 General Physics, MT 201, MT 202, MT 203 Calculus.

P 280 CWE PHYSICS

(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 physics. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

PE 131 INTRODUCTION TO HEALTH AND PHYSICAL EDUCATION

(3 class hrs/wk 3 cr)

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 180 BEGINNING BASKETBALL: WOMEN

(3 class hrs/wk 1 cr)

Covers basic basketball skills and concepts. Begins with fundamentals and works towards a full court situation.

PE 180A INTERMEDIATE BASKETBALL: WOMEN

(3 class hrs/wk 1 cr)

Advances the beginning basketball player's skills toward better success in a game situation. Prerequisite: PE 180 Beginning Basketball: Women.

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 ADVANCED SOFTBALL: WOMEN

(3 class hrs/wk 1 cr) Sp

An advanced women's fast pitch softball course. Emphasizes the finer aspects of the fast pitch game, including offensive and defensive skills and coaching strategies. Prerequisite: Instructor approval.

PE 180D 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 185 AQUATIC FITNESS: CO-ED

(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 185 ARCHERY: CO-ED

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

Introduces the fundamentals of archery, safety and proper use of equipment.

PE 185 BEGINNING BADMINTON: CO-ED

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

Provides instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstrates singles and doubles play, plus teamwork involved.

PE 185 INTERMEDIATE BADMINTON: CO-ED

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

Presents more advanced instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstrates singles and doubles play, plus teamwork involved.

PE 185 BODY CONDITIONING: CO-ED

(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 185 BODY TONING: COED

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

Course is 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 185 BEGINNING BOWLING: CO-ED

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

Stresses bowling fundamentals. Provides basic foundation from which students may progress to advanced bowling skills.

PE 185 INTERMEDIATE BOWLING: CO-ED

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

Increases skills and techniques of bowling. Rules and courtesies of the game as well as social and recreational value to the student are stressed.

COURSE DESCRIPTIONS

PE 185 ADVANCED BOWLING: CO-ED

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

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 185 CROSS COUNTRY: CO-ED

(3 class hrs/wk 1 cr) F

Improves the cardiovascular system through distance running. Also deals with training methods and procedures for improvement of distance runners and the strategies that may be employed in cross country running.

PE 185 DANCE AEROBICS: CO-ED

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

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 BEGINNING GOLF: CO-ED

(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 185 INTERMEDIATE GOLF: CO-ED

(3 class hrs/wk 1 cr) Sp

Provides a more detailed presentation of golf techniques and strategy to improve and correct basic swing errors.

PE 185 ADVANCED GOLF: CO-ED

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

Includes intercollegiate as well as recreational golf and emphasizes the development of skills during competitive play.

PE 185 BEGINNING GYMNASTICS: CO-ED

(3 class hrs/wk 1 cr)

Provides instruction and practice in tumbling and use of gymnastic apparatus.

PE 185 INTERMEDIATE GYMNASTICS: CO-ED

(3 class hrs/wk 1 cr)

Provides intermediate-level instruction and practice in tumbling and use of gymnastic apparatus.

PE 185 JOGGING: CO-ED

(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 185 BEGINNING KARATE: CO-ED

(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 185 INTERMEDIATE KARATE: CO-ED

(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 185 BEGINNING MODERN DANCE: CO-ED

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

Introduces the use of the human body in space and time while examining elements of modern dance technique.

PE 185 INTERMEDIATE MODERN DANCE: CO-ED

(3 class hrs/wk 1 cr)

Develops technique through exposure to historical and contemporary modern dance trends. Prerequisite: 3 credits of PE 185 Beginning Modern Dance or instructor approval.

PE 185 BEGINNING RACQUETBALL: CO-ED

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

Provides instruction and practice in stances, grips, service strokes, scoring rules and strategy. Demonstrates singles and doubles play.

PE 185 INTERMEDIATE RACQUETBALL: CO-ED

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

Provides more advanced instruction and practice in racquetball, with a detailed presentation of technique strategy.

PE 185 RELAXATION: CO-ED

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

Teaches techniques to increase skill in relaxation.

PE 185 SOFTBALL: CO-ED

(3 class hrs/wk 1 cr) Sp

Provides instruction and experience in fundamental softball skills, as well as providing game experience. Emphasizes slow pitch rather than fast pitch style of play.

PE 185 BEGINNING SWIMMING: CO-ED

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

Covers basic water skills and safety while in or about the water.

PE 185 INTERMEDIATE SWIMMING: CO-ED

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

Provides instruction and practice in individual water skills and safety while in, on or about the water. Includes the elements of good swimming.

PE 185 ADVANCED SWIMMING: CO-ED

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

Provides instruction and practice in skills to increase endurance and versatility in the water.

PE 185 BEGINNING TENNIS: CO-ED

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

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 185 INTERMEDIATE TENNIS: CO-ED

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

Covers advanced tennis strategies and skills.

PE 185 ADVANCED TENNIS: CO-ED

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

Prepares students for competition, emphasizing development of skills for competitive play. Prerequisite: Instructor approval.

PE 185 ADVANCED TRACK: CO-ED

(3 class hrs/wk 1 cr) Sp

Develops sophisticated skills and techniques for intercollegiate competition.

PE 185 TRACK SKILLS: CO-ED

(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 185 BEGINNING VOLLEYBALL: CO-ED

(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 185 INTERMEDIATE VOLLEYBALL: CO-ED

(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 185 ADVANCED VOLLEYBALL: CO-ED

(3 class hrs/wk 1 cr)

Increases skill levels and mental strategies, with emphasis on increasing a player's abilities within a team situation.

PE 185 AEROBIC WEIGHT TRAINING: CO-ED

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

Introduces students to an exercise program designed to increase strength, flexibility and coordination, with a major emphasis on cardiovascular fitness through the use of various weight-training techniques.

PE 190 BEGINNING BASEBALL: MEN

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

Introduces fundamental baseball skills.

PE 190 INTERMEDIATE BASEBALL: MEN

(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 190 ADVANCED BASEBALL: MEN

(3 class hrs/wk 1 cr) Sp

Prepares students for intercollegiate competition in baseball.

PE 190 BASEBALL CONDITIONING: MEN

(3 class hrs/wk 1 cr) W

Emphasizes physical conditioning that develops strength and agility for better efficiency in baseball skills.

PE 190 BASEBALL SKILLS: MEN

(3 class hrs/wk 1 cr) W

Offers students the opportunity to learn and improve individual baseball skills.

PE 190 BEGINNING BASKETBALL: MEN

(3 class hrs/wk 1 cr)

Covers basic basketball skills and concepts for the beginner. Starts with fundamentals and works toward a full court situation.

PE 190 INTERMEDIATE BASKETBALL: MEN

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

Advances the beginning basketball player's skills toward better success in a game situation. Prerequisite: PE 190 Beginning Basketball: Men.

PE 190 ADVANCED BASKETBALL: MEN

(3 class hrs/wk 1 cr) F/W/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 190 FLAG FOOTBALL: MEN

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

Develops the skills fundamental to flag football. Note: Organization of class depends upon skill level.

PE 194 PROFESSIONAL ACTIVITIES

(4-6 class hrs/wk 2 cr) F/W/Sp

Provides technical information for prospective teachers of various physical education activities. Includes six-week sessions in softball, personal conditioning, basketball and volleyball and a 12-week session in swimming.

PE 231 LIFETIME WELLNESS

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

Evaluates the present status of the student's total wellness level. As a result of this evaluation, an exercise prescription, information on nutrition, stress management and psychological health are made available to the participant. Preparing the student to enter the worksite as a healthy individual and to maintain this level of wellness are major goals of the class.

PE 232 BACKPACKING/ ORIENTEERING

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

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 280 CWE RECREATION

(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su
An instructional program designed to give students practical experience in supervised employment related to recreation. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

PE 298 RIDING & THEORY I

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

Teaches the fundamentals of Western riding, including safety, equipment, saddling, mounting, the aids, balance and control.

➤ PHL 201 INTRODUCTION TO PHILOSOPHY

(3 class hrs/wk 3 cr)

Introduces basic questions of philosophy, their effects on thought processes and the ability to reason.

➤ 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 203 ELEMENTARY LOGIC

(3 class hrs/wk 3 cr)

Introduces the study of reasoning, including the ability to recognize, analyze, criticize and construct the main types of argument and proof.

PHO 253 ZONE SYSTEM PHOTOGRAPHY

(3 class hrs/wk 2 cr) Sp

Introduces the Zone System approach and Fine Print techniques as applied to 35mm and medium-to-large format black-and-white photography, includes exposure controls, development adjustments, film indexing, printing controls, toning and expressive composition.

PHO 261 INTRODUCTION TO PHOTOGRAPHY

(4 class hrs/wk 3 cr)

Introduces black-and-white photography, including exposure, camera handling, composition, light, developing and printing, history and styles. Limited number of cameras available for checkout.

COURSE DESCRIPTIONS

PHO 262 INTERMEDIATE PHOTOGRAPHY

(4 class hrs/wk 3 cr) W

Covers advanced black-and-white darkroom techniques with fibre papers, including archival processing; use of toners, bleaches and intensifiers; direct-positive processing; solarization; double-printing; hand coloring; and other print manipulation techniques. Prerequisites: PHO 261 Introduction to Photography.

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. Prerequisite: PHO 262 Introduction to Photography or consent of instructor.

PS 104 PROBLEMS IN AMERICAN POLITICS

(3 class hrs/wk 3 cr)

Covers current policy issues in American politics, e.g., unemployment, education, crime.

PS 106 U.S. AT THE CROSSROADS

(2 class hrs/wk 2 cr)

Introduces students to current political problems in the United States and to the various subfields and approaches used in political science.

PS 198 RESEARCH TOPICS

(1 class hrs/wk 1 cr)

Requires student to make an indepth review of current knowledge about a political science topic. Intended primarily for the political science major to develop skills in independent research. Prerequisite: WR 123 English Composition.

PS 201 AMERICAN GOVERNMENT

(3 class hrs/wk 3 cr) F

First course of a three-part sequence. Focuses on the structure of power in the United States and the functions, sources and uses of power in American politics.

PS 202 AMERICAN GOVERNMENT

(3 class hrs/wk 3 cr) W

Second course of a three-part sequence. Covers public policy making: what political institutions do and how they do it. Also emphasizes mechanisms and outcomes of the policy-making process.

PS 203 AMERICAN GOVERNMENT

(3 class hrs/wk 3 cr) Sp

Third course of a three-part sequence. Focuses on local political institutions and the relationship of citizens to them, especially the significance and operation of participatory institutions.

PS 204 GOVERNMENT REGULATION OF BUSINESS & ECONOMY

(3 class hrs/wk 3 cr)

Presents an analysis of selected U.S. national government policies and regulatory devices in areas of business and the economy. Emphasizes the background, development, administration and content of government regulatory policies in areas such as business, labor, agriculture, energy, natural resources and civil rights.

PS 205 INTERNATIONAL RELATIONS

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

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)

Introduces the foundations and processes of governmental policy making in European nations examined within a historical and comparative framework.

PS 207 INTRODUCTION TO POLITICAL SCIENCE

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

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.

PS 220 U.S. FOREIGN POLICY

(3 class hrs/wk 3 cr)

Analysis of selected U.S. foreign policy decisions and problem areas, with an emphasis on attempts to provide world order and to manage the international economic system.

PS 225 POLITICAL IDEOLOGY

(3 class hrs/wk 3 cr)

Examines the role of ideology, the organization of propaganda and the structure of mass political action in the modern state.

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.

PY 110 UNDERSTANDING HUMAN BEHAVIOR

(3 class hrs/wk 3 cr)

Develops the scientific approach to the study of human behavior. Integrates physiological, intrapsychic and social/behavioral perspectives on human thought and behavior.

PY 198 RESEARCH TOPICS

(1 class hrs/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: PY 203 General Psychology to be taken prior to or concurrently with PY 198.

PY 201 GENERAL PSYCHOLOGY

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

Introduces the use of objective, scientific procedures in the study of behavior and mental processes. Provides brief overview of the scope of psychology followed by a more concentrated study of biological and developmental processes, perception and consciousness. Note: Recommended for second-year students.

■ **PY 202 GENERAL PSYCHOLOGY**

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

Surveys current knowledge in the psychological processes of learning and memory, language and thought, motivation and emotion, individual mental abilities and their measurement. Note: Recommended for second-year students. Prerequisite: PY 201 General Psychology.

■ **PY 203 GENERAL PSYCHOLOGY**

(3 class hrs/wk 3 cr) Sp

Surveys current knowledge about personality and its assessment; conflict and stress; abnormal psychology, including methods of therapy; and social psychology. Note: Recommended for second-year students. Prerequisite: PY 202 General Psychology.

■ **PY 213 INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY**

(3 class hrs/wk 3 cr)

Introduces the physiological processes underlying behavior; emphasizes the human brain, its functions, its common pathologies and its many mysteries.

■ **PY 216 SOCIAL PSYCHOLOGY I**

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

Surveys the influence of psychology on culture, society, groups and individuals. Topics include group dynamics, leadership, socialization, attitude change and achievement of goals. Emphasizes learning to use social psychology in life situations. Note: Will not substitute for PY 201, 202, 203 General Psychology sequence.

■ **PY 217 SOCIAL PSYCHOLOGY II**

(3 class hrs/wk 3 cr)

Surveys the influence of psychology on culture, society, groups and individuals. Topics include altruism, aggression, sexual behavior, social exchange, cooperation and competition, environment and social behavior. Emphasizes learning to use social psychology in life situations. Note: Will not substitute for PY 201, 202, 203 General Psychology sequence.

■ **PY 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.

PY 280 CWE PSYCHOLOGY

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

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

➤ **R 102 RELIGIONS OF WESTERN WORLD**

(3 class hrs/wk 3 cr)

Describes the origin, form and beliefs of major Western religions (Judaism, Islam, Christianity, Native American) and the role of religion in culture and society.

➤ **R 103 RELIGIONS OF EASTERN WORLD**

(3 class hrs/wk 3 cr)

Describes the origins, forms and beliefs of major Eastern religions (Hinduism, Buddhism, Confucianism, Shintoism) and the role of religion in culture and society.

➤ **R 210 WORLD RELIGIONS**

(3 class hrs/wk 3 cr)

Discusses the history, similarities and differences of major religions of the world.

➤ **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.

RM 150 RECREATION IN SOCIETY

(3 class hrs/wk 3 cr) F

Provides the student with an introduction to the field of recreation and leisure as a profession. Includes personal leisure awareness and self-evaluation.

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 today and examines topics such as information management, business ethics and union influences.

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 (i.e., information gathering, interviewing, disciplining, building teams, doing performance appraisals and coaching employees). Also explores techniques for overcoming change, delegating effectively, handling conflict and managing stress.

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, verbal and written communications are examined. Students practice active listening skills, effective oral and written communication skills, and verbal presentation skills.

SD 107 SUPERVISORY PSYCHOLOGY

(3 class hrs/wk 3 cr) W

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

SD 112 COMMUNICATING EFFECTIVELY AT WORK

(3 class hrs/wk 3 cr)

Explores supervisory communications in the workplace. Covers reading skills; active listening skills; writing reports, letters and interoffice memos; prepared and extemporaneous presentations; non-verbal communications; and the difference between formal and informal communications.

COURSE DESCRIPTIONS

SD 113 HUMAN RELATIONS IN BUSINESS

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

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

SD 210 PUBLIC RELATIONS

(3 class hrs/wk 3 cr)

Studies the history, process and practice of promoting rapport and goodwill between a person, firm or institution and other persons, special publics or the community at large. Emphasizes various strategies used for communicating with, and influencing opinions of, other people and/or organizations.

SLS 100 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. Independent project required.

SO 198 RESEARCH TOPICS

(1 class hrs/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.

SO 204 GENERAL SOCIOLOGY

(3 class hrs/wk 3 cr)

Introduces the sociological perspective: the components of society and social organization, culture, socialization and stratification.

SO 205 GENERAL SOCIOLOGY

(3 class hrs/wk 3 cr)

Analyzes the major sociological institutions: family, political, economic, religious and educational.

SO 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.

SO 214 SOCIAL PROBLEMS: VIOLENCE & AGGRESSION

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

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.

SO 221 JUVENILE DELINQUENCY

(3 class hrs/wk 3 cr) Sp

Defines and surveys the development and patterns of delinquent behavior, institutional control and treatment, and legal methods of dealing with delinquency.

SO 222 MARRIAGE RELATIONSHIPS

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

Presents a sociological approach to the institution of marriage, including preparation for marriage, mate selection, adjustment to marriage, marital problems to expect and solve, and the changing styles of family relationship. Prerequisite: SO 204 General Sociology or instructor approval.

SO 244 INTRODUCTION TO CRIMINOLOGY

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

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.

SO 280 CWE SOCIOLOGY

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

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

SP 111 INTERPERSONAL COMMUNICATION

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

Develops effective interpersonal communication skills in listening, verbal and non-verbal communication, self concept and conflict resolution in relationships.

SP 112 FUNDAMENTALS OF SPEECH

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

Projects in oral communication to develop skill and confidence in speaking before large groups, with emphasis on content, organization, audience motivation and language.

SP 113 INTRODUCTION TO PERSUASION

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

Introduces argumentation and persuasion, with focus on the theory and practice of persuasive speaking. Includes modes of proof, evidence, audience motivation, methods of organization and the rights and responsibilities of persuaders.

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.

SPN 101, 102, 103 FIRST-YEAR SPANISH I, II, III

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

Introduces the Spanish language, stressing speaking and reading with exercise 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 199 SPECIAL STUDIES: SPANISH

(1 class hrs/wk 1 cr)

Presents selected topics focusing on Spanish culture. Note: Can be taken up to three times for credit.

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 232 SELECTED READINGS

(3 class hrs/wk 3 cr)

Presents selected readings from Spanish and Hispanic American literature. May be taught in English or Spanish depending on subjects selected. Does not satisfy foreign language degree requirements.

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.

■ **SSC 104 INTRODUCTION TO THE SOCIAL SCIENCES**

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

Introduces the study of man, his culture, institutions, past and present social situations and problems. Provides an integrative review of the six social sciences: anthropology, history, sociology, economics, political science and psychology.

► **TA 111 INTRODUCTION TO THEATRE**

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

Surveys theatre past and present, the development of dramatic literature, performers, theatres and theatre organization. Emphasizes audience awareness and appreciation. Not a performance class.

► **TA 121 FUNDAMENTALS OF ACTING I**

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

Presents basic theory and techniques of the craft and art of acting. An experience-oriented performance course designed for all students to increase understanding and skill as a performer. No previous experience is required.

► **TA 122 FUNDAMENTALS OF ACTING II**

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

Continues study begun in TA 121. Experience-oriented performance course centered around developing a character for presentation in a public performance. Prerequisite: TA 121 Fundamentals of Acting I or instructor approval.

► **TA 124 READERS THEATRE**

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

Involves ensemble performance of poetry, prose and drama for audience response. Special stress also is placed on the student's selection, planning and direction of Reader's Theatre programs.

► **TA 125 IMPROVISATION**

(3 class hrs/wk 3 cr)

Provides the opportunity for students to polish their acting skills, primarily through improvisation, sensory awareness exercises and theatre games. The course also increases imaginative and spontaneous problem-solving abilities. No previous experience required.

TA 161 FUNDAMENTALS OF TECH THEATRE: SCENERY

(5 class hrs/wk 4 cr) F

Introduces theatre forms and spaces, the working elements of a theatre, and the basic principles and techniques of scenery construction.

TA 162 FUNDAMENTALS OF TECH THEATRE: LIGHTING

(5 class hrs/wk 4 cr) W

Introduces the basic equipment and methods of stage lighting.

TA 163 FUNDAMENTALS OF TECH THEATRE: STAGE MANAGEMENT

(5 class hrs/wk 4 cr) Sp

Introduces the role and responsibility of the stage manager in relationship to sound, lighting, scenery and other technical operations. Also includes projects in scenery design emphasizing efficient stage management, sound effect tape construction and lighting cue organization.

TA 180/182 REHEARSAL AND PERFORMANCE

(2-6 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

(2-6 class hrs/wk 1-3 cr) F/W/Sp

Offers credit for preparing scenery, costumes, properties or publicity for a college production. Note: Each may be repeated for up to 9 credits. 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 credit for individually arranged projects in theatre design of scenery, lighting, costumes or properties, directing, audition material and model making. Note: Each 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 INDEPENDENT STUDIES: THEATRE

(2-6 class hrs/wk 1-3 cr)

Individually arranged projects.

► **TA 229 ORAL INTERPRETATION OF LITERATURE**

(3 class hrs/wk 3 cr)

Studies of poetry, prose, drama and non-fiction through performance. In-class activities increase skills in analyzing literature.

TA 270 STAGE MAKE-UP

(3 class hrs/wk 3 cr) Sp

Studies the basic principles and techniques through practical application in the areas of facial anatomy, corrective make-up, character, old age and special application. Designed for both majors and non-majors; 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.

WE 202 CWE SEMINAR

(1 class hrs/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. Course may be repeated for up to 4 credits.

COURSE DESCRIPTIONS

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, improvement of fluency in writing expository prose and 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 121 ENGLISH COMPOSITION

(3 class hrs/wk 3 cr) F/W/Sp
Presents processes and fundamentals of writing expository essays, using unity, clarity, coherence and detail. Note: Placement determined by pre-enrollment testing.

WR 122 ENGLISH COMPOSITION

(3 class hrs/wk 3 cr) W/Sp
Emphasizes principles of argumentation, logic and style in expository writing, stressing ability to define statements and issues, recognize evidence, use inductive and deductive arguments, and avoid fallacies. Attention is paid to diction, tone and style of writing. Continues emphasis of WR 121 on rhetorical concerns and accuracy in mechanics and usage. Prerequisite: WR 121 English Composition.

WR 123 ENGLISH COMPOSITION

(3 class hrs/wk 3 cr) W/Sp
Introduces use of library, research methods, proper use of sources and documentation. Students write one or more research papers, making use of an outline, note cards, footnotes, bibliography and manuscript forms. Continues emphasis of WR 121 on rhetorical concerns and accuracy in mechanics and usage. Prerequisite: WR 121 English Composition.

WR 214 BUSINESS ENGLISH

(3 class hrs/wk 3 cr) F/W/Sp
Introduces students to the business memo, letter, short report and to resume writing strategies and formats. Prerequisite: WR 121 English Composition.

WR 227 TECHNICAL REPORT WRITING

(3 class hrs/wk 3 cr) F/W/Sp
Introduces students to the process of gathering, evaluating, organizing and presenting technical information in a variety of formats, including proposals, progress reports and formal reports, appropriate to professional and technical audiences. Prerequisite: WR 121 English Composition.

► WR 240 PERSONAL JOURNAL WRITING

(3 class hrs/wk 3 cr) F/W/Sp
Emphasizes the use of journals for recording observations, reflecting thoughts of personal and public interest, preserving one's past, noting ideas for poems or stories, exploring one's identity, or practicing and experimenting with writing styles. Note: May be repeated for up to 6 credits.

► WR 241 INTRODUCTION TO IMAGINATIVE WRITING

(3 class hrs/wk 3 cr) F/W/Sp
Includes a study of the elements of short fiction (dialogue, setting, character, conflict, etc.). Uses workshop sessions in which students discuss the exercises and stories of their classmates. Note: May be repeated for up to 6 credits.

► WR 242 INTRODUCTION TO IMAGINATIVE WRITING

(3 class hrs/wk 3 cr) F/W/Sp
Introduces the basic techniques of poetry writing, such as rhythm, rhyme and imagery, with additional discussion of the more technical aspects of the craft. Students may be asked to work with certain fixed traditional forms, but major emphasis is placed on fostering and developing individual style. Note: May be repeated for up to 6 credits.

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.

■ WS 100 WOMEN IN TRANSITION

(3 class hrs/wk 3 cr)
Explores role conflict and ambiguity; methods and tools for change; and alternative behaviors, attitudes and world views.

■ WS 101 INTRODUCTION TO WOMEN'S STUDIES

(3 class hrs/wk 3 cr)
Examines the research and theories of sex-role stereotyping from the sociological perspective. Examines the diversified roles and status of women in the community and their involvement in education, politics, business, economics, religion and the family.

● ZO 201, 202, 203 GENERAL ZOOLOGY

(6 class hrs/wk 4 cr) F/W/Sp
ZO 201, Structure and function of vertebrate animals, cells and biological molecules; ZO 202, Molecular genetics, Mendelian genetics, reproduction, animal development and evolution; ZO 203, Classification, structure and function of animals representing the major animal groups and principles of ecology. Note: General Zoology sequence may be substituted for "core biology" (BI 211, 212, 213) at four-year institutions. Recommended for science majors. Prerequisite: High school science and math. Corequisite: Concurrent enrollment in chemistry and math.



FACULTY & ADMINISTRATIVE STAFF

FACULTY AND
ADMINISTRATIVE
STAFF**Adams, Ann**

Director, College Computer Services. BS, Colorado State University. At Linn-Benton since 1987.

Aikman, John

Faculty, Graphic Arts. BA, Oregon State University; MFA, University of Wyoming. At Linn-Benton since 1980.

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Campbell, Jack C.

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Chambers, Maynard

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Confidential Secretary, Human Resources. AS, Linn-Benton Community College. At Linn-Benton since 1985.

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Conrad, Neal

Faculty, Emergency Medical Technician. NREMT-P; AS, University of Arkansas for Medical Sciences. At Linn-Benton since 1988.

Cripe, Sue

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Tetz, Clarice

Secretary, Vice President for Instruction. Secretarial degree, Northwestern School of Commerce. At Linn-Benton since 1979.

Tolbert, James A.

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Trautman, Dale

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Trautwein, W. Sue

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VanLaere, Margaret Susan

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Vee, Regina

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Walczak, Al

Faculty, Business Management. BS, Portland State College; MEd, Oregon State University. At Linn-Benton 1969-78 and 1985 to present.

Watson, Diane

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Weber, Roberta (Bobbie)

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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.

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Widmer, Jason (Jay)

Faculty, Ceramics, Humanities; Ceramics, Benton Center, Community Education. BA, Oregon State University. At Linn-Benton since 1974.

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Yu, Kitson

Faculty, Data Processing. BS, MS, Troy State University. At Linn-Benton since 1981.

Zimmer, Sandra S.

Faculty, Fine Arts. BA, Kearney State College; MA, University of Northern Colorado. At Linn-Benton since 1972.

LINN-BENTON COMMUNITY COLLEGE 1989-1990 Academic Calendar

	Summer 1989	Fall 1989	Winter 1990	Spring 1990	Summer 1990
Registration Begins (See class schedule for specific times)*	June 12	Sept. 12	Dec. 4	March 5	June 11
Classes Begin	June 19	Sept. 25	Jan. 2	March 26	June 18
Last Day to Register					
For 12 or more credits (Fulltime)	June 23	Sept. 29	Jan. 8	March 30	June 22
Late Fee Begins	July 5	Sept. 25	Jan. 2	March 26	June 18
For 11 or less credits (Parttime)	July 6	Oct. 13	Jan. 19	April 13	July 5
Late Fee Begins	July 5	Oct. 9	Jan. 15	April 9	July 2
Last Day to Drop Without "W"	June 29	Oct. 6	Jan. 12	April 6	June 28
Last Day to Withdraw and Quality for a Refund (full-term classes)	July 6	Oct. 13	Jan. 19	April 13	July 5
Last Day to Request P/NP or AU Option	August 3	Nov. 9	Feb. 16	May 11	Aug. 2
Last Day to Officially Withdraw	August 3	Nov. 9	Feb. 16	May 11	Aug. 2
Final Exams		Dec. 11-13	March 12-14	June 4-6	
Graduation				June 7	
Last Day of Term	Aug. 24	Dec. 15	March 16	June 8	Aug. 23
Holidays	Independ. Day July 3-4	Veterans' Day Nov. 10 Thanks. Day Nov. 23-24	New Year's Day Jan. 1 Presidents' Day Feb. 19	Memorial Day May 28	Independ. Day July 4

Linn-Benton Community College
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