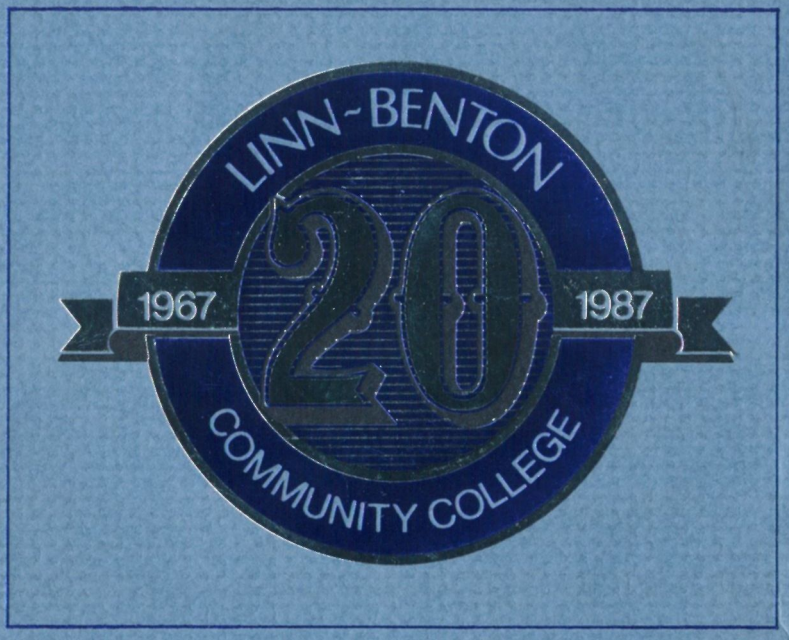


# LINN~BENTON
## Community College

## 1987-88
## General Catalog

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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.**

**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:

Roba Rathkey, Chairwoman, McMinnville
Ruth Hewett, Vice Chairwoman, Salem
Thelma Elliott, Portland
Clifford L. Freeman, Portland
Donald Kruse, Roseburg
Jane Reyneke, Grants Pass
Gene Stunz, Nyssa

## Oregon Department of Education:

Verne A. Duncan, State Superintendent of Public Instruction
Mike Holland, Executive Director of Community Colleges
Monty Multanen, Associate Superintendent, Division of Vocational Education

## LBCC Board of Education:

Terry McCormick, Chairwoman, Corvallis
Joseph Novak, Vice Chairman, Albany
O. Robert Adams, Corvallis
Walter Griffiths, Lebanon
Robert Hyland, Sweet Home
Dave Schmidt, Albany
Richard Wendland, Philomath

## 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 accomodate 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 underprepared 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, 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.

## Values

**Preface.** The primary goal of Linn-Benton Community College is to be a quality institution, operated by dedicated people providing educational services and opportunities that meet the needs of our students and our community. We aspire to be recognized in our community as a caring institution, committed to high standards in all our educational programs and services. As a publicly supported community college, we make every effort to provide opportunities for the educational development of our students and a fulfilling work environment for our staff. When students enroll in the college and when employees are hired, we expect them to commit themselves to these institutional values.

## I. Our Institutional Identity

**Central Value:**
We believe that the college staff holds the institution in trust for the citizens of Oregon.

Emanating from this Central Value are the following statements:

*Quality instruction with college-level standards must be maintained at all times.

*The college must respond to a dynamic environment through self-evaluation and innovation.

*The viability of the college and its mission must take priority over individual concerns while the responsibility to safeguard the rights of staff and students is maintained.

*Academic freedom and the free exchange of ideas must be essential elements of the college.

*The college must be committed to responding to local and regional needs, yet must incorporate state and national issues into its mission.

## II. Our Values Pertaining to Students

**Central Value:**
We believe that the college exists so that students experience growth opportunities through a college education, prepare for the world of work and develop an appreciation for lifelong learning.

Emanating from this Central Value are the following statements:

*Students can grow toward their full potential by experiencing the joys of discovery and by participating in the rigors of study.

*Students possess abilities that can be further refined and developed.

*Students have the responsibility to enroll in classes appropriate to their ability levels.

*Students must take responsibility for making their educational experiences significant and meaningful.

*Students are "special" and the college should respond in a personal and humane manner.

## III. Our Values Pertaining to Staff Relations

**Central Value:**
We believe that all college personnel must contribute to and be supportive of the educational mission of the college.

Emanating from this Central Value are the following statements:

*Staff must develop and maintain a strong interest in the growth of students and the community we serve.

*Staff are responsible and accountable for their personal and professional actions as they carry out their assignments.

*Effective communication and cooperation among staff are necessary to fulfull the mission of the college.

*Staff are encouraged to take primary responsibility for professional development opportunities.

*The college will share responsibility for providng professional development activities for staff.

## IV. Our Values Pertaining to Leadership and Management

**Central Value:**
We believe that quality leadership and managerial practices must be provided to create a healthy working environment.

Emanating from this Central Value are the following statements:

*Positive leadership must be encouraged at all levels within the college.

*An open, team-oriented management style should provide opportunities for staff input to decision making.

*A constant search to improve the ways staff work together should be supported and recognized.

*A willingness to take risks in an open atmosphere of shared values is encouraged.

*Staff must be guided by principles of fairness, trust and respect for each other's skills, abilities and contributions to the college in accordance with these value statements.

## 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 23,000 people take one or more classes through LBCC each year, or a full-time equivalent of about 4,300 full-time students, making LBCC the fifth largest of Oregon's 13 community colleges.

## The Campus

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

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

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

A barn, small greenhouse, solar-heated energy center, arboretum site, learning resource center, bookstore, 500-seat 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 easy 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 Stystem of Higher Education colleges and universities. A variety of Linn-Benton programs qualify for veterans benefits with approval of the Veterans' Administration

Students who want to review information about LBCC's accreditation status may contact the President's office, CC-101, 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 Assistant Director of Human Resources Carroyl Kleine; Linn-Benton Community College; 6500 SW Pacific Blvd.; Albany, OR 97321. 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 or quarter system, with the fall term beginning late September and ending before Christmas. The winter term begins early January and runs until mid-March. The spring term begins late March and ends mid-June. A summer term is held for a 10-week period from mid-June until late August.

## Credit Hours

Generally, a class 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 and parking for handicapped persons.

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

Parking and traffic rules also are available in the Public Safety/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. A separate program provides dental coverage. The insurance programs are available at group rates and include provisions for coverage of the student's dependents. For more information, contact the Admissions Office, Takena 115, or call 967-6105.

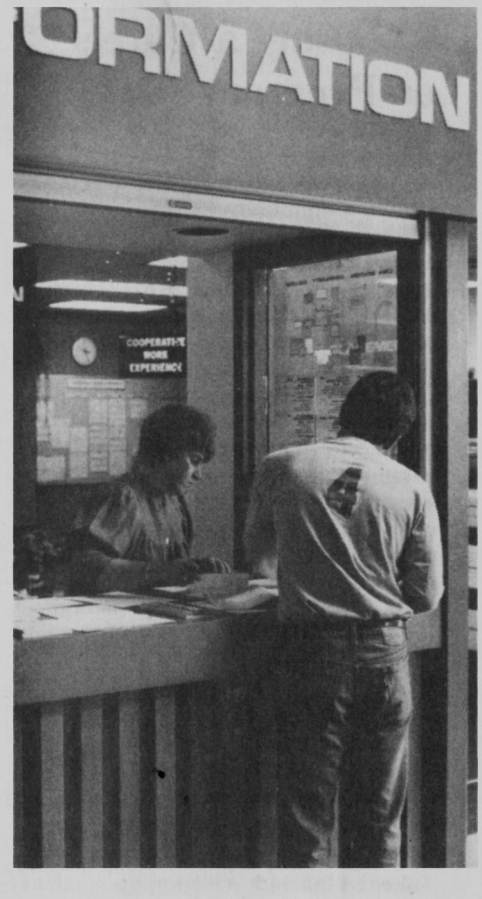
## Child Care

A limited child facility is available on campus in conjunction with the Parent Education program. Children must be three 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 Parent Education Office, Takena 119, or phone 928-3621, ext. 384.

Child care also is available through the Linn, Benton, Lincoln Community Coordinate Child Care Council. This agency functions as a cooperative to provide affordable child care options for student parents. Additional information is available from the LBL 4-C Council, 757-8842, or the LBCC Financial Aid Office, 967-6104.

## Student Rights, Complaints, Freedoms and Responsibilities

The college's board of education has established policy relating to student rights, freedoms, responsibilities and due process. This policy includes opportunity for students to file complaints and outlines the due process procedure. In addition, rules for student conduct are included in the policy. Individuals who want a copy should contact the Director of Student Programs, Takena 115, 967-6105.



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

LBCC maintains an "open door" policy on admissions; however, special admissions standards may be imposed for specific instructional programs to effectively and responsibly administer the resources of the institution. Such standards are set to ensure each student a reasonable chance of success in a program and shall constitute the minimum standards consistent with the demands of that program. A student will always be able to qualify for admission to any program by demonstrating a mastery of the material contained in appropriate high school courses. Admisssions 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 from high school.
3. Take the Comparative Guidance and Placement (CGP) examination.
4. Forward official copies of transcripts directly to LBCC's Admissions Office, if wanting to receive credit for college work at another institution.

*PART-TIME STUDENTS:* Students enrolling for non-credit classes need only register for desired classes at the appropriate time. Those part-time students who plan to complete a certificate or degree from LBCC are encouraged to complete the admission procedure for full-time students. The process must be completed before a certificate or degree is granted.

## Limited Enrollment Admission

Students who have not completed the application process 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 for admission. The deadline for foreign student applications is one month prior to the beginning of the term in which the student plans to attend. Questions about specific requirements may be directed to the Director of Admissions.

## Special Admissions Programs

Although Linn-Benton Community College maintains an "open door" policy on admissions, special admission standards may be required for specific instructional programs. These standards are set to effectively and responsibly administer the college's resources and to ensure that each student has a reasonable chance of succeeding in a program. The special admission requirements are based on the minimum standards necessary to meet the demands of the particular program. A student will always be able to qualify for admission to any program by demonstrating a mastery of the material contained in appropriate high school courses. Admissions to all other college programs shall be on a first-come, first-served basis.

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 faculty 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 begining fall term must: (1) have application and transcripts on file by a specified date (contact the Admissions Office for date); (2) applicants must be high school graduates or have a 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); (4) complete the Comparative Guidance and Placement Exam; (5) have the total file reviewed by the admission committee; (6) be available for an admission interview; (7) if accepted, have a complete physical exam. Also, a negative tuberculin skin test or chest X-ray is required. ADN applicants will be notified of the disposition of their applications by June 1.

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

EMERGENCY MEDICAL TECHNOLOGY. Admission to the Emergency Medical Technician certificate program is limited and based on date of application. Applications may be submitted beginning 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 Comparative Guidance and Placement Examination or complete EN 115 Effective Reading with a "C" grade or better.

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 Comparative Guidance and Placement Examination; (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.

COMPUTER PROGRAMMING. Applicants to the Computer Programming program must demonstrate ability to enroll in WR 121 English Composition based on completion of WR 115 Introduction to Writing with a "C" or better or demonstrated ability as verified by the Comparative Guidance and Placement Examination.

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.

ELECTRONICS ENGINEERING TECHNOLOGY: Students wanting to enroll in the Electronics Engineering Technology program must take the CGP (Comparative Guidance and Placement) Examination 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.

WATER/WASTEWATER. 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 Comparative Guidance and Placement Examination score or by completion of 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 has demonstrated the intent of making Oregon the state of permanenet 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.

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 noncredit, 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 AND FEES

### TUITION SCHEDULE

Following are the tuition and fee charges for credit and non-credit classes for the 1987-88 school year.

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

| Credit Classes | District | Out-of-State | Foreign |
|---|---|---|---|
| Per credit minimum (2 credit minimum charge) | $ 21 | $ 87 | $ 97 |
| Full-time Tuition (12-20 credits) | $252 | $1,044 | $1,164 |
| Tuition for over 20 credits (non-refundable) | $ 21 | $ 87 | $ 97 |

### 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
Career Guidance and Placement Examination.....$5
Late registration:
Twelve credit hours or more, beginning second 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 activties 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 withdrawal by a student carrying 12 or more credits:** full refund less $15.

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

**Official withdrawal by a student enrolled in non-credit Community Education classes 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

when required by the student's major department. 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 Testing Center, 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 Testing 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 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 must 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.

## 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: Uncompleted work must be completed by the end of the following term, with the exception of summer quarter, or "IN" automatically is changed to a "Y" if a change of grade form with a letter grade is not submitted by the instructor. A letter grade in this case is considered an A, B, C, D, F or P/NP, if that option was chosen.

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

Certain courses listed in the schedule have an "OPT" designation, indicating students have the option of taking the course for letter grade or on a pass/no-pass (P/NP) basis. 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. Stu-

dents 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.

New 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 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 a partial tuition refund (see "Refunds").

# FINANCIAL AID

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

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

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

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

## Application Procedures

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

In addition, the CSS Financial Aid Form may be used to determine a student's eligbility 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.

Application for aid may be made throughout the year; however, because financial aid funds are limited, students applying after March 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 admitted to LBCC as regular students 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. Ex-

amples of average student costs for nine months (three school terms) are:

SINGLE (living with parents)
* Tuition & Fees.....$756
* Books & Supplies.....$450
Living Expenses.....$2,430

MARRIED (one dependent child)
* Tuition & Fees.....$756
* Books & Supplies.....$450
Living Expenses.....$9,675

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

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

## Deferred Payments

Full-time students may apply to have up to two-thirds of their tuition deferred for a five-week period. Under the deferred tuition plan, students pay one-third at the time of registration plus any late fee assessed, with the balance payable before the end of the fifth week of the school term. Ten percent simple annual interest is charged 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 $150 to $1650 for an academic year. The federal government determines the amount of award based on the applicant's financial need.

**SUPPLEMENTAL OPPORTUNITY GRANTS.** The Supplemental Opportunity Grant (SEOG) is an award made to students with exceptional financial need. Grants vary from $100 to $1200 per academic year, depending on need of the applicant.

**STATE NEED GRANTS.** State Need Grants are made from state and federal funds, awarded by the Oregon State Scholarship Commission to eligible Oregon residents. A recipient must have applied for the Pell Grant, be enrolled as a full-time student and not have earned a baccalaureate degree. Oregon Need Grants are transferrable to other Oregon and Washington 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-quarter 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.

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

**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, annual interest deferment and cancellation provisions is available at the Financial Aid Office.

**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 appply 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. At the time of application, a 5 percent origination fee is charged. Loan repayment and interest charges begin six months after the borrower ceases full-time enrollment. Application forms and additional information regarding deferment and cancellation provisions are available at the Financial Aid Office.

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

**PLUS LOAN.** This is a loan designed for parent(s) with undergraduates. The maximum a parent could borrow is $3000 and the current interest rate is 12 percent. Parent(s) would begin repayment within 60 days of the loan's disbursement.

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

## Repayment and Student-Owed Refunds to Grant and Loan Programs

If a student receiving financial aid withdraws from school during the regular, 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 and the award letter.

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 progress outlined in the financial aid brochure and the award letter.

Additionally, any student not in good standing with the institution 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 Comparative Guidance and Placement Test (unless waivered by adequate transfer credit).
3. Attendance at a scheduled LBCC new student orientation.
4. Having official transcripts of all college credit earned at other schools sent to the LBCC Admissions Office.
5. 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.

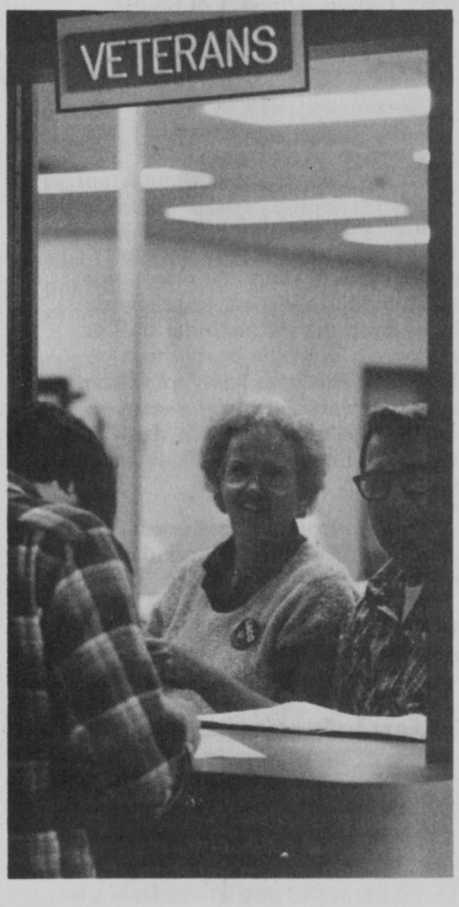
**GRADE POINT AVERAGE:** A cumulative GPA of 2.00 is the minimum acceptable GPA necessary to qualify for any degree, diploma or training certificate from Linn-Benton Community College.

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

**REINSTATEMENT OF VA BENEFITS:** To re-establish VA benefits following unsatisfactory progress, the student may:

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

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



# SERVICES FOR STUDENTS

## CAREER CENTER

Robert Talbott, Director of Student Development Division
928-2361, ext. 291
LRC 202

### 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 Centers.

### Disabled Student Services

928-2361, ext. 291
TTY 967-6114
LRC 202

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

The director of the Student Development Division 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 and services or make appointments with LBCC staff members by calling the college's TTY number, 967-6114. The TTY is located in the Student Development Office on the second floor of the Learning Resource Center.

LBCC offers a number of support services and specialized classes to disabled students.

### Student Employment Center/Cooperative Work Experience Services

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, and 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. 291
LRC 202

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 quarter.

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 be used by any instructor on campus who wants a secrured and adaptable environment. The staff in the Math Lab try to offer a pleasant and encouraging atmosphere to ease the stress of testing.

## Disabled Student Services

928-2361, ext. 410 TTY 967-6114
LRC 200L

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
- Vocational study skills
- Other accomodations specific to a student needs and disability

Students must meet special enrollment requirements to receive program services.

## Testing Services

928-2361, ext. 277
T 107A

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 Comparative Guidance and Placement (CGP) exam for all new full-time students;
3. the College Level Exam Program (CLEP) test for college credit by examination;
4. course challenges that enable students to earn college credit by examination without completing regular credit course work;
5. skills tests, such as those for reading and writing;
6. vision and hearing screening; and
7. individualized testing for on-campus courses.

## Tutorial Services

928-2361, ext. 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 each term for the convenience of part-time students and additional hours are scheduled the first two weeks of each term. Used texts may be sold back during designated hours each finals week. Texbooks also may be purchased at the community education centers off-campus for courses taught at those locations.

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

The Santiam Restaurant is student operated and is located in CC 201. Daily menus are planned, prepared and served by Culinary Arts students from 9:30 am to 12:30 pm Monday-Thursday.

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

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

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.

## Library

928-2361, ext. 336 - circulation
928-2361, ext. 116 - reference
928-2361, ext. 330 - director
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

Community Relations Office
928-2361, ext. 254
CC 105

Reservations for the college's meeting rooms are made through the Community Relations Office, which is open 8 am to 5 pm, Monday through Friday.

This office also provides general information about the college and can arrange for tours of the LBCC 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 extracurricular 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. Dick McClain, Athletic Director, 967-6109, AC 102. 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.

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 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.


## 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 s 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 AND DIPLOMAS

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

### ASSOCIATE OF SCIENCE DEGREES

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

Accounting Technology
Administrative Secretary
- Alphabetic Shorthand
- Gregg Shorthand
- Word Processing

Agriculture
Animal Technology
Associate Degree Nursing
Auto Body Repair
Automotive Technology
Banking and Finance
Business Management/Marketing
Civil Engineering Technology
Computer Programming
Crafts & Trades
Criminal Justice
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

Humanities
Elementary Education
Engineering
Journalism
Laboratory Science
Secondary Education
Social Science
Theatre/Acting
Visual Arts
- Fine Arts
- Graphic Arts

### ASSOCIATE OF ARTS DEGREE - GENERAL

This degree is awarded to those students who complete a non-specified, two-year curriculum that consists of transfer credit course work.

### ASSOCIATE OF GENERAL STUDIES DEGREE

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

Three 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 to 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.

### CERTIFICATES

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

One-year certificates are offered in:

Advanced Supervisory Development
Agriculture
Dental Assistant
Horticulture
Medical Transcriptionist
Microcomputer Operations
Office Specialist
Water/Wastewater Plant Operations
Welding

Two-year certificates are offered in:

Auto Body Repair
Auto Technology
Heavy Equipment Mechanics/Diesel
Manufacturing Technology
Metallurgy
Refrigeration, Heating and Air Conditioning
Supervisory Development
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 records and determining which courses the student must take to meet graduation requirements. The diploma is issued by the local high school district.

2. **Oregon Competency Based Adult High School Diploma:** The primary purpose of this program is to assist individuals 18 years of age or older, or high school-age students released from compulsory attendance under ORS 339.30, in completing credits required of all high school graduates in Oregon. LBCC evaluates the student's educational records and life experiences and assists in planning a study program that will meet individual needs.

3. **General Education Diploma:** LBCC offers the GED high school certificate through the Developmental Skills Center.

## SPECIAL TRAINING PROGRAMS

### Cooperative Work Experience

Marian Cope, Rich Horton
CWE Coordinators
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 is designed to provide the opportunity to share work-related experiences with the CWE coordinator and fellow CWE students.

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

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.

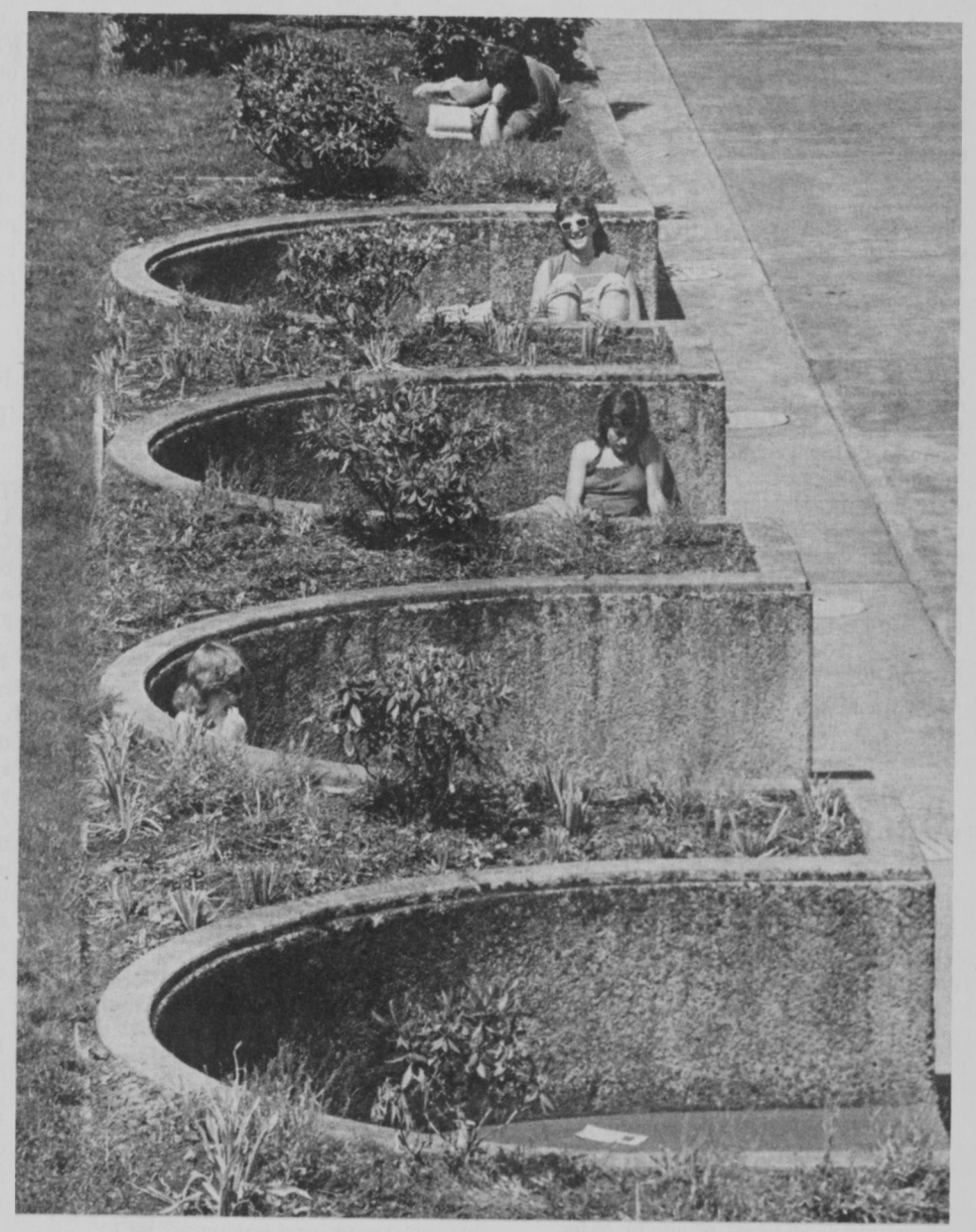
ARMY ROTC. This program offers each eligible man and woman the opportunity to compete for a commission as an officer in the United States Army while earning a college degree. Both basic and advanced programs with multiple entry points can be tailored to a student's needs. Those interested in aviation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

proved 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, Division of Community Colleges. Students qualifying for an Associate of Science or an Associate of Arts degree will not be allowed to apply for the Associate of General Studies degree. 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.

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.

## REQUIREMENTS FOR THE ASSOCIATE OF SCIENCE DEGREE

To receive an Associate of 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 Comparative Guidance and 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 in the Comparative Guidance and Placement test to enroll in the above math courses.)

Health and PE (select four credits).....(4)

| | |
|---|---|
| HE 112 First Aid: Multi-Media | 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 will fulfill these requirements, look for the proper symbol in the Course Description section in the back of the 1987-88 catalog. Humanities/Arts courses will be marked with the symbol ◄; Social Science classes will be marked with the symbol ■; Math/Science classes will be marked with the symbol ●; and courses fulfilling the Computer Competency requirement will be marked with the symbol ◆.

## REQUIREMENTS FOR THE ASSOCIATE OF 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 Requirements.....45

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 Comparative Guidance and Placement test to enroll in WR 121.

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

| | |
|---|---|
| SP 111 Interpersonal Communication | 3 |
| SP 112 Fundamentals of Speech | 3 |
| SP 113 Introduction to Persuasion | 3 |

Health and PE (select 6 credits).....(6)

| | |
|---|---|
| HE 112 First Aid: Multi-Media | 1 |
| HE 250 Health | 3 |
| HE 252 First Aid | 3 |
| HE 261 CPR | 1 |
| PE 185 Activity Courses | 1 |
| PE 231 Lifetime Wellness | 3 |

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, literature, music, philosophy, religion, speech and theater.

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 100 Intermediate Algebra level. This requirement may be satisfied by either attaining the appropriate test score on the Comparative Guidance and Placement test or by taking MT 100 (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 will fulfill the last four requirement areas, look for the proper symbol in the Course Description section in the back of the 1987-88 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 Requirements.....35

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

Composition.....(3)

| | |
|---|---|
| WR 121 English Composition | 3 |

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

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

| | |
|---|---|
| 1.103 Occupational Speech | 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 w/Calculators | 4 |
| 4.202 Math II | 4 |

(Student must have passed Math I Pre-Business Math or attained appropriate placement test score on the Comparative Guidance and Placement test to enroll in the above math courses.)

Health and PE (select 4 credits).....(4)

| | |
|---|---|
| HE 112 First Aid: Multi-Media | 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 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, literature, music, philosophy, religion, speech and theatre.

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

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 will fulfill these requirements, look for the proper symbol in the Course Descriptions section in the back of the 1987-88 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 CERFIFICATE

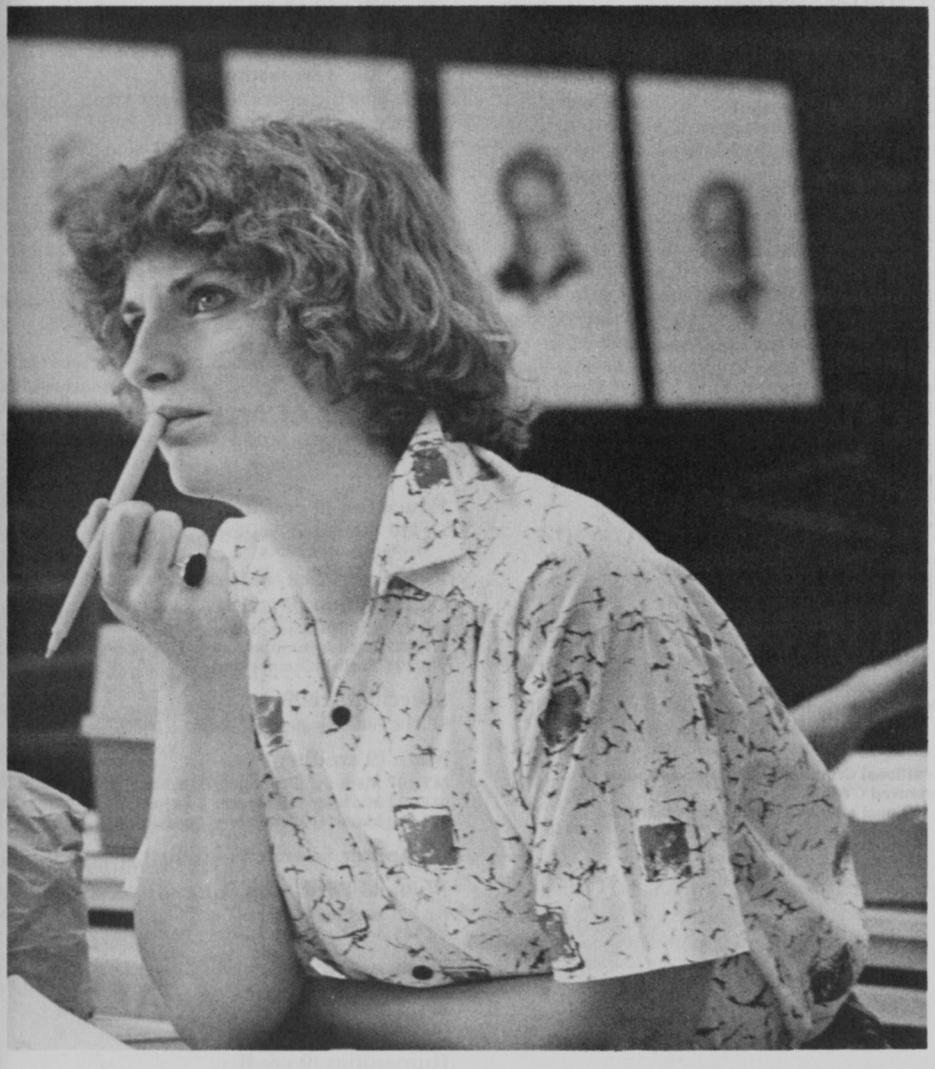
Generally, students must complete, with an accumulative grade point average of at least 2.00, a minimum 36 credits to qualify for the one-year certificate. General certificates require a specified number of credit hours. Refer to department listings for specific requirements.

# REQUIREMENTS FOR THE HIGH SCHOOL 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 the student about his own uniqueness. The second is to teach the nature of society, human organization and the body politic, offering an education that is outward looking, social and civic, and teaches the student his relationship to other humans. The third is to fit the student for an economic role in society, through teaching the skills necessary for paid employment.

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

The Arts, Humanities & Social Sciences Division offers programs leading to the Associate of Arts or Associate of Science degree in the following subjects: criminal justice, education, graphic communications, humanities, journalism, social sciences, 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:**
Earl Liverman, Jerald Phillips

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

Students who major in criminal justice are presented with an opportunity to attain a basic understanding of criminal behavior theory, of historical and current criminal justice processes, and of utilizing more efficiently and effectively those resources available to the criminal justice system.

Students are given the opportunity to earn credit through the Cooperative Work Experience program (CWE) by active participation in criminal justice agencies, including police departments and sheriff offices, probation and parole offices, jails and other correctional facilities, halfway houses and juvenile group homes.

Two degree programs are offered. Students may earn either the Associate of Arts or the Associate of Science degree, with majors in either corrections or law enforcement.

## CRIMINAL JUSTICE CURRICULUMS

### Associate of Arts in Criminal Justice

**General Education Requirements . . . . . 45**

**See graduation requirements for Associate of Arts degree**
*WR 123 Research Paper to be taken concurrently with CJ 198 Research Topics is required.*
*SP 113 Introduction to Persuasion is required.*

**Core Requirements . . . . . 25**

| | |
|---|---|
| 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 220 Substantive Law | 3 |
| CJ 226/PS 252 Constitutional Law | 3 |
| CJ 280 Cooperative Work Experience | 6 |

**Sequence Requirements (select one) . . . 12**

☐ Law Enforcement . . . . . (12)

| | |
|---|---|
| CJ 200 Police & Public Safety | 3 |
| CJ 210 Intro to Crim. Investigation | 3 |
| CJ 216 Criminal Justice Management | 3 |
| CJ 222 Procedural Law | 3 |

☐ Corrections . . . . . (12)

| | |
|---|---|
| CJ 132 Intro to Parole & Probation | 3 |
| CJ 225 Corrections Law | 3 |
| CJ 232 Corrections Casework | 3 |
| CJ 233 Community-Based Corrections | 3 |

**Electives . . . . . 12**

| | |
|---|---|
| **Must Be Taken From the Following Courses:** | |
| AN 103 Intro to Cult. Anthropology | 3 |
| CJ 100 Survey of Criminal Justice System | 3 |
| CJ 201/SO 221 Juvenile Deliquency | 3 |
| CJ 280 Approved CWE above the required six (6) hours | (14) |
| PS 207 Intro to Political Science | 3 |
| PY 216 Social Psychology I | 3 |
| R 201 Religions of the World | 3 |
| WR 227 Technical Report Writing | 3 |

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### Associate of Science in Criminal Justice

**General Education Requirements . . . . . 20**

**See graduation requirements for Associate of Science degree**
*SP 113 Introduction to Persuasion is required.*

**Core Requirements . . . . . 25**

| | |
|---|---|
| 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 220 Substantive Law | 3 |
| CJ 226/PS 252 Constitutional Law | 3 |
| CJ 280 Cooperative Work Experience | 6 |

**Sequence Requirements (Select One) . . 12**

☐ Law Enforcement . . . . . (12)

| | |
|---|---|
| CJ 200 Police & Public Policy | 3 |
| CJ 210 Intro to Crim. Investigations | 3 |
| CJ 216 Criminal Justice Management | 3 |
| CJ 222 Procedural Law | 3 |

☐ Corrections . . . . . (12)

| | |
|---|---|
| CJ 132 Intro to Parole & Probation | 3 |
| CJ 225 Corrections Law | 3 |
| CJ 232 Corrections Casework | 3 |
| CJ 233 Community-Based Corrections | 3 |

**Distribution Requirements . . . . . 18**

| | |
|---|---|
| Social Science | 9 |
| Humanities | 9 |

**Electives . . . . . 19**

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

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# EDUCATION

**Advisor:**
Marian L. Cope

Successful completion of the outlined programs will permit students to transfer to any institution in the Oregon State System of Higher Education offering programs in elementary or secondary education and, upon admission to the professional teacher education program, complete requirements for a baccalaureate degree.

Admission to professional programs in education is based on several qualifications, including academic background and demonstrated ability to speak, write, read and compute adequately. Application for admission should be made before transferring to the four-year institution.

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

## ELEMENTARY EDUCATION CURRICULUM

### Associate of Arts in Elementary Education

**Education (9 credits)**

| | |
|---|---|
| ED 210 Theory and Practicum II—Sophomore Block | 4 |
| ED 210A Seminar | 1 |

**Composition (9 credits)**

| | |
|---|---|
| WR 121 English Composition | 3 |
| WR 122 English composition | 3 |
| WR 123 English Composition | 3 |

**Speech (3 credits)**

| | |
|---|---|
| SP 112 Fundamentals of Speech | 3 |

**Math (9 credits)**

| | |
|---|---|
| MT 191 Math for Elementary Teachers | 3 |
| MT 192 Math for Elementary Teachers | 3 |
| MT 193 Math for Elementary Teachers | 3 |

**Computer Science (3 credits)** 3

**Physical Education & Health (6 credits)**

| | |
|---|---|
| HE 231 Lifetime Wellness | 3 |
| PE 185 Activity Courses | 3 |

**Sciences (12 credits)**

| | |
|---|---|
| BI 101 General Biology | 4 |
| BI 102 General Biology | 4 |
| GS 106 Physical Science | 4 |

**Humanities (9 credits)**

| | |
|---|---|
| EN 104 Intro to Literature | 3 |
| EN 105 Intro to Literature | 3 |
| EN 106 Intro to Literature | 3 |

**Psychology (6 credits)**

| | |
|---|---|
| PY 201 General Psychology | 3 |
| PY 202 General Psychology | 3 |

(continued on next page)

**Social Sciences (15 credits)**

| | |
|---|---|
| GE 106 World Regional Geography | 3 |
| *or* | |
| GE 107 Cultural Geography | 3 |
| HS 101 History of Western Civilization | 3 |
| HS 102 History of Western Civilization | 3 |
| HS 103 History of Western Civilization | 3 |
| HS 201 U.S. History | 3 |

**Creative Arts Courses 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 |

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## SECONDARY EDUCATION CURRICULUM

### Associate of Arts in Secondary Education

**Education (9 credits)**

| | |
|---|---|
| ED 210 Theory & Practicum II—Sophomore Block | 5 |
| ED 210A Seminar | 1 |

**Composition (9 credits)**

| | |
|---|---|
| WR 121 English Composition | 3 |
| WR 122 English Composition | 3 |
| WR 123 English Composition | 3 |

**Speech (3 credits)**

| | |
|---|---|
| SP 112 Fundamentals of Speech | 3 |

**Physical Education & Health (6 credits)**

| | |
|---|---|
| HE 231 Lifetime Wellness | 3 |
| PE 185 Activity Courses | 3 |

**Humanities/Arts (9 credits)**

| | |
|---|---|
| EN 104 Intro to Literature | 3 |
| EN 105 Intro to Literature | 3 |
| EN 106 Intro to Literature | 3 |

**Math/Science (16 credits)**

| | |
|---|---|
| MT 100 Intermediate Math | 4 |
| Laboratory Science - one year sequence | 12 |

**Computer Courses (3 credits)** 3

**Social Science (15 credits)**

| | |
|---|---|
| History - (HS 101, 102, 103 or HS 201, 101, 203) | 9 |
| Social Science Courses | 6 |

Suggested: Geography, Sociology, Political Science, Anthropology

**Psychology (6 credits)**

| | |
|---|---|
| PY 201 General Psychology | 3 |
| PY 202 General Psychology | 3 |

**Major Requirements . . . . . 14**

Courses to be selected in area of concentration

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# FINE AND APPLIED ARTS

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

## 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.

## VISUAL ARTS CURRICULUM

### Associate of Arts in Visual Arts

**General Education Requirements . . . . . 45**

See graduation requirements for Associate of Arts degree
*AR 201, 202 & 203 Art History required for humanities group.*
*SP 112 Fundamentals of Speech is required.*

**Core Requirements . . . . . 15**

| | |
|---|---|
| AR 115 Basic Design I | 3 |
| AR 116 Basic Design II | 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**

90

☐ Graphic Arts Sequence . . . . . (36)

| | |
|---|---|
| AA 104 Intro to Graphic Communications | 3 |
| AA 120 Layout and Pasteup Procedures | 3 |
| AA 174 Screen Printing | 3 |
| AA 221 Graphic Design I | 3 |
| AA 222 Graphic Design II | 3 |
| AA 223 Graphic Design III | 3 |
| AA 224 Typographical Design | 3 |
| AA 225 Packaging and 3-D Design | 3 |
| AA 228 Portfolio Prep & Prof Prac | 3 |
| AA 229 Typesetting | 3 |
| AA 237 Illustration | 3 |
| AA 263 Process Camera | 3 |

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# Graphic Communications and Journalism

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

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

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

Students in the graphic arts and graphic design programs should anticipate expenses of $300 per term for tools and materials. Printing technology and advertising/promotion students probably will spend $100 annually for tools and supplies in addition to textbooks. Film and photographic paper will cost journalism students about $50 during those terms in which they take photography.

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

The Graphic Communications and Journalism curriculums lead to the Associate of Arts degree in Journalism, with concentrations in either reporting and editing or advertising and public relations, and the Associate of Science degree in Graphic Communications, with concentrations in either graphic design or printing technology.

## GRAPHIC COMMUNICATIONS CURRICULUM

### Associate of Science in Graphic Communications

**General Education Requirements . . . . . 20**

See graduation requirements for Associate of Science degree.
*SP 112 Fundamentals of Speech is required.*

**Core Requirements . . . . . 29**

| | |
|---|---|
| 4.124 Technical Drawing I | 2 |
| AA 104 Intro to Graphic Communications | 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 |
| JN 134 Intro to Photography | 2 |
| OA 121A Typing Keyboard* | 2 |
| OA 121B Basic Production Typing* | 2 |
| OA 123 Typing Skill Building* | 3 |

*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 . . . . . (43)**

| | |
|---|---|
| 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 Prep & Prof Prac | 3 |
| AA 237 Illustration | 3 |
| AR 115 Basic Design I | 3 |
| AR 116 Basic Design II | 3 |
| AR 131 Drawing I | 3 |
| AR 132 Drawing II | 3 |
| AR 133 Drawing III | 3 |
| AR 234 Figure Drawing | 3 |
| JN 199 Newspaper Makeup (Repeated for 4 credits) | 4 |
| | 92 |

**Printing Technology Sequence . . . . . (41)**

| | |
|---|---|
| 3.167 Offset Press | 4 |
| 3.168 Adv Offset Press | 4 |
| 3.169 Negative Imposition & Platemaking | 4 |
| 4.130 Machine Processes | 2 |
| 4.310 Introductory Physics | 3 |
| AA 121 Survey of Visual Design | 3 |
| AR 102 Art Appreciation | 3 |
| JN 199 Newspaper Makeup (Repeated for 6 credits) | 6 |
| JN 234 Intermediate Photography | 2 |
| Electives | 10 |
| | 90 |

## JOURNALISM CURRICULUM

### Associate of Arts in Journalism

**General Education Requirements . . . . . 45**

See graduation requirements for Associate of Arts degree

**Core Requirements . . . . . 16**

| | |
|---|---|
| AA 104 Intro to Graphic Communications | 3 |
| JN 134 Intro to Photography | 2 |
| JN 215 Journalism Lab (repeated for 3 credits) | 3 |
| JN 216 Reporting I | 3 |
| JN 225 Advertising/Public Relations | 3 |
| JN 234 Intermediate Photography | 2 |

**Sequence Requirements**
**(Select either the Reporting and Editing Sequence or the Advertising/Public Relations Sequence)**

**Reporting and Editing Sequence . . . . . (29)**

| | |
|---|---|
| JN 199 Newspaper Makeup | 2 |
| JN 217 Reporting II | 3 |
| JN 218 Copy Editing and Makeup | 3 |
| Electives | 21 |
| Additional courses or approved CWE. Recommended: economics, business management, political science, literature. | |
| | 90 |

**Advertising/Public Relations Sequence . . . . . (29)**

| | |
|---|---|
| AA 120 Layout and Pasteup Procedures | 3 |
| AA 121 Survey of Visual Design | 3 |
| AA 224 Typographical Design | 3 |
| AA 229 Typesetting | 3 |
| AA 263 Process Camera | 3 |
| BA 223 Prin of Marketing | 4 |
| Electives | 10 |
| Additional courses or approved CWE. | |
| | 90 |

# HUMANITIES

**Faculty:**
Beth Camp, Department Chairwoman
Art Bervin, Tom Chase, Linda Eastburn, Paul Hagood, Vera Harding, Larry Sult, Jane White, Barbarajene Williams

The Humanities Department offers courses that encourage students to improve their writing; read, analyze, evaluate and appreciate literature; develop fluency in a second language; develop their abilities for intellectual criticism; and enlarge their understanding of social and ethical values in contemporary society.

Students majoring in department programs can meld classroom theory to the practicality of the working world. Cooperative Work Experience (CWE) allows students to satisfy degree requirements while working on jobs related to their majors. Through this program students develop or refine their skills, reinforce the suitability of their chosen careers, and discover the range of careers open to them.

The department offers programs leading to an Associate of Arts degree in Humanities, with major concentrations in fine art, literature, creative writing, music, philosophy/religion, Spanish and theatre.

## HUMANITIES CURRICULUM

### Associate of Arts in Humanities

**General Education Requirements . . . . . 45**
See graduation requirements for Associate of Arts degree

**Core Requirements . . . . . 15**
HU 100 Intro to Humanities (3)

**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 AR 102 Art Appreciation

☐ English (select from)
EN 101, 102, 103 English Literature
EN 104, 105, 106 Intro to Literature
EN 107, 108, 109 World Literature
EN 201, 202, 203 Shakespeare
EN 253, 254, 255 American Literature

☐ 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) | |
| | | 90 |
| ☐ Literature (Select two sequences) | (18) | 30 |
| EN 101, 102, 103 English Literature | 9 | |
| EN 107, 108, 109 World Literature | 9 | |
| EN 201, 202, 203 Shakespeare | 9 | |
| EN 253, 254, 255 American Literature | 9 | |
| ☐ (Select 3 credits) . . . . . | (3) | |
| WR 240 Personal Journal Writing | 3 | |
| WR 241, 242 Intro to Imag. Writing | 6 | |
| Electives | (9) | |
| | | 90 |
| ☐ 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 course literature | (3) | |
| Electives | (9) | |
| | | 90 |
| ☐ Music . . . . . | (22) | 30 |
| MU 101, 102 Music Fundamentals I & II | 6 | |
| 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 | 3 | |
| Electives | (8) | |
| | | 90 |
| ☐ 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) | |
| | | 90 |
| ☐ Spanish . . . . . | (24) | 30 |
| SPN 101, 102, 103 First Year Spanish | 12 | |
| SPN 201, 202, 203 Second Year Spanish | 12 | |
| Electives | (6) | |
| | | 90 |
| ☐ Theatre . . . . . | (22) | 30 |
| TA 111, 112 Intro to Theatre | 6 | |
| TA 121, 122 Acting I & II | 6 | |
| TA 125 Improvisation | 3 | |
| TA 229 Oral Interpretation of Lit. *or* | 3 | |
| TA 180 and/or 185 Rehearsal & Performance or Production Workshop | 3 | |
| TA 161 or 162 or 163 Technical Theatre | 4 | |
| Electives | (8) | |
| | | 90 |

# PERFORMING ARTS (Music, Speech, Theatre)

**Faculty:**
Gary Ruppert, Department Chairman
Jane Donovan, Hal Eastburn, Robert Hirsh

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 Takena Hall. Music classes meet in specially designed classrooms, with small practice rooms available to individuals.

Most department performances are held on the Mainstage, Takena Hall. The performing arts also make use of The Loft theatre, a converted classroom in Takena Hall, for Readers 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.

## THEATRE CURRICULUM

### Associate of Arts in Theatre

**General Education Requirements . . . . . 45**
See graduation requirements for Associate of Arts degree.

**Program Requirements . . . . . 39**

| | |
|---|---|
| TA 111 Intro to Theatre | 3 |
| TA 112 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 |

**Electives . . . . . 6**

90

# SOCIAL SCIENCES

**Faculty:**
Doug Clark, Department Chairman
Max Lieberman, Maribel Montgomery, Martin Rosenson, Larry Sult, 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 habitates of humans; historians seek to understand the present by re-creating 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 uses 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 on one of three areas of concentration: Behavioral Studies, American Studies or International/Interculture 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.

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 Requirements . . . . .45**

See graduation requirements for Associate of Arts degree

**Core Requirements . . . . . .4**

| | |
|---|---|
| SSC 104 Intro to Social Science | 3 |
| ___ 198 Research Topics | 1 |

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 Concentration . . . . . .21**

(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) |
| *SO 204, 205, 206 General Sociology | (9) |
| SO 222 Marriage Relations | 3 |
| SO 224 Juvenile Deliquency | 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 215 Social History of Oregon | 3 |
| HS 220 Labor History | 3 |
| HS 240 Oregon History | 3 |
| PS 104 Problems in American Politics | 3 |
| PS 106 U.S. At The Crossroads | 2 |
| *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 |

☐ 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 |
| *GE 105 Natural Environments | 3 |
| *GE 106 World Regional Geography | 3 |
| *GE 107 Cultural Geography | 3 |
| *HS 101, 102, 103 Western Civilization | (9) |
| HS 191 China - Society & Culture to 1911 | 3 |
| HS 192 China | 3 |
| IS 252 Intro to International Studies | 3 |
| PS 205 International Relations | 3 |
| PS 207 Intro to Political Science | 3 |
| PS 220 U.S. Foreign Policy | 3 |
| PS 225 Political Ideology | 3 |

**Selectives . . . . . .9**

(Select 9 credits from the two areas not selected as the major area of concentration, a minimum of 3 credits from each area. Three of these 9 credits may be taken either as CWE Social Science Internship or an HO 250 Honors Colloquium or AS ___ 198 Independent Study.)

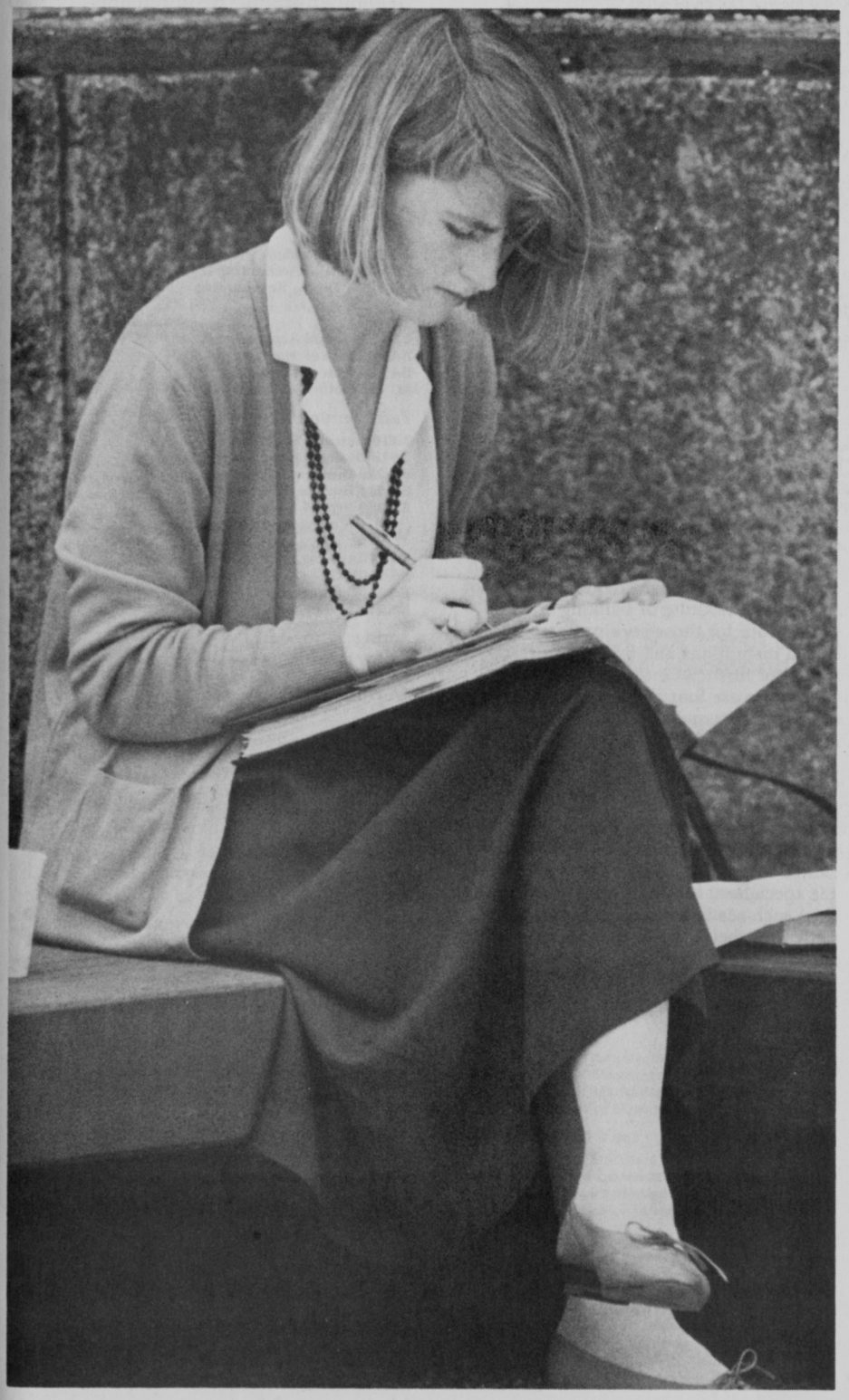
**Electives . . . . . .11**

**90**

*Identifes 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. Both lower division college transfer courses and courses leading to a two-year degree are offered. Associate level degrees are available for both courses of study.

Computer programming and operations and accounting are offered in addition to the traditional secretarial and management programs.

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

# BUSINESS MANAGEMENT

**Faculty:**
Maynard N Chambers, Department Chairman
Gerry Conner, Rich Lenhart, 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.

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

## Accounting Technology

This two-year program is designed to prepare students for career positions in accounting. Accounting positions exist in public accounting firms; retail, industrial and manufacturing businesses; and in various government agencies. Career opportunities include accounting clerk, full-charge bookkeeper, junior accountant, internal auditor and management trainee.

Students 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 curriculum leads to an Associate of Science degree.

### ACCOUNTING TECHNOLOGY CURRICULUM

### Associate of Science in Accounting Technology

**General Education Requirements . . . . . 20**

**See graduation requirements for Associate of Science degree**
*1.110 Elements of Algebra and SP 112 Fundamentals of Speech are required.*

**Major Requirements . . . . . 75-76**

Fall - First Year

| | |
|---|---|
| 2.515 Business Math w/Calculators | 3 |
| 2.530 Practical Accounting I | 3 |
| BA 101 Intro to Business | 4 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc | 2 |
| 2.531 Practical Accounting II | 3 |
| OA 121A Typing Keyboarding | 2 |

Spring

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

Fall - Second Year

| | |
|---|---|
| 2.516 Business Statistics | 4 |
| 2.595 Professional Accounting I | 3 |
| BA 131 Intro to Information Systems | 4 |
| BA 256 Income Tax Preparation | 3 |

Winter

| | |
|---|---|
| 2.518 Business Law *or* | 3 |
| BA 226 Business Law | 4 |
| 2.596 Professional Accounting II | 3 |
| BA 110A Using the PC-DOS | 1 |
| BA 110B Using the PC-LOTUS | 1 |
| BA 110C Using the PC-DBASE III+ | 1 |
| BA 215 Cost Accounting | 3 |

Spring

| | |
|---|---|
| 2.533 Computerized Accounting | 3 |
| 2.535 Payroll Accounting | 3 |
| 2.597 Professional Accounting III | 3 |
| BA 207 Labor Management Relations | 3 |
| BA 222 Financial Management | 3 |

**Electives . . . . . 3**

**Additional business course**

**95-96**

## 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 Science degree.

### BANKING AND FINANCE CURRICULUM

### Associate of Science in Banking and Finance

**General Education Requirements . . . . . 20**

**See graduation requirements for Associate of Science degree**
*1.110 Elements of Algebra and SP 112 Fundamentals of Speech are required.*

**Major Requirements . . . . . 72-73**

Fall - First Year

| | |
|---|---|
| 2.515 Business Math w/Calculators | 3 |
| 2.530 Practical Accounting I | 3 |
| BA 101 Intro to Business | 4 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc | 2 |
| 2.531 Practical Accounting II | 3 |
| OA 121A Typing Keyboarding | 2 |

Spring

| | |
|---|---|
| 2.532 Practical Accounting III | 3 |
| BA 206 Prin of Management | 3 |
| BA 223 Prin 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 Info Systems | 4 |
| BA 269 Prin of Banking | 3 |

Winter

| | |
|---|---|
| BA 110A Using the PC-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**

Bus Electives

# 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.

## BUSINESS ADMINISTRATION CURRICULUM

### Associate of Arts in Business Administration

**General Education Requirements . . . . . 45**

**See graduation requirements for Associate of Arts degree**

*MT 161, 162, 163 Mathematics for Non-Science Majors, required for math/science group requirement.*
*EC 201, 202, 203 Principles of Economics, required for social science group requirements. 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 |

Winter

| | |
|---|---|
| BA 226 Business Law | 4 |

Spring

| | |
|---|---|
| BA 131 Intro to Info. Systems | 4 |

Fall - Second Year

| | |
|---|---|
| BA 200 Prin of Accounting I | 3 |
| BA 206 Prin of Management | 3 |

Winter

| | |
|---|---|
| BA 201 Prin of Accounting II | 3 |
| BA 235 Intro to Business Statistics | 4 |

Spring

| | |
|---|---|
| BA 202 Prin of Accounting III | 3 |
| BA 223 Prin of Marketing | 4 |

**Electives . . . . . 15**

Additional courses or approved CWE.

**92**

# Business Management/ Marketing

This two-year program is designed to meet the needs of persons preparing for employment in a variety of business occupations. The successful completion of this course of study should afford the graduate an entry-level position and lead eventually to middle-management positions. Career opportunities include management positions in retail business, wholesale firms, speciality 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 Science degree.

## BUSINESS MANAGEMENT / MARKETING CURRICULUM

### Associate of Science in Business Management / Marketing

**General Education Requirements . . . . . 20**

**See graduation requirements for Associate of Science degree**
*1.110 Elements of Algebra and SP 112 Fundamentals of Speech are required.*

**Major Requirements . . . . . 72-73**

Fall - First Year

| | |
|---|---|
| 2.515 Business Math w/Calc | 3 |
| 2.530 Practical Accounting I | 3 |
| BA 101 Intro to Business | 4 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc | 2 |
| 2.531 Practical Accounting II | 3 |
| OA 121A Typing Keyboarding | 2 |

Spring

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

Fall - Second Year

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

Winter

| | |
|---|---|
| 2.518 Business Law *or* | 3 |
| BA 226 Business Law | 4 |
| BA 110A Using the PC-DOS | 1 |
| BA 110B Using the PC-LOTUS | 1 |
| BA 110C Using the PC-DBASE III + | 1 |
| BA 249 Retail Merchandising | 3 |
| SD 113 Human Relations in Business | 3 |

Spring

| | |
|---|---|
| ~~2.129 Business Problem~~ Solving | 3 |
| BA 207 Labor Management Relations | 3 |
| BA 222 Financial Management | 3 |
| BA 233 Intro to Market Research | 3 |

**Electives . . . . . 3**

Additional Business Course

**92-93**

# 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 satify individual needs.

# Supervision

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

Three curriculum options are available. Students may complete an 18-credit program in supervision, a 45-credit program in advanced supervisor development or a 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 Science degree in Supervision or a certificate in Supervision or Advanced Supervisor Development.

## SUPERVISION CURRICULUMS

### Associate of Science in Supervisory Development

**General Education Requirements . . . . . 20**

**See graduation requirements of Associate of Science degree**
**SP 112 Fundamentals of Speech is required.**

**Major Requirements . . . . . 37**

| | |
|---|---|
| 2.530 Practical Accounting I | 3 |
| 9.555 Industrial Safety I | 3 |
| BA 101 Intro to Business | 4 |
| BA 131 Intro to Info Systems | 4 |
| BA 207 Labor Management Relations | 3 |
| BA 224 Personnel Management | 3 |
| BA 226 Business Law | 4 |
| EC 115 Outline of Economics | 4 |
| SD 101 Elements of Supervision | 3 |
| SD 107 Psychology for Supervisors | 3 |
| SD 113 Human Relations in Business | 3 |

**Electives . . . . . 33**

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

**90**

(continued on next page)

## Certificate in Supervision

**Major Requirements . . . . . 13**

| | |
|---|---|
| BA 101 Intro to Business | 4 |
| SD 101 Elements of Supervision | 3 |
| SD 107 Psychology for Supervisors | 3 |
| SD 113 Human Relations in Business | 3 |

**Electives . . . . . 5**

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

**18**

## Certificate in Advanced Supervisory Development

**Major Requirements . . . . . 29**

| | |
|---|---|
| 9.555 Industrial Safety I | 3 |
| BA 101 Intro to Business | 4 |
| BA 131 Intro to Info Systems | 4 |
| BA 207 Labor Management Relations | 3 |
| SD 101 Elements of Supervision | 3 |
| SD 107 Psychology for Supervisors | 3 |
| SD 113 Human Relations in Business | 3 |
| SP 112 Fundamentals of Speech | 3 |
| WR 121 English Composition | 3 |

**Electives . . . . . 16**

| | |
|---|---|
| Additional business courses | 5 |
| Approved CWE or credit for prior work experience | 12 |

**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 data processing 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 Cooperative Work Experience (CWE).

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

## DATA PROCESSING CURRICULUMS

### Associate of Science in Computer Programming

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

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

**Major Requirements . . . . . 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/1 | 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 Prin 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 Prin of Accounting II | 3 |

Spring

| | |
|---|---|
| 1.280 CWE Data Processing | 7 |

☐ Accounting Option (select one) . . (3)

| | |
|---|---|
| 2.532 Practical Accounting III | 3 |
| BA 202 Prin of Accounting III | 3 |

**90-91**

### Associate of Arts in Computer Science

**General Education Requirements . . . . . 45**

*Math 200, 201, 202 Calculus is required.*
*WR 122 English Composition is required.*

**Major Requirements . . . . . 27**

Fall - First Year

| | |
|---|---|
| BA 131 Intro to Info Systems | 4 |

Winter

| | |
|---|---|
| CS 211 Intro to Computer Science | 4 |

Spring

| | |
|---|---|
| CS 212 Tech for Computer Programming | 4 |
| CS 213 Intro to Symbolic Prog. FORTRAN | 4 |

Fall - Second Year

| | |
|---|---|
| MT 241 Elem Lin Algebra | 4 |

Winter

| | |
|---|---|
| CS 215 Comp. Organization | 4 |

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' Lang & UNIX | 4 |

**Electives . . . . . 10**

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

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(continued on next page)

## One-Year Certificate in Microcomputer Operations

**Major Requirements . . . . . 40**

Fall

| | |
|---|---|
| 2.512 Computer Terminal Operation | 2 |
| 2.513 Computer Terminal Skillbuilding | 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

| | |
|---|---|
| 2.533 Computerized Accounting | 3 |
| 2.555 Data Entry on Micro | 4 |
| 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 |
| BA 110A Using the PC-DOS | 1 |
| BA 110B Using the PC-Lotus | 1 |
| BA 110C Using the PC-DBASE III + | 1 |
| OA 201A Word Processing-Word Perfect | 1 |

**Electives . . . . . 3**

Suggested electives are BA 177 Payroll Accounting, 2.569 First Course in Computers, 2.652 Filing or OA 122 Typing II

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# OFFICE TECHNOLOGY

**Faculty**
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 Science degrees in Administrative Secretary (Alphabetic Shorthand, Gregg Shorthand or Word Processing Option), Legal Secretary and Medical Receptionist, or to one-year certificates in Office Specialist (Shorthand or Transcription Option) and Medical Transcriptionist.

## OFFICE TECHNOLOGY CURRICULUMS

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

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

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

**Major Requirements . . . . . 79**

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 |
| 2.588 Editing Skills for Info Processing | 3 |
| OA 121A Typing Keyboarding | 2 |
| OA 121B Basic Production Typing | 2 |
| OA 201A Word Processing-Word Perfect | 1 |
| WR 115 Intro to Writing (may be waived based on competency exam) | 3 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc (applies to general ed requirements) | 3 |
| 2.530 Practical Accounting I | 3 |
| 2.551 Office Communications | 3 |
| 2.652 Filing | 1 |
| OA 114 Alphabetic Shorthand | 3 |
| OA 122 Typing II | 3 |

Spring

| | |
|---|---|
| 2.527 Transcribing Machines I | 3 |
| 2.515 Business Math w/Calc (applies to general ed requirements) | 1 |
| 2.610 Clerical Office Procedures | 3 |
| 2.664 Word Processing - WordStar | 3 |
| OA 124 Typing III | 3 |
| OA 214 Applied Alphabetic Shorthand | 3 |

Fall - Second Year

| | |
|---|---|
| 2.528 Transcribing Machines II | 3 |
| 2.647 Administrative Management | 3 |
| 2.653 Automated Office Concepts | 3 |
| 2.666 IBM Displaywriter | 3 |
| SD 113 Human Relations in Business | 3 |

Winter

| | |
|---|---|
| 2.533 Computerized Accounting | 3 |
| 2.613 On-the-Job Training | 4 |
| OA 202A Advanced Word Perfect | 1 |

Spring

| | |
|---|---|
| 2.613 On-the-Job Training | 4 |
| 2.656 Word Processing Practicum | 2 |
| BA 206 Prin of Management | 3 |

95

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

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

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

**Major Requirements . . . . . 76**

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 |
| 2.588 Editing Skills for Info Processing | 3 |
| 2.652 Filing | 1 |
| OA 111 Stenography I | 3 |
| OA 121A Typing Keyboarding | 2 |
| OA 121B Basic Production Typing | 2 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc (applies to general ed requirements) | 3 |
| 2.551 Office Communications | 3 |
| OA 112 Stenography II | 3 |
| OA 122 Typing II | 3 |
| OA 201A Word Processing-Word Perfect | 1 |

Spring

| | |
|---|---|
| 2.515 Business Math w/Calc (applies to general ed requirements) | 1 |
| 2.527 Transcribing Machines I | 3 |
| 2.610 Clerical Office Procedures | 3 |
| 2.664 Word Processing - WordStar | 3 |
| OA 211 Applied Stenography I | 3 |
| OA 124 Typing III | 3 |

Fall - Second Year

| | |
|---|---|
| 2.528 Transcribing Machines II | 3 |
| 2.647 Administrative Management | 3 |
| 2.653 Automated Office Concepts | 3 |
| 2.656 Word Processing Practicum | 2 |

Winter

| | |
|---|---|
| 2.530 Practical Accounting I | 3 |
| 2.613 On-the-Job Training | 4 |
| OA 202A Advanced Word Perfect | 1 |
| OA 212 Applied Stenography II | 3 |

Spring

| | |
|---|---|
| 2.533 Computerized Accounting | 3 |
| 2.613 On-the-Job Training | 4 |
| 2.666 IBM Displaywriter | 3 |

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

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

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

**Major Requirements . . . . . 77**

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 |
| OA 121A Typing Keyboarding | 2 |
| OA 121B Basic Production Typing | 2 |
| WR 115 Intro to Writing (may be waived based on competency exam) | 3 |
| ☐ Shorthand Option (select one) . . . | (3) |
| OA 111 Steno I | 3 |
| OA 114 Alphabetic Shorthand | 3 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc (applies to general ed requirements) | 2 |
| 2.551 Office Communications | 3 |
| 2.588 Editing Skills for Info Processing | 3 |
| 2.652 Filing | 1 |
| OA 122 Typing II | 3 |
| OA 201A Word Processing-Word Perfect | 1 |
| ☐ Shorthand Option (select one) . . . | (3) |
| 2.518 Business Law | 3 |
| OA 112 Steno II | 3 |

Spring

| | |
|---|---|
| 2.515 Business Math w/Calc | 3 |
| 2.527 Transcribing Machines I | 3 |
| 2.610 Clerical Office Procedures | 3 |
| 2.664 Word Processing - Word Star | 3 |
| OA 124 Typing III | 3 |

Fall - Second Year

| | |
|---|---|
| 2.528 Transcribing Machines II | 3 |
| 2.530 Practical Accounting I | 3 |
| 2.647 Administrative Management | 3 |
| 2.656 Word Processing Practicum | 2 |

(continued on next page)

Winter

| | |
|---|---|
| 2.533 Computerized Accounting | 3 |
| 2.613 On-the-Job Training | 4 |
| 2.653 Automated Office Concepts | 3 |
| 2.666 IBM Displaywriter | 3 |
| OA 202A Advanced Word Perfect | 1 |

Spring

| | |
|---|---|
| 2.614 On-the-Job Training | 4 |
| SD 113 Human Relations in Business | 3 |

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## Associate of Science in Legal Secretary

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

See graduation requirements for Associate of Science degree

*2.515 Business Math with Calculators is required.*

**Major Requirements . . . . . 77**

Fall - First Year

| | |
|---|---|
| 1.131 Spelling (may be waived based on competency exam) | 3 |
| 2.500 Business Orientation | 1 |
| 2.515 Business Math w/Calc (applies to general ed requirements) | 2 |
| 2.518 Business Law | 3 |
| OA 122 Typing II | 3 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc (applies to general ed requirements) | 2 |
| 2.588 Editing Skills for Info Processing | 3 |
| 2.652 Filing | 1 |
| 2.661 Typing III-Legal | 3 |
| 2.675 Legal Term & Off Proc I | 3 |
| OA 201A Word Processing-Word Perfect | 1 |

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

| | |
|---|---|
| OA 111 Stenography I | 3 |
| OA 114 Alphabetic Shorthand | 3 |

Spring

| | |
|---|---|
| 2.527 Transcribing Machines I | 3 |
| 2.666 IBM Displaywriter | 3 |
| 2.676 Legal Term & Off Proc II | 3 |

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

| | |
|---|---|
| OA 112 Stenography II | 3 |
| OA 214 Applied Alphabetic Shorthand | 3 |

Fall - Second Year

| | |
|---|---|
| 2.551 Office Communications | 3 |
| 2.647 Administrative Management | 3 |
| 2.662 Legal Transcription | 3 |
| 2.664 Wordprocessing - Word Star | 3 |
| 2.677 Legal Term & Off Proc III | 3 |

Winter

| | |
|---|---|
| 2.530 Practical Accounting | 3 |
| 2.613 On-the-Job Training | 4 |
| 2.653 Automated Office Concepts | 3 |
| 2.656 Word Processing Practicum | 2 |
| OA 211 Applied Stenography *or* | 3 |
| Approved Elective (see list below) | |

Spring

| | |
|---|---|
| 2.613 On-the-Job Training | 4 |
| OA 212 Applied Stenography *or* | 3 |
| Approved Elective (see list below) | |

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Approved Electives:

| | |
|---|---|
| 2.512 Computer Terminal Operations | 2 |
| BA 177 Payroll Accounting | 3 |
| CJ 220 Intro to Substantive Law | 3 |
| CJ 222 Procedural Law | 3 |
| OA 123 Typing Skill Building | 3 |

## Associate of Science in Medical Receptionist

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

See graduation requirements for Associate of Science degree

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

**Major Requirements . . . . . 81**

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 w/Calc (applies to general ed requirements) | 3 |
| 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 Word Processing-Word Perfect | 1 |

Spring

| | |
|---|---|
| 2.506 Typing III Medical | 3 |
| 2.515 Business Math w/Calc (applies to general ed requirements) | 1 |
| 2.527 Transcribing Machines I | 3 |
| 2.670 Medical Office Procedures | 3 |
| 2.672 Intro to Medical Coding | 3 |
| 5.634 Medical Terminology III | 3 |

Fall - Second Year

| | |
|---|---|
| 2.524 Medical Transcription I | 3 |
| 2.551 Office Communications | 3 |
| 2.587 Intro to Word Star | 1 |
| 5.625 Clinical Office Procedures | 4 |
| OA 114 Alphabetic Shorthand | 3 |

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 |

Spring

| | |
|---|---|
| 2.535 Payroll Accounting | 3 |
| 2.613 On-the-Job Training | 4 |
| OA 202A Advanced Word Perfect | 1 |

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## One-Year Certificate in Medical Transcriptionist

**Major Requirements . . . . . 44**

Fall - First Year

| | |
|---|---|
| 1.131 Spelling (may be waived based on competency) | 3 |
| 2.500 Business Orientation | 1 |
| 2.588 Editing Skills for Info Processing | 3 |
| 5.630 Medical Teminology I | 3 |
| OA 122 Typing II | 3 |
| OA 201A Word Processing-Word Perfect | 1 |

Winter

| | |
|---|---|
| 2.506 Typing III Medical | 3 |
| 2.527 Transcribing Machines I | 3 |
| 2.671 Medical Law and Ethics | 2 |
| 5.633 Medical Terminology II | 3 |
| OA 202A Advanced Word Perfect | 1 |
| WR 115 Intro to Writing (may be waived based on competency exam) | 3 |

Spring

| | |
|---|---|
| 2.529 Applied Med Transcription | 5 |
| 2.587 Intro to Word Star | 1 |
| 2.672 Intro to Medical Coding | 3 |
| 5.634 Medical Terminology III | 3 |
| SD 113 Human Relations in Business | 3 |

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## One-year Certificate in Office Specialist/Shorthand Option

**Major Requirements . . . . . 46**

Fall - First Year

| | |
|---|---|
| 1.131 Spelling (may be waived based on competency exam) | 3 |
| 2.500 Business Orientation | 1 |
| 2.515 Business Math w/Calc | 2 |
| 2.652 Filing | 1 |
| 2.653 Automated Office Concepts | 3 |
| OA 201A Word Processing-Word Perfect | 1 |
| WR 115 Intro to Writing (may be waived based on competency exam) | 3 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc | 2 |
| 2.530 Practical Accounting I | 3 |
| 2.551 Office Communications | 3 |
| 2.588 Editing Skills for Info Processing | 3 |
| OA 122 Typing II | 3 |

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

| | |
|---|---|
| OA 111 Stenography I | 3 |
| OA 114 Alphabetic Shorthand | 3 |

Spring

| | |
|---|---|
| 2.527 Transcribing Machines I | 3 |
| 2.610 Clerical Office Procedures | 3 |
| 2.664 Word Processing - Word Star | 3 |
| OA 124 Typing III | 3 |

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

| | |
|---|---|
| OA 112 Stenography II | 3 |
| OA 214 Applied Alphabetic Shorthand | 3 |

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## One-year Certificate in Office Specialist/Transcription Option

**Major Requirements . . . . . 46**

Fall

| | |
|---|---|
| 1.131 Spelling (may be waived based on competency exam) | 3 |
| 2.500 Business Orientation | 1 |
| 2.652 Filing | 1 |
| OA 122 Typing II | 3 |
| OA 201A Word Processing-Word Perfect | 1 |
| WR 115 Intro to Writing (may be waived based on competency exam) | 3 |

Winter

| | |
|---|---|
| 2.515 Business Math w/Calc | 1 |
| 2.527 Transcribing Machines I | 3 |
| 2.530 Practical Accounting | 3 |
| 2.551 Office Communications | 3 |
| 2.588 Editing Skills for Info Processing | 3 |
| 2.653 Automated Office Concepts | 3 |
| OA 124 Typing III | 3 |

Spring

| | |
|---|---|
| 2.515 Business Math w/Calc | 3 |
| 2.528 Transcribing Machines II | 3 |
| 2.535 Payroll Accounting | 3 |
| 2.610 Clerical Office Procedures | 3 |
| 2.665 Word Processing - Word Star | 3 |

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# COMMUNITY EDUCATION DIVISION

**Director:** Mary Spilde, Linn County and 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, Brownsville, Philomath and Alsea. Classes are held in other areas when there are sufficient numbers of students and an available public or private facility.

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

# ALBANY CENTER

**Director:**
Dee Deems
967-6108

The Albany Center is located in Takena Hall on the main LBCC campus and serves the general populations of Albany, North Albany, Tangent and Shedd. Workshops and courses are offered for vocational upgrading, parent education and life enrichment in subjects such as conversational language, art, music, physical fitness, microcomputers, human services, home and family living and trade/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.

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

## Evening, Weekend Campus

The Albany Center is responsible for administration of main-campus evening classes and weekend classes and instructional programs. During the regular academic year, the Albany Center is open Monday through Thursday evenings until 10 pm and 9 am to 5 pm on Fridays. After 5 pm questions or problems concerning evening classes or instructional programs should be directed to the Albany Center.

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

### HOME ECONOMICS CURRICULUM

**General Education Requirements . . . . . 45**

**Major Requirements . . . . . 11**

| | |
|---|---|
| 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 | 3 |

**Requirements dependent upon area of concentration . . . . . 34**

**90**

# BENTON CENTER

**Director:**
Ann Crisp

**Asst. Director:**
Doris Nelson

**Faculty:**
Annamay Lundstrom, Jason Widmer

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

The center has many self-study, open-entry labs which allow students to start a program when they are ready and to make their own schedule. The center provides lower division transfer courses, vocational preparation programs, upgrading courses for local business and industries and adult self-improvement courses. Popular subject areas include practical accounting, 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:**
Susan Van Laere

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 com-

(continued on next page)

munity 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 the 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 Occupations Lab

**Faculty:**
Joyce Moreira

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

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

Courses offered apply towards the certificates and degrees offered by the 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 utilized for classes throughout the area. Although a variety of daytime classes are offered, the Lebanon Center schedule consists primarily of evening courses.

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

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

## Adult General Education

**Faculty:**
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 Occupations Lab

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

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 four classrooms, with several other locations throughout the area used for classes. Although a variety of daytime classes are offered, the Sweet Home Center schedule consists primarily of 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."

# TRAINING AND ECONOMIC DEVELOPMENT CENTER

**Director:**
Mary Spilde

The Training and Economic Development (T.E.D.) 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 center also works closely with LBCC's Cooperative Work Experience and Placement programs to help students involved in short-term training projects.

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

The TED Center is located in LBCC's College Center Building.

## Business and Industry Training and Assistance Programs

### Professional Development

The 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 such areas as retail sales, clerical, food service and word processing.

### Contracted Training

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.

### Small-Business Development Center

This center offers assistance specifically 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 business, 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 will be able to provide intensive help to a small number of businesses. This assistance will take the form of monthly meetings with instructors to attack specific problems and will help business owners maximize their capabilities to survive and/or expand.

The center also makes available a variety of reference materials.

The services offered through the Small Business Development Center are available to local farming families.

## Fire Science

**Advisor:**
Susan Wolff

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

## Parent Education

**Coordinator:**
Bobbie Weber

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

Classes also are offered to help individuals who work with children as foster parents, teacher aides or volunteers.

Strategies of parenting are addressed in discussion classes. Participatory classes also include a laboratory experience in which parents and children interact. Special interest classes address a specific area of work with children.

A certificate of completion in Parent Education is available to individuals who complete specific requirements. For further information, contact the Parent Education coordinator.

# CULINARY ARTS & HOSPITALITY SERVICES

**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. Freshmen 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.

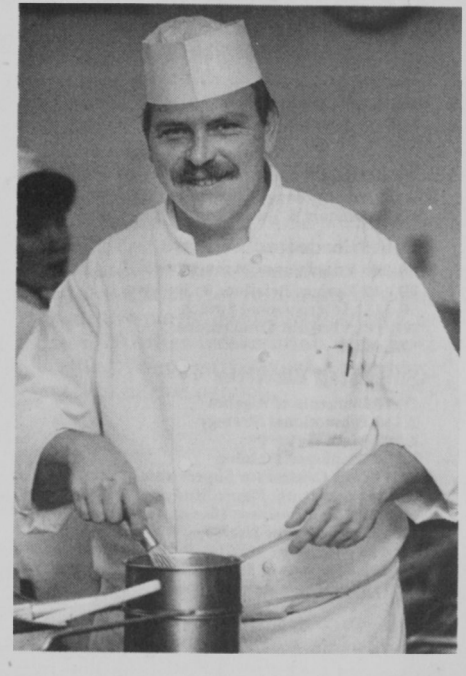
Students with advanced skills may enter the **Chef Training** second-year program upon department approval. This option combines advanced cooking techniques with theory and application courses in menu planning and kitchen management.

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 Option.** Students who wish to pursue a four-year degree in Hospitality Services can enroll at LBCC for two years and transfer to Oregon State University's Restaurant & Tourism Management program following their tenure at LBCC. Students wanting to pursue this option should arrange their classes with the Business Division.

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.**



# CULINARY ARTS AND HOSPITALITY SERVICES CURRICULUMS

## Associate of 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 Technics | 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 Foodservice 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 |
| 9.320* CPR | 1 |
| HE 251* First Aid | 3 |

## Second Year - Chef Training Option

**General Education Credits . . . . . 20**

### CAHS Required Courses

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 Credits . . . . . 75**

95

## Second Year - Conference and Resort Management

**General Education Credits . . . . . 20**

Fall

| | |
|---|---|
| 1.280** CWE: Hotel/Motel Mgmt. | 3 |
| 8.418 Beverage Operations & Services | 2 |
| 8.354*** Banquet & Buffet Lab E | 1 |

Winter

| | |
|---|---|
| 1.280** CWE: Hotel/Motel Mgmt. | 4 |
| 8.352 Banquet & Buffet Lab C | 1 |
| BA 160 Purchasing | 3 |

Spring

| | |
|---|---|
| 8.353 Banquet & Buffet Lab D | 1 |

### Other Required Courses

| | |
|---|---|
| 2.518 Business Law | 4 |
| 2.530 Practical Accounting I | 3 |
| BA 206 Prin of Management | 3 |
| BA 233 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 Educational Requirements
**May be taken any term following completion of First Year Requirements
***Optional

**Major Credits . . . . . 78**

**General Education Credits . . . . . 20**

98

## Second Year - Restaurant and Catering Management

**General Education Credits . . . . . 20**

Fall

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

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 233 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 | 3CS 100* Computer Literacy |
| 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

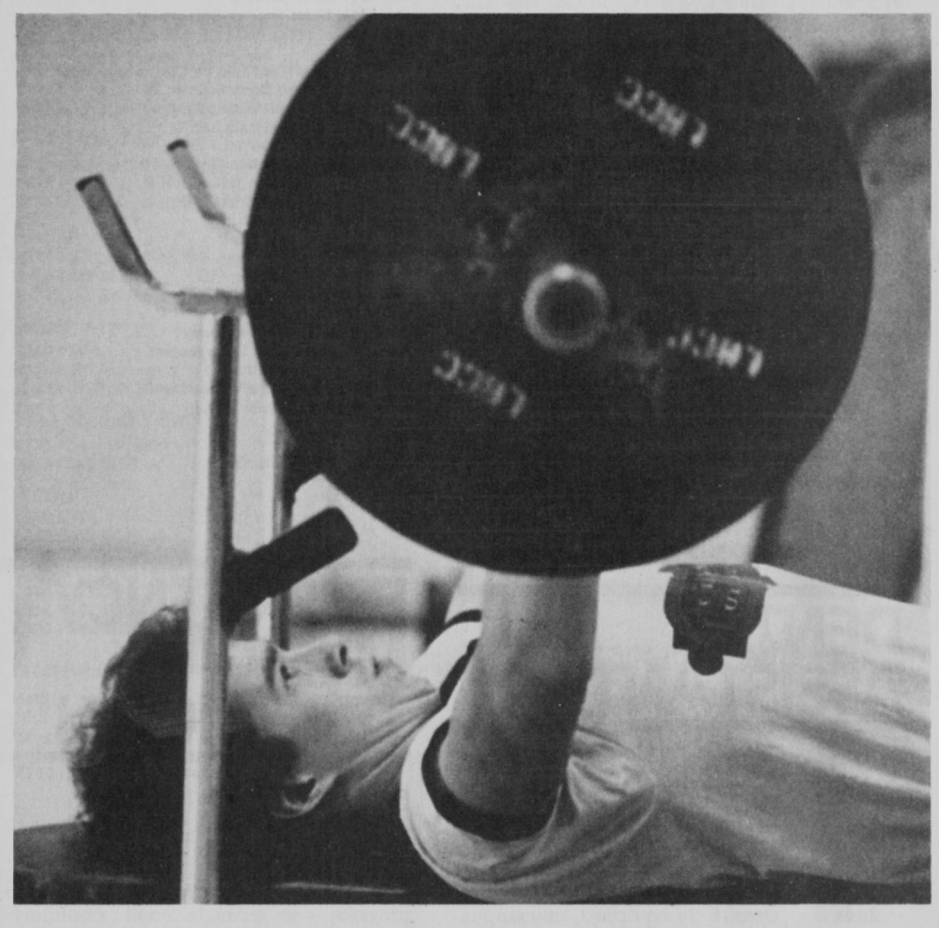
**Major Credits . . . . . 82**

**General Education Credits . . . . . 20**

102

# 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 and first aid also are a part of the division's curriculum.

The Health Occupations and Physical Education Division encourages students to make career choices based on interests, needs and abilities, without regard to the traditional roles of men, 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
Missy Black, Rachel Hagfeldt, Lyndall Johnson, Evon Wilson

The Associate Degree Nursing program is approved by the Oregon State Board of Nursing and fully accredited by the National League for Nursing. This two-year program is open to both men and women and is designed to train highly skilled bedside nurses (RN) oriented to patient care. Clinical facilities utilized are the hospitals, nursing homes and health agencies in Linn and Benton counties and the state hospital in Salem.

Following acceptance into the nursing program (See "Admission to Health Occupations Programs" in the "Entering the College" section of this catalog), the student is expected to achieve a minimum C grade in each required course, to be taken in the specified sequence. Permission to continue in the nursing program with an incomplete in any required course will be considered on an individual basis.

Proficiency in math and chemistry is required for admission to the ADN program. Students with a deficiency will be required to complete CH 101 or CH 104 Basic Chemistry and 1.110 Elements of Algebra as program prerequisites.

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

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

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

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

## ASSOCIATE DEGREE NURSING CURRICULUM

### Associate of Science in Nursing

**General Education Requirements . . 17-20**

*1.110 Elements of Algebra is required.*
*SP 111 Interpersonal Communication is required.*
*AN 103 Introduction to Anthropology or SO 204 General Sociology substitutes for the elective requirement.*

**Major Requirements . . . . . 86**

Fall - First Year

| | |
|---|---|
| 5.711 Nursing I | 6 |
| 5.732 Drug Administration | 2 |
| BI 221 Human Anatomy & Physiology | 4 |
| FN 225 Nutrition | 4 |

Winter

| | |
|---|---|
| 5.712 Nursing II | 8 |
| BI 222 Human Anatomy & Physiology | 4 |
| BI 234 Microbiology for Nurses | 4 |
| PY 201 General Psychology | 3 |

Spring

| | |
|---|---|
| 5.713 Nursing III | 9 |
| 5.726 Nursing in Contemporary Society I | 1 |
| BI 223 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 |

**Electives . . . . . 3**

| | |
|---|---|
| Additional humanities courses | 3 |
| | 106-109 |

# DENTAL ASSISTANT

**Faculty:** Patty Parker

The one-year Dental Assistant program is accredited by the American Dental Association and prepares students for chairside assisting, office laboratory activities and receptionist procedures. Clinical facilities include a modern, fully equipped, on-campus dental clinic and cooperating dental offices throughout Linn and Benton counties.

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

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

The Dental Assistant curriculum leads to a one-year certificate. Graduating students are eligible for State of Oregon certificates in Radiological Proficiency and Expanded Duties and are eligible to take the certification exam administered by the National Board of the American Dental Assistants Association.

## DENTAL ASSISTANT CURRICULUM

### One-Year Certificate in Dental Assisting

**Major Requirements . . . . . 62**

Fall

| | |
|---|---|
| 1.150 Techniques of Reading/Studying | 1 |
| 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 |

Summer

| | |
|---|---|
| 5.510 Office Practicum | 8 |
| HE 261 CPR | 1 |
| | 62 |

# EMERGENCY MEDICAL TECHNICIAN

**Faculty:**
Beverly Moore

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

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

Clinical facilities utilized are ambulance services, hospitals and community health

(continued on next page)

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.

## EMERGENCY MEDICAL TECHNICIAN CURRICULUM

### Certificate in Emergency Medical Technician

**Major Requirements . . . . . 65**

Fall - First Year

| | |
|---|---|
| 5.630 Medical Terminology | 3 |
| 9.313 EMT I | 8 |
| BI 221 Human Anatomy & Physiology | 4 |

Winter

| | |
|---|---|
| 2.671 Medical Law & Ethics | 2 |
| 9.314 EMT II | 7 |
| BI 222 Human Anatomy & Physiology | 4 |

Spring

| | |
|---|---|
| 1.280 CWE | 2 |
| 9.320 CPR Instructor | 1 |
| BI 223 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 | 10 |
| 9.322 Patient Assessment | 1 |

**Electives . . . . . 11**

| | |
|---|---|
| Math | 4 |
| PE | 1 |
| Speech | 3 |
| Business (Select one from BA 222, BA 224, SD 101, SD 107, SD 113) | 3 |
| | 76 |

# NURSING ASSISTANT / HOME HEALTH AID

**Faculty:**
Carol Metcalf

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. Classroom and on-the-job experience provide the student with the background needed to care for, under the supervision of a professional nurse, the moderately ill or convalescent patient.

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.

## NURSING ASSISTANT CURRICULUM

### Certificate in Nursing Assistant

**Major Requirements . . . . . 5**

| | | |
|---|---|---|
| 5.406 Nursing Assistant | 5 | |
| 5.400 Home Health Aid (optional) | 4 | 5 |

# PHYSICAL EDUCATION AND HEALTH

**Faculty:**
Verlund Kimpton, Department Chairman
David Bakley, Arlene Crosman,
Greg Hawk, Jean Irvin

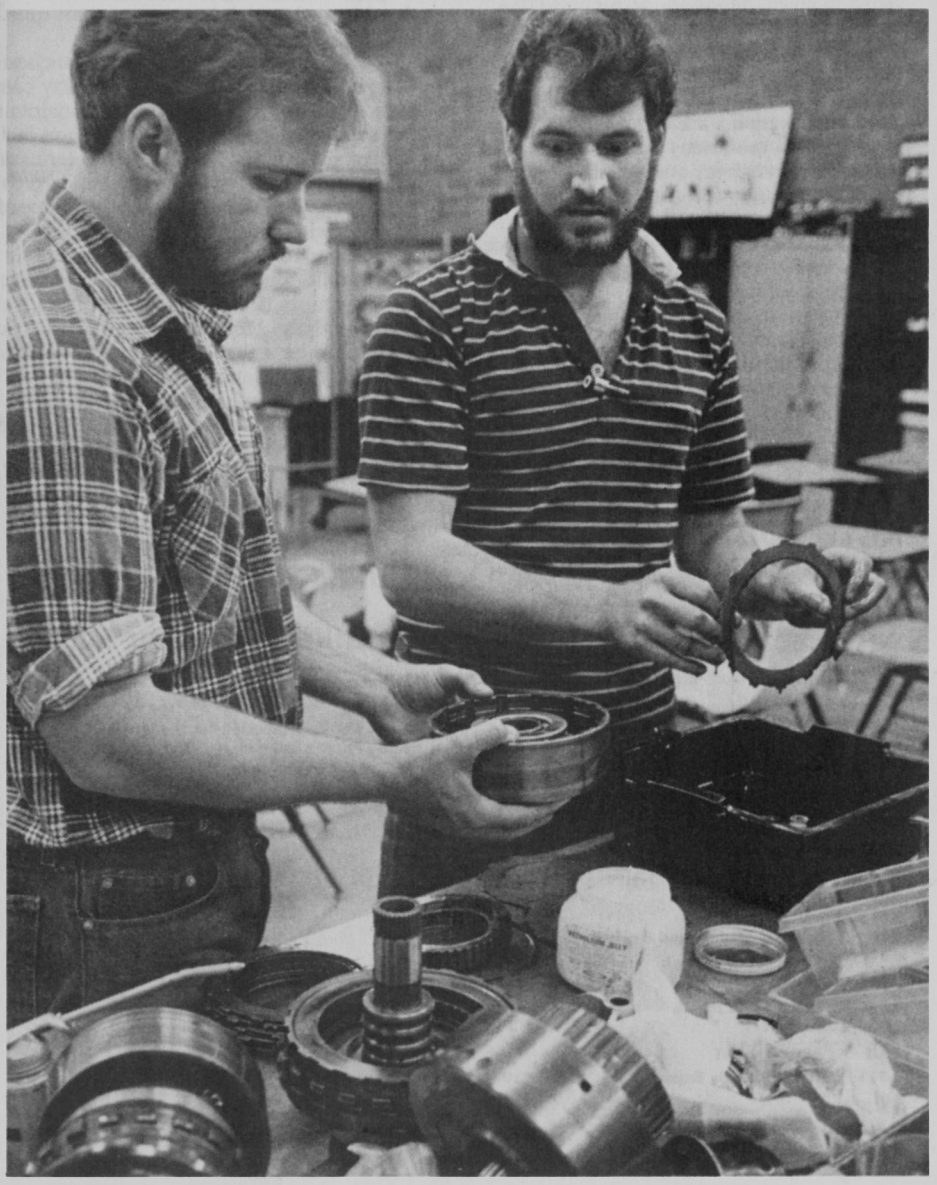
The Physical Education and Health Department provides a comprehensive program for students who want to gain knowledge about the value of preventive and corrective health practices and who want to participate in physical activities to gain and maintain physical fitness.

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, refrigeration/heating/air conditioning and welding.

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

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

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

# 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 weldor, manufacturing plant electrician, power lineman, industrial instrumentation and industrial millwright. Being an indentured apprentice is a condition for entering related training classes.

Upon completion of the required training program, the apprentice is eligible to take a state-required examination for journeyman standing. LBCC also offers the journeyman the opportunity to earn an associate degree in the industrial trades. The recognized journeyman will be granted 45 credits toward the industrial crafts and trades degree. An additional 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 curriculum leads to an Associate of Science degree.

## AUTO BODY REPAIR CURRICULUM

### Associate of Science in Auto Body Repair

**General Education Requirements . . . . . 20**

**See graduation requirements for Associate of Science degree**
*2.515 Business Math with Calculators, recommended for math requirement.*

**Major Requirements . . . . . 72**

Fall—First Year

| | |
|---|---|
| **3.511 Auto Body Basics** | 10 |
| **4.151 Welding I** | 2 |

Winter

| | |
|---|---|
| **3.512 Auto Body Procedures** | 10 |
| **4.108 Occupational Safety and Health** | 3 |
| **4.152 Welding II** | 2 |

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** | 3 |

Spring

| | |
|---|---|
| **3.516 Advanced Shop Procedures** | 10 |

**Electives . . . . . 4**

**3.195 Auto Body Skills or approved CWE**

**96**

# FARRIER SCIENCE

**Faculty:**
Larry Bewley

Dates for Farrier School terms are:
Fall Term: September 14 - December 17, 1987
Winter Term: January 4 - April 7, 1988
Spring Term: April 18 - July 21, 1988

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.

The program is located in Manchester Arena on the Oregon State University campus. The Farrier Science program maintains an active association with the Oregon State University Animal Science and Veterinarian 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 am to 4 pm 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.

The Farrier Science curriculum leads to a certificate.

## FARRIER SCIENCE CURRICULUM

### 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.

# MANU-FACTURING TECHNOLOGY

**Faculty:**
John Griffiths, Department Chairman
Douglas Chambers

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 curriculum leads to an Associate of Science degree.

## MANUFACTURING TECHNOLOGY CURRICULUM

### Associate of Science in Manufacturing Technology

**General Education Requirements . . . . . 20**

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

**Major Requirements . . . . . 80**

Fall — First Year

| | |
|---|---|
| **3.403 Manufacturing Technology I** | 8 |
| **3.409 Computer Integrated Mfg I** | 2 |
| **4.128 Drafting Fundamentals** | 4 |

Winter

| | |
|---|---|
| **3.404 Manufacturing Technology II** | 8 |
| **3.410 Computer Integrated Mfg II** | 2 |
| **4.108 Occupational Safety and Health** | 3 |

Spring

| | |
|---|---|
| **3.405 Manufacturing Technology III** | 8 |
| **3.411 Computer Integrated Mfg III** | 2 |
| **4.204 Math III** | 4 |

Fall — Second Year

| | |
|---|---|
| **3.406 Manufacturing Technology IV** | 8 |
| **3.412 Machine Tool Programming I** | 2 |
| **4.151 Welding I** | 2 |

Winter

| | |
|---|---|
| **3.407 Manufacturing Technology V** | 8 |
| **3.413 Machine Tool Programming II** | 2 |
| **3.446 Metals Investigation & Eval** | 2 |
| **4.152 Welding II** | 2 |

Spring

| | |
|---|---|
| **3.408 Manufacturing Technology VI** | 8 |
| **3.414 Machine Tool Programming III** | 2 |
| **MT 173B Microcomputers: Basic** | 3 |

**100**

# MECHANICAL TECHNOLOGY

**Faculty:**
David E. Carter, Department Chairman
Mike Henich, Allan Jackson, Carl Reeder

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

## Automotive Technology

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

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

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

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

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

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.

## AUTOMOTIVE TECHNOLOGY CURRICULUM

### Associate of Science in Automotive Technology

**General Education Requirements . . . . . 20**

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

**Major Requirements . . . . . 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 |
| 4.108 Occupational Safety and Health | 3 |
| 4.130 Machine Processes | 2 |
| 4.151 Welding I | 2 |
| SD 113 Human Relations in Business | 3 |

**Electives . . . . . 3**

3.301 Service & Repair Practices or approved CWE.

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## Heavy Equipment Mechanics/Diesel

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

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

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

In addition to the usual books and supplies, students should expect to spend about $500 for a personal set of diesel mechanic hand tools.

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

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

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 class. 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.

## HEAVY EQUIPMENT MECHANICS/DIESEL CURRICULUM

### Associate of Science in Heavy Equipment Mechanics/Diesel

**General Education Requirements . . . . . 20**

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

**Major Requirements . . . . . 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 |
| 4.108 Occupational Safety and Health | 3 |
| 4.151 Welding I | 2 |
| 4.152 Welding II | 2 |
| SD 113 Human Relations in Business | 3 |

**Technical Elective . . . . . 2**

| | |
|---|---|
| 3.301 Service & Repair Practices | 2 |
| Approved CWE | |

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# METALLURGY TECHNOLOGY

**Faculty:**
Seaton McLennan, Department Chairman

The Metallurgy Technology program offers a two-year Associate of 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 Nondestructive Testing will be offered (pending approval by the State Dept. of Education) with standards approved by the American Society of Nondestructive Testing (ASNT).

Students may choose to emphasize their work at LBCC in occupations involving the extraction, purification, treatment, fabrication, examination and testing of materials; the evaluation of industrial processes; or quality control. Students completing prescribed courses may qualify for a certificate of completion according to the American Society of Nondestructive Testing standards. In addition to ASNT, a student may take the Engineering Council for Professional Development (ECPD) examination to obtain the Engineering Technician Certificate.

Students wanting to enter the Metallurgical 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 Metallurgical 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.

## METALLURGY TECHNOLOGY CURRICULUM

### Associate of Science in Metallurgy Technology

**General Education Requirements . . . . . 20**

See graduation requirements for Associate of Science degree
*1.110 Elements of Algebra is required.*

**Major Requirements . . . . . 75**

| | |
|---|---|
| Fall — First Year | |
| 4.151 Welding I | 2 |
| 6.281 Non-Destructive Testing I | 3 |
| 6.293 Intro to Metallurgy | 4 |
| GS 104 Physical Science | 4 |
| Winter | |
| 3.445 Welding Metallurgy II | 4 |
| 4.100 Blueprint Reading | 2 |
| 6.276 Physical Metallurgy | 4 |
| 6.282 Non-Destructive Testing II | 3 |
| 6.298 Metallography I | 3 |
| Spring | |
| 4.108 Occupational Safety and Health | 3 |
| 4.120 Fund of Specification | 3 |
| 6.283 Non-Destructive Testing III | 3 |
| 6.299 Metallography II | 3 |
| Fall — Second Year | |
| 4.122 Strength of Materials | 3 |
| 4.161 Materials Testing I | 3 |
| CH 101 General Chemistry | 4 |
| Winter | |
| 4.162 Materials Testing II | 3 |
| 6.285 Ultrasonics | 4 |
| CH 102 General Chemistry | 4 |
| Spring | |
| 4.130 Machine Processes | 2 |
| 4.163 Materials Testing III | 3 |
| 6.284 Radiography | 4 |
| 6.294 Process Metallurgy | 4 |

**Technical Electives . . . . . 2**

| | |
|---|---|
| 3.442 Industrial Technical Society or approved CWE | 2 |
| | 97 |

# REFRIGERATION, HEATING AND AIR CONDITIONING

**Faculty:**
Jim Frank, Department Chairman
Jack Campbell

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 businesses.

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

Entering students should have good math and reading skills or be prepared to improve them 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.

The Refrigeration, Heating and Air Conditioning curriculum leads to an Associate of Science degree.

(continued on next page)

## REFRIGERATION, HEATING AND AIR CONDITIONING CURRICULUM

### Associate of Science in Refrigeration, Heating and Air Conditioning

**General Education Requirements . . . . . 20**

**See graduation requirements for Associate of Science Degree**
*4.202 Math II is required.*

**Major Requirements . . . . . 81**

Fall — First Year

| | |
|---|---|
| 3.293 Industrial Skills Lab | 1 |
| 3.580 Intro to Ref/Heat/AC | 6 |
| 4.100 Blueprint Reading | 2 |
| 3.552 Trade Electrical Components I | 3 |

Winter

| | |
|---|---|
| 3.583 Prin of Refrigeration | 6 |
| 3.584 Sheet Metal Basics | 4 |
| 4.151 Welding I | 2 |
| 3.553 Trade Electrical Components II | 3 |

Spring

| | |
|---|---|
| 3.585 Prin of Heating | 6 |
| 3.586 Mech Installation Procedures | 4 |

Fall — Second Year

| | |
|---|---|
| 3.527 Alternate Energy Sources | 4 |
| 3.587 Operation Prin of AC and Air Movement | 6 |
| 3.588 Pneumatic Controls | 4 |
| 4.204 Math III (may be used to fill general education requirement) | 4 |

Winter

| | |
|---|---|
| 3.589 Diagnosis, Service & Repair | 6 |
| 3.590 Control Applications | 4 |
| 4.108 Occupational Safety and Health | 3 |

Spring

| | |
|---|---|
| 3.591 Commercial & Industrial Refrigeration | 6 |
| 3.592 Systems Design | 4 |
| 6.221 Solar Energy | 3 |

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# 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 basic training in welding procedures, blueprint reading and layout. A two-year Associate of Science Degree is available, offering some general education classes as well as more specialized training in areas of layout, fabrication and welding repair. Students not completing the general education classes but continuing for a second year may qualify for a two-year Certificate of Completion in a specialized area of welding.

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 to become 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, a person should generally be in good physical condition and able to stand, stoop, kneel and bend. Good eyesight, especially depth perception, is necessary for a weldor.

Personal qualities desirable in a weldor include preciseness and creativity. As with most career fields, the ability to get along well with others is a valuable asset. The program requires that a student have the initiative to work on class projects independently.

The job outlook for welding is excellent, both locally and regionally. Wages vary greatly between union and non-union shops. A variety of local machine shops, repair shops and industrial firms hire weldors. Some students use the welding program as a basis for applying to apprenticeship programs such as millwright, pipefitter, steamfitter, iron worker and other related trades.

Welding is a rewarding career for a person who enjoys working with his/her hands. The beginning wage is good, opportunities for advancement exist with on-the-job training, and the weldor experiences a pride of workmanship working in this industrial field.

## WELDING TECHNOLOGY CURRICULUM

### Associate of Science in Welding Technology

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

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

**Major Requirements . . . . . 78**

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

| | |
|---|---|
| 4.108 Occupational Safety and Health | 3 |
| 4.257 Fab Repair III | 6 |

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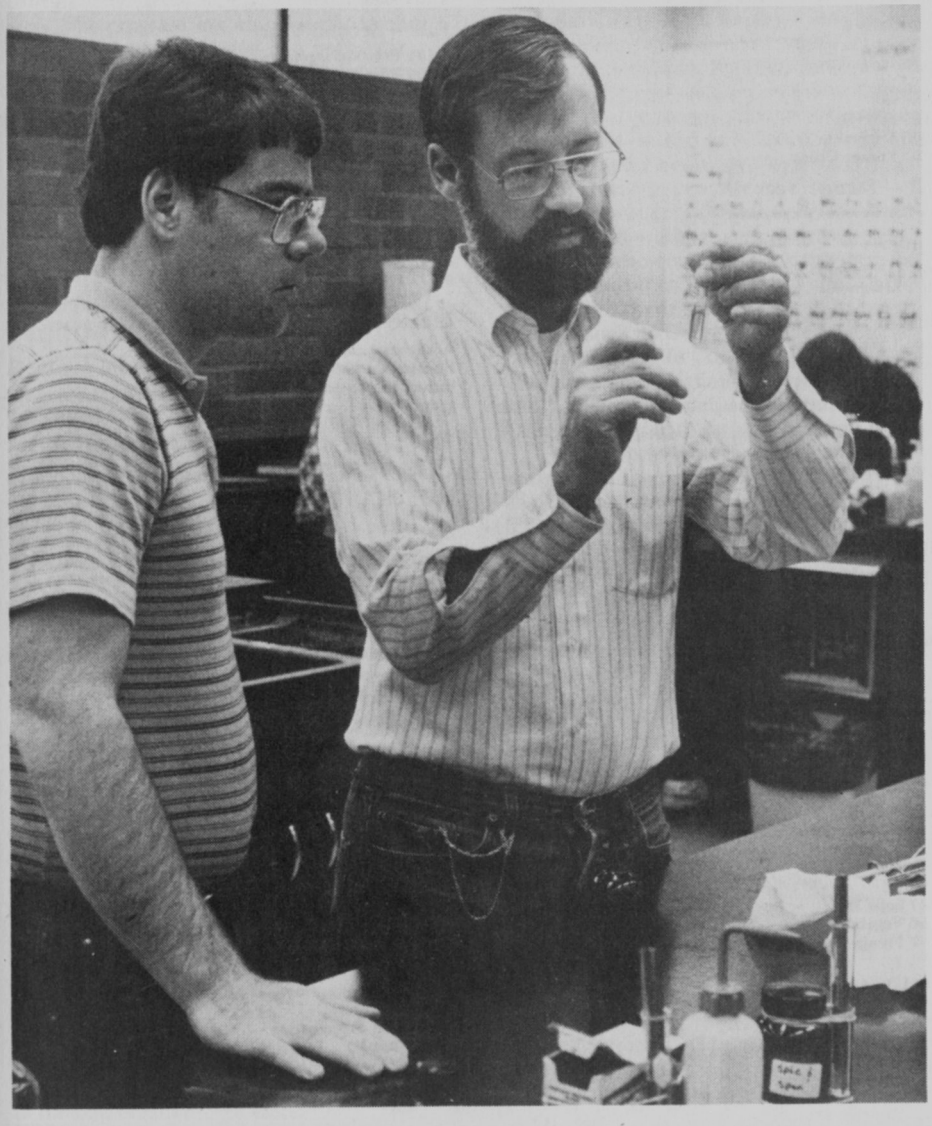
# SCIENCE & TECHNOLOGY DIVISION

**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 Science degrees or certificates in agriculture and the engineering technologies. Associate of Arts degrees are offered in transfer pre-engineering and laboratory science.

# AGRICULTURAL SCIENCES

**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 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 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.

## AGRICULTURE/ HORTICULTURE CURRICULUMS

### Associate of Science in Agriculture

**General Education Requirements . . . . . 20**
See graduation requirements for Associate of Science degree

**Major Requirements . . . . . 56**

Fall — First Year

| | |
|---|---|
| 8.100 Computers in Ag | 2 |
| 8.125 Soils I | 3 |
| 8.131 Pest Management | 3 |
| 8.165 Plant Science | 4 |

Winter

| | |
|---|---|
| 8.126 Soils II | 3 |
| 8.130 Ag Chemicals | 4 |
| 8.138 Irrigation | 3 |

Spring

| | |
|---|---|
| 8.127 Soils III | 3 |
| 8.166 Vegetable Tech | 3 |
| 8.167 Forage Crops | 3 |

Fall — Second Year

| | |
|---|---|
| CH 101 General Chemistry | 4 |

Winter

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

Spring

| | |
|---|---|
| 1.201 CWE Seminar | 1 |
| 1.280 CWE Agriculture | 11 |

**Electives . . . . . 14**

| | |
|---|---|
| Industrial courses (minimum 5 credits) | 5 |
| Business courses (minimum 9 credits) | 9 |
| Additional courses | 3 |

**90**

### One-year Certificate in Agriculture

**Major Requirements . . . . . 31**

Fall

| | |
|---|---|
| 8.100 Computers in Ag | 2 |
| 8.125 Soils I | 3 |
| 8.131 Pest Management | 3 |
| 8.165 Plant Science | 4 |

Winter

| | |
|---|---|
| 8.126 Soils II | 3 |
| 8.130 Ag Chemicals | 4 |
| 8.138 Irrigation | 3 |

Spring

| | |
|---|---|
| 8.127 Soils III | 3 |
| 8.166 Vegetable Tech | 3 |
| 8.167 Forage Crops | 3 |

**Electives . . . . . 5**

**36**

### Associate of Science in Horticulture

**General Education Requirements . . . . . 20**
See graduation requirements for Associate of Science degree

**Major Requirements . . . . . 61**

Fall — First Year

| | |
|---|---|
| 8.100 Computers in Ag | 2 |
| 8.125 Soils I | 3 |
| 8.140 Landscape Maintenance | 3 |
| 8.165 Plant Science | 4 |

Winter

| | |
|---|---|
| 8.126 Soils II | 3 |
| 8.135 Turf Management I | 3 |
| 8.138 Irrigation | 3 |

Spring

| | |
|---|---|
| 8.127 Soils III | 3 |
| 8.136 Turf Management II | 3 |
| 8.168 Plant ID | 3 |

Fall — Second Year

| | |
|---|---|
| 8.131 Pest Management | 3 |
| 8.169 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.

**90**

### One-year Certificate in Horticulture

**Major Requirements . . . . . 34**

Fall

| | |
|---|---|
| 8.100 Computers in Ag | 2 |
| 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 |

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 | 3 |

Spring

| | |
|---|---|
| 8.127 Soils III | 3 |
| 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 |

**Electives . . . . . 5**

**39**

# 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 Science degree.

## ANIMAL TECHNOLOGY CURRICULUM

### Associate of Science in Animal Technology

**General Education Requirements . . . . . 20**

**See graduation requirements for Associate of Science degree**

**Major Requirements . . . . . 53-55**

☐ 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

| | |
|---|---|
| **8.100 Computers in Ag** | 2 |
| **8.125 Soils I** | 3 |

Winter

| | |
|---|---|
| **8.126 Soils II** | 3 |
| **8.143 Anat & Phys of Farm Animals** | 3 |
| **8.150 Animal Genetics** | 4 |

Spring

| | |
|---|---|
| **8.167 Forage Crops** | 3 |
| **ANS 231 Livestock Evaluation** | 3 |

Fall — Second Year

☐ 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 |

**Electives . . . . . 15-17**

**Additional courses or approved CWE.**

**90**

# BIOLOGICAL SCIENCES

**Faculty:**
Stephen Lebsack, Department Chairman
Henrietta Chambers, Carolyn Lebsack, 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 pre-medicine, who complete their first two years at LBCC and then transfer to a four-year institution. These students enroll in required courses such as General 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, programming and supervision of other technicians.

Students expecting to graduate in two years should have a strong interest in design, mathematics, sciences and conceptualization. They should have sufficient 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 Science degree. An additional examination is required to become a Certified Engineering Technician.

**(continued on next page)**

## CIVIL ENGINEERING TECHNOLOGY CURRICULUM

### Associate of Science in Civil Engineering Technology

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

**See graduation requirements for Associate of Science degree**
*MT 101 College Algebra - Technical may substitute for math requirement.*
*SP 112 Fundamentals of Speech is required.*

**Major Requirements . . . . . 82**

Fall — First Year

| | |
|---|---|
| 4.128 Drafting Fundamentals | 4 |
| 6.214 Tech Physics | 4 |
| MT 101 College Algebra - Technical (substitutes for general ed requirement) | 4 |
| MT 173B Micro Computer Basic | 3 |

Winter

| | |
|---|---|
| 4.131 Drafting I | 4 |
| MT 102 Trigonometry - Technical | 4 |
| MT 174B Micro Computer Adv. Basic | 3 |

Spring

| | |
|---|---|
| 4.132 Drafting II | 4 |
| 4.133 Production Methods & Materials | 4 |
| 6.202 Statics | 3 |
| 6.216 Tech Physics | 4 |
| MT 106 Elementary Calculus - Technical | 4 |

Fall — Second Year

| | |
|---|---|
| 4.148 Practical Descriptive Geometry | 3 |
| 6.200 Surveying I | 3 |
| 6.203 Strength of Materials | 3 |
| 6.218 Intro to Sanitary Engineering | 2 |
| WR 227 Tech Report Writing | 3 |

Winter

| | |
|---|---|
| 6.205 Civil Drafting I | 3 |
| 6.235 Applied Hydraulics | 4 |
| 6.217 Intro to Soil Mechanics | 2 |

Spring

| | |
|---|---|
| 4.144 Computer Assisted Drafting | 4 |
| 6.201 Surveying II | 2 |
| 6.206 Civil Drafting | 3 |
| 6.210 Engineering Design Project | 3 |
| 6.211 Prin of Road Design | 2 |

98-102

# 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 $100.

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

## DRAFTING TECHNOLOGY CURRICULUM

### Associate of Science in Drafting Technology

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

**See graduation requirements for Associate of Science degree**
*6.550 Practical Geometry may substitute for math requirement.*

**Major Requirements . . . . . 74**

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 Microcomputers: BASIC | 3 |
| WR 227 Tech Report Writing | 3 |

Fall — Second Year

| | |
|---|---|
| 4.141 Advanced Drafting I | 4 |
| 4.148 Practical Descriptive Geometry | 3 |
| 4.310 Introductory Physics | 3 |
| 6.200 Surveying I | 3 |

Winter

| | |
|---|---|
| 4.123 Illustration | 4 |
| 4.142 Advanced Drafting II | 4 |
| 4.149 Applied Mechanics | 3 |
| 6.205 Civil Drafting I | 3 |

Spring

| | |
|---|---|
| 4.143 Advanced Drafting III | 4 |
| 4.144 Computer-Assisted Drafting | 4 |
| 4.150 Drafting Design Project | 2 |
| 6.206 Civil Drafting II | 3 |

90-94

# ELECTRONICS ENGINEERING TECHNOLOGY

**Faculty:**
Kent Hansen, Department Chairman
Alex March, 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 and GE Medical Systems.

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 Science degree.

**(continued on next page)**

## ELECTRONICS ENGINEERING TECHNOLOGY CURRICULUM

### Associate of Science in Electronics Engineering Technology

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

**See graduation requirements for Associate of Science degree**
*1.103 Occupational Speech is required.*
*MT 101 College Algebra - Technical substitutes for math requirement.*

**Major Requirements . . . . . 93**

Fall — First Year

| | |
|---|---|
| 1.150 Technical Reading Skills | 1 |
| 6.214 Tech Physics | 4 |
| 6.316 Intro to Electronics | 1 |
| 6.320 Direct Current | 6 |
| 6.343 Electronics Lab Skills I | 1 |
| MT 101 College Algebra - Technical (substitutes for general ed requirement) | 4 |

Winter

| | |
|---|---|
| 1.134 Voc Study Skills | 1 |
| 6.215 Tech Physics | 4 |
| 6.321 Alternating Current | 6 |
| 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

| | |
|---|---|
| 6.223 Analog Circuits I | 5 |
| 6.346 Digital Circuits I | 5 |
| MT 173B Microcomputers - BASIC | 3 |

Winter

| | |
|---|---|
| 6.324 Analog Circuits II | 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 | 5 |
| 6.338 Tech Electricity III | 3 |
| 6.349 Microprocessors | 5 |
| WR 227 Tech Report Writing | 3 |
| | 109-113 |

# 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.

## ENGINEERING TRANSFER CURRICULUM

### Associate of Arts in Pre-Engineering

**Major Requirements . . . . . 102***

Fall - First Year

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

Winter - First Year

| | |
|---|---|
| CH 202 General Chemistry | 4 |
| EC 202 Principles of Economics | 3 |
| GE 102 Engineering Orientation | 2 |
| MT 201 Calculus | 4 |
| PE Activity Course | 1 |
| SP 112 Fundamentals of Speech | 3 |

Spring - First Year

| | |
|---|---|
| CH 203 General Chemistry | 4 |
| EC 203 Principles of Economics | 3 |
| GE 103 Engineering Orientation | 2 |
| GE 115 Engineering Graphics | 3 |
| MT 202 Calculus | 4 |
| PE Activity Course | 1 |

Fall - Second Year

| | |
|---|---|
| EN 104 Intro to Literature | 3 |
| GE 211 Statics | 4 |
| MT 203 Calculus | 4 |
| P 211 General Physics | 5 |

Winter - Second Year

| | |
|---|---|
| EN 105 Intro to Literature | 3 |
| GE 212 Dynamics | 4 |
| GE 221 Electric Circuit Fund | 3 |
| HE 252 First Aid | 3 |
| P 212 General Physics | 5 |

Spring - Second Year

| | |
|---|---|
| EN 106 Intro to Literature | 3 |
| MT 221 Applied Diff. Equations | 4 |
| P 213 General Physics | 5 |
| WR 227 Technical Report Writing | 3 |
| | 102 |

***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 102 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**
**GE 213 Strength of Materials**
**GE 222 Electrical Control Fundamentals**
**MT 204 Vector Calculus**
**MT 214 Statistics for Scientists and Engineers**
**MT 233 Introduction to Numerical Computation**
**MT 241 Elementary Linear Algebra**

# 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 a two-year program in laboratory science and provides physical science instruction for other occupational programs and for lower division transfer students. The department has excellent teaching laboratories and lecture rooms plus an analytical instrument laboratory. Courses are offered in physics, chemistry, astronomy and general science subjects.

(continued on next page)

# 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.

## LABORATORY SCIENCE CURRICULUM

### Associate of Arts in Laboratory Science

**General Education Requirements . . . . . 45**

**See graduation requirements for Associate of Arts degree**
**P 201, 202, 203, required for Math/Science Group requirements**

**Major Requirements . . . . . 52**

Fall - First Year
**CH 104 General Chemistry** 5

Winter
**CH 105 General Chemistry** 5

Spring
**CH 106 General Chemistry** 5

Fall - Second Year
**MT 100 Intermediate Algebra** 4
**CH 234 Quantitative Analysis** 4

☐ Biological Sciences Option (select one) . . . . . (4)

*Option selected should be taken for entire three-term sequence.*
**BO 201 General Botany** 4
**ZO 201 General Zoology** 4

Winter
**MT 101 College Algebra** 4
**MT 173B Microcomputers—BASIC** 3

☐ Biological Sciences Option (select one) . . . . . (4)
**BO 202 General Botany** 4
**ZO 202 General Zoology** 4

Spring
**MT 102 Trigonometry** 4
**CWE** 6

☐ Biological Sciences Option (select one) . . . . . (4)
**BO 203 General Botany** 4
**ZO 203 General Zoology** 4

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# WATER/ WASTEWATER TECHNOLOGY

**Faculty:**
John W Carnegie, Department Chairman
Ronald M Sharman, Holly Mason

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 quarters. Students completing the one-year program may choose to transfer credits to the two-year Associate of Science degree program.

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

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

Students in both the one-year certificate program and the two-year associate degree program must complete an in-plant practicum during the summer quarter. This may require relocation of the student for one term. There is no guarantee of funding for students during this period. 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.

The Water/Wastewater Technology curriculums lead to an Associate of Science degree or a one-year certificate.

## WATER/WASTEWATER CURRICULUMS

### Associate of Science in Water/Wastewater Technology

**General Education Requirements . . . . . 10**

**See graduation requirements for Associate of Science degree**
*MT 102 Trigonometry - Technical substitutes for math requirement.*
*HE 112 First Aid: Multi-Media is required; must be completed during first year.*

**Major Requirements . . . . . 84**

Fall - First Year
**6.190 Intro to W/WW Operations** 7
**6.193 Intro to Aquatic Chem & Micro** 4

Winter
**4.100 Blueprint Reading** 2
**6.180 W/WW Mechanics I** 2
**6.191 Water Systems Operations** 7
**6.194 Basic Aquatic Chem & Micro** 4

Spring
**6.181 W/WW Mechanics II** 2
**6.192 Primary & Secondary Treatment** 7
**6.195 Intermediate Aquatic Chem & Micro** 4

Summer
**6.168 In-Plant Practicum** 12

Fall - Second Year
**6.154 Advanced Process Control** 3
**6.164 Water Sources** 4
**6.169 Map Reading** 1
**6.182 W/WW Mechanics III** 2

Winter
**6.166 Water Purification Systems** 4
**6.197 Solids Handling** 3
**6.235 Applied Hydraulics** 4
**MT 102 Trigonometry - Tech** 4

Spring
**6.165 Water Distribution** 4
**6.198 Instrumentation** 4

**Electives . . . . . 7**

**Three (3) credits to be selected from business management or supervision courses and four (4) credits from an approved laboratory science course. (These electives satisfy Gen. Ed. Elective requirements.)**

101

### One-year Certificate in Water/Wastewater Plant Operations

**Major Requirements . . . . . 63**

Fall
**4.202 Math II** 4
**6.190 Intro to W/WW 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/WW Mechanics I** 2
**6.191 Water Systems Operations** 7
**6.194 Basic Aquatic Chem & Micro** 4
**4.204 Math III** 4

Spring
**6.181 W/WW Mechanics II** 2
**6.192 Primary & Secondary Treatment** 7
**6.195 Intermediate Aquatic Chem & Micro** 4
**HE 112 First Aid: Multi-Media** 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. Many testing services, such as the General Education Development (GED) test and the College Level Exam Program (CLEP) test, also are provided.

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

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

# DEVELOPMENTAL EDUCATION CENTER

**Faculty:**
Laurel Bible, Katherine Clark, Carroll Flaherty, Carolyn Gardner, Russell Gregory, Paula Grigsby, Candy Johnson, Charles Mann, Carolyn Miller, 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 student services. These developmental or growth programs provide for:

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

The Developmental 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 that a student may begin or end studies at any time during the quarter.

Students may decide for themselves to improve skills in the Developmental 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 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.

## CITIZENSHIP PREPARATION

Individualized study programs are available for residents who want to become naturalized United States citizens. Additional information is available from the General Educational Development (GED) instructor in the Student Development Division office or the local Community Education center.

## ENGLISH AS A SECOND LANGUAGE (ESL)

For adults whose first or native language is not English, instruction is available in reading, writing and speaking the English language. The course emphasizes vocational and "survival" skills in using and understanding English.

Instruction is provided at beginning, intermediate and advanced levels. The beginning level instruction is free. A tuition charge may be assessed for advanced levels.

## GENERAL EDUCATIONAL 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.

## DISABLED STUDENT SERVICES

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

Whenever possible, students are enrolled in regular vocational classes. When necessary, specially designed, individual training programs are developed using community resources and community training sites. Some special classes available are Living Skills and Sign Language. Students in the program must meet particular enrollment requirements. Specific information is available at the Disabled Student Services office.

# GUIDANCE SERVICES

**Faculty:**
Rosemary Bennett, Steve Hornbeck, 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 DESCRIPTION LIST

# Numerical Courses

Courses marked with the following symbols will fulfill General Education Requirements:

◆ Computer Competency
◀ Humanities/Arts
● Math/Science
■ Social Sciences

**0.611 WORD PROBLEMS**
(2 class hrs/wk 1 cr)
This course deals exclusively with the major types of word problems found in algebra. Many exercises involving 10 types of problems are explained in the text and performed by the student. Note: 5-week class.

**0.901 EFFECTIVE PARENTING OF TEENS**
(2 class hrs/wk 1 cr)
Designed to facilitate improvement of relationships between teenagers and their parents. Emphasizes effective communication skills, mutual problem solving and assuming responsible behavior. Recognition is given to the strength families have and to means of increasing personal growth for both parents and adolescents. Note: Appropriate for any interested adults. Eight-week course.

**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
Preparation for 2.515 Business Mathematics. Includes a review of fundamental operations with whole numbers, fractions, decimals and percentages. Note: A minimum competency level is required to pass this course.

●**1.110 ELEMENTS OF ALGEBRA**
(4 class hrs/wk 1-4 cr) F/W/Sp/Su
Development of the basic operations with algebraic expressions and methods for solving linear equations. Introduces rational expressions, factoring, graphing and solving quadratic equations by factoring. Designed for the student who has no previous algebra or needs a review of elementary algebra. Note: A minimum competency level is required to pass this course.

**1.122 LEARNING STRATEGIES**
(2-3 class hrs/wk 0-2 cr) F/W/Sp
Course is designed to teach "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
Class designed to prepare students with the academic strategies required to complete their course of study successfully.

**1.126 DEVELOPMENTAL ENGLISH INDIVIDUALIZED**
(3 class hrs/wk 0-3 cr) F/W/Sp
Sentence structure, usage, punctuation, grammar and improvement of writing skills are taught on a one-to-one basis. Diagnosis of existing skills indicates where a student begins within the program. Students progress at their own pace through the program, demonstrating mastery of one skill before beginning the next.

**1.128 READING SKILLS**
(3 class hrs/wk 3 cr) F/W/Sp/Su
Individualized instruction in the reading skills of comprehension, rate and vocabulary. Individual diagnosis provides placement at the appropriate instructional level and instruction stresses the improvement of those reading skills most closely related to the student's academic and career plans. Note: Course may be repeated for up to 9 credits.

**1.129 SPEED AND POWER READING**
(3 class hrs/wk 1-3 cr) F/W/Sp
Course is for students who want to improve their reading rate and their reading ability to analyze, evaluate, and critique literary materials ranging in difficulty from average to complex.

**1.130 DEVELOPMENTAL ENGLISH**
(3 class hrs/wk 3 cr) F/W/Sp
Designed to instruct students in the basic rules and practices in grammar, sentence structure, punctuation and general usage in writing. Special attention is given to individual differences and difficulties and the application of course work to the student's writing.

**1.131 SPELLING**
(3 class hrs/wk 3 cr) F/W/Sp/Su
Spelling skill is developed through word structure, word attack skills and pronunciation. Proofreading and dictionary usage are emphasized for use in the student's writing.

**1.132 SPELLING INDIVIDUALIZED**
(3 class hrs/wk 3 cr) F/W/Sp
Improvement of spelling through studying spelling principles in primarily independent manner. Instruction is based on diagnosis of the student's existing spelling skills. Modules allow for each student's different needs and learning speeds.

**1.134 STUDY SKILLS: VOCATIONAL**
(2-6 class hrs/wk 0-3 cr) F/W/Sp
Individualized instruction to develop specific skills in various vocational programs. The instruction will be supplemental to the regular course offerings and will not substitute for that instruction. Diagnosis of deficiencies and interests of students determines level of instruction.

**1.135 DEVELOPMENTAL READING**
(3 class hrs/wk 3 cr) F/W/Sp
Course designed to improve skills in comprehension, reading rate and vocabulary. Reading skills are presented in individual and group activities. Diagnosis of the individual's reading skill provides placement for the individual activities. Note: Course may be repeated for up to 9 non-transfer credits.

**1.150 TECHNIQUES OF READING/STUDYING**
(3 class hrs/wk 1-3 cr) F/W/Sp
Study skills and reading skills necessary to meet academic requirements are taught, with emphasis on the needs of the class. Reading skills of comprehension, rate and vocabulary development are individualized to each student.

**1.156 ENGLISH AS SECOND LANGUAGE-BEGINNING**
(6 class hrs/wk 3 cr) F/W/Sp
Designed for non-native speakers. Class gives practice in reading, writing and speaking English. Emphasizes vocabulary, idioms and practical classroom skills. Prerequisite: Instructor approval.

**1.157 ENGLISH AS A SECOND LANGUAGE ADVANCED**
(6 class hrs/wk 3 cr) F/W/Sp
The English as a Second Language-Advanced course is designed for the nonnative speaker of English who has acquired some independent language control but who has not yet reached the creative level of English language proficiency. Listening, speaking, reading, and writing skills are carefully integrated and include practice and exercises in vocabulary, grammar, structure and organization. Prerequisite: STEL Beginning Level 30 or above, PCC Listening Test 20 or above.

**1.158 STUDY STRATEGIES: METALLURGY**
(1 class hrs/wk 1 cr) F/W/Sp
Course designed to teach study strategies to students enrolled in metallurgy courses. Acquaints students with techniques, principles and rules for learning the content presented in the metallurgy sequence. Course is divided into 5 areas: Study Skills, Reading Skills, Listening Skills, Writing Skills and Thinking Skills. Prerequisite: Students must be enrolled in the LBCC Metallurgy Program.

**1.201 CWE SEMINAR**
(1 class hrs/wk 1 cr) F/W/Sp/Su
Field Experience Seminar is a course designed to provide opportunity for students involved in Supervised Field 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, basic economics. This course is required for all students enrolled in Supervised Field Experience and is open to any other students who want to participate.

**1.204 CAREER ORIENTATION METALLURGY**
(3 class hrs/wk 1 cr)
An introduction to 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.

**2.500 BUSINESS ORIENTATION**
(2 class hrs/wk 1 cr) F/W
Introduction to various career opportunities in the business field through films, speakers and field trips. Note: 5-week course.

**2.506 TYPING III: MEDICAL**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Introduction to preparation of medical forms and projects, as well as continued drills for speed and accuracy. Prerequisite: OA 122 Typing II or equivalent.

**◆2.512 COMPUTER TERMINAL OPERATION**
(5 class hrs/wk 2 cr) F/Sp
Hands-on instruction on a micro computer terminal. Students learn basic operating features and enter a series of business projects, including a merchandise inventory, bank reconciliation, payroll, accounts receivable, accounts payable, general ledger and BASIC program. Some speed and accuracy building on alphabetic copy, 10-key numeric pad and top-row numbers. Note: Five-week course. Prequisite: Typing skills, minimum 25 wpm by touch on alphabetic keyboard.

**2.513 COMPUTER TERMINAL SKILLBUILDING**
(5 class hrs/wk 2 cr) F/W/Sp/Su
Course builds speed and accuracy on alphabetic keys and 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 course; course may be repeated for credit. Prerequisite: OA 121A Typing I Keyboarding or minimum 20 wpm by touch.

**●2.515 BUSINESS MATH WITH CALCULATORS**
(5 class hrs/wk 1-5 cr) F/W/Sp/Su
Course provides the opportunity to learn operation of the electronic calculator. This knowledge will be applied to business mathematics in areas such as payroll, banking invoices, simple interest, compound interest, etc. Students advance at their own rate. Prerequisite: 1.109 Pre-Business Math or equivalent.

**2.516 INTRODUCTION TO BUSINESS STATISTICS**
(4 class hrs/wk 4 cr)
Introduction to methods and terminology used in statistical reports generated in business and industry. Topics include descriptive statistics; probability; binomial, normal, "t-" and chi-square distributions; linear regression and correlation; and hypothesis testing. Prerequisite: 1.110 Elements of Algebra.

**2.517 DATA ENTRY CONCEPTS**
(3 class hrs/wk 3 cr) Sp
Course covers concepts involved in data entry on a computer. Topics include hardware, software, ergonomics, spreadsheets, data base management systems, word processing concepts and selecting appropriate software.

**2.518 BUSINESS LAW**
(3 class hrs/wk 3 cr) F/W
Introduction to study of law and business, legal reasoning and the evolutionary process of law, the legal environment of business and principles of contract law. Emphasizes the study of business agreements, their information, operation, performance and discharge.

**◆2.519 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. Jobs are simulations of data entry work typical for several different types of companies. 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 Computer Terminal Operation, 2.555 Data Entry on a Microcomputer.

**2.524 MEDICAL TRANSCRIPTION I**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Introductory course in transcription of medical terminology in word lists and paragraphs, as well as preparation of basic medical forms. Prerequisite: 2.527 Transcribing Machines I; 5.630 Medical Terminology I.

**2.525 MEDICAL TRANSCRIPTION II**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Further development of skill in preparation of medical forms and records from dictated material. Prerequisite: 2.524 Medical Transcription I; 5.633 Medical Terminology II.

**2.527 TRANSCRIBING MACHINES I**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Course provides opportunity to develop an entry-level job skill on the transcribing machine. Prerequisite: OA 122 Typing II or equivalent; WR115 Introduction to Writing or 2.588 Editing Skills for Information Processing; 1.131 Spelling or equivalent.

**2.528 TRANSCRIBING MACHINES II**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Course further develops the student's skill on the transcribing machine. Includes projects from a variety of business situations. Prerequisite: 2.527 Transcribing Machines I.

**2.529 APPLIED MEDICAL TRANSCRIPTION**
(10 class hrs/wk 1-5 cr) F/W/Sp/Su
Introduction to transcription of medical terminology in word lists and paragraphs, followed by preparation of medical forms and records from dictated material. Prerequisite: 2.527 Transcribing Machines I; 5.633 Medical Terminology II.

**2.530 PRACTICAL ACCOUNTING I**
(5 class hrs/wk 3 cr) F/W/Sp/Su
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
A continuation of 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, including entries requiring analysis and interpretation, unearned and accrued items, depreciation of assets, the voucher system, payroll records, property sales and taxes. Emphasizes accounting for a corporation. Prerequisite: 2.531 Practical Accounting II.

**◆2.533 COMPUTERIZED ACCOUNTING**
(3 class hrs/wk 3 cr) F/W/Sp
Hands-on computer experience in accounting applications, general ledger, accounts receivable, accounts payable, payroll and financial statements.

**2.535 PAYROLL ACCOUNTING**
(3 class hrs/wk 3 cr) F/W/Sp
Course 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) W/Sp
Course shows students how good communication works for the individual on a day-to-day basis. Stresses written communications, oral communications and listening skills. Prerequisite: WR 115 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 3 cr) F/W/Sp
Students learn to use 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
Course 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

Introduction to 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

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

**◆2.573 DATA PROCESSING III: PL/I**

(12 class hrs/wk 6 cr) Sp

Further study of the IBM 360/370 assembler language. Study of the high-level structured language of PL/I and the use of VSAM (Virtual Storage Access Methods) files for business application programming included. Prerequisite: 2.572 Data Processing II: Advanced Logic or instructor approval.

**◆2.581 DP IV: SYSTEMS ANALYSIS & DESIGN**

(12 class hrs/wk 6 cr) F

Computer programming students continue 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

This block 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. Prerequisite: 2.581 Data Processing IV: Systems Analysis & Design.

**2.585 DATA PROCESSING MANAGEMENT DPMA PRACT.**

(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 of Computer Programming or Computer Science.

**◆2.587 INTRODUCTION TO WORD STAR**

(4 class hrs/wk 1 cr) F/W/Sp/Su

Basic introduction to Word Star, 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.

**2.588 EDITING SKILLS: INFORMATION PROCESSING**

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

A course designed to help students improve their written communication skills. Editing and proofreading procedures are emphasized. Additional work provided in the area of punctuation, capitalization, numbers, abbreviations and word mastery. Prerequisite: WR 115 Introduction to Writing.

**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

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

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

**2.597 PROFESSIONAL ACCOUNTING III**

(3 class hrs/wk 3 cr) Sp

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

**2.610 CLERICAL OFFICE PROCEDURES**

(6 class hrs/wk 3 cr) Sp

Course includes instruction in telephone techniques, job interviewing, communications and office procedures. Students do projects integrating all office skills and techniques. Prerequisite: 2.551 Office Communications; OA 122 Typing II; WR 115 Introduction to Writing.

**2.613 ON-THE-JOB TRAINING FOR SECRETARIES**
(3-36 class hrs/wk 1-12 cr) F/W/Sp/Su
Supervised employment in a secretarial field, primarily for second-year students, to provide practical experience related to the student's major field of interest. Prerequisite: 2.0 GPA; Business Division approval.

**2.644 CIVIL SERVICE PREPARATION**
(5 class hrs/wk 1 cr)
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
Course includes office managerial topics, such as office layout and equipment, records management and selection and supervision of office personnel.

**2.652 FILING**
(5 class hrs/wk 1 cr) F/W/Sp/Su
Introduction to basic principles and information for efficient performance in managing and using records in the office. Note: five-week course.

**2.653 AUTOMATED OFFICE CONCEPTS**
(3 class hrs/wk 3 cr) F/W
Terminology and concepts concerning the automated office are introduced and discussed, such as word processing, automated records management (micrographics), microcomputers and reprographics.

**◆2.656 WORD PROCESSING PRACTICUM**
(4 class hrs/wk 2 cr) F/W/Sp/Su
Course 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 typing tasks for a variety of local businesses. Prerequisite: 2.666 IBM Displaywriter.

**2.657 WHEELWRITER 5 TYPEWRITER**
(4 class hrs/wk 1 cr) F/W/Sp/Su
Five-week course designed to train students who have basic typing skills to use the electronic typewriter. Features of the wheelwriter 5 electronic typewriter are explained and students have an opportunity to work with the machine in order to master the techniques presented. Note: five-week course. Prerequisite: OA 122 Typing II or equivalent.

**2.661 TYPING III: LEGAL**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Course emphasizes typing legal documents, with continued drills for speed and accuracy. Prerequisite: OA 122 Typing II or equivalent.

**2.662 LEGAL TRANSCRIPTIONIST**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Course stresses the ability of students to take instruction via the dictaphone and to type legal documents verbatim. Prerequisite: 2.527 Transcribing Machines I; 2.675 Legal Office Procedures and Terminology I.

**◆2.664 WORD PROCESSING: WORD STAR**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Instruction in the operation of Word Star--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 122 Typing II or equivalent.

**◆2.666 IBM DISPLAYWRITER**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Instruction in operating the IBM Displaywriter to do computer-based word processing. Includes edit, edit table, print, global search and replace, and automatic word wrap. Prerequisite: OA 124 Typing III or equivalent.

**2.670 MEDICAL OFFICE PROCEDURES**
(6 class hrs/wk 3 cr) Sp
Specifics of working in a medical office are stressed, including insurance, medical records, administrative office procedures, receptionist techniques and communications. Prerequisites: OA 122 Typing II; WR 115 Introuction to Writing or 2.588 Editing Skills for Information Processing.

**2.671 MEDICAL LAW AND ETHICS**
(2 class hrs/wk 2 cr) W
Course 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.

**2.675 LEGAL TERMINOLOGY & OFFICE PROCEDURES I**
(3 class hrs/wk 3 cr) W
Course covering 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, course systems and legal research. Prerequisite: OA 121A Keyboarding or equivalent.

**2.676 LEGAL TERMINOLOGY & OFFICE PROCEDURES II**
(6 class hrs/wk 3 cr) Sp
Main purpose of this course is to help students understand the litigation process--both civil and criminal--and to have them type the pleadings to support the litigation. Appeals will be 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
Main thrust of course is to practice what students have learned by doing three simulations. In addition, information concerning real property, probate, employment and business entities will be learned and projects typed. Prerequisites: OA 122 Typing II or equivalent.

**3.128 FUEL INJECTION SYSTEM**
(20 class hrs/wk 1-10 cr) F
Study of 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 super chargers and cooling system maintenance will be included.

**3.129 HEAVY EQUIPMENT/DIESEL ENGINES**
(20 class hrs/wk 1-10 cr) W
Operating principles, maintenance, repair and overhaul of various types and sizes of diesel engines comprise this unit. Includes both two-and four-stroke diesel engines, their component parts and related accessories, and standardized manufacturer's specifications.

**3.130 HEAVY EQUIPMENT/DIESEL TUNE-UP**
(20 class hrs/wk 1-10 cr) Sp
Study of diesel tune-up and techniques for optimum engine performance, including diagnostic troubleshooting, load testing and engine break-in procedure through use of the dynomometer.

**3.131 HEAVY EQUIPMENT SERVICE & REPAIR**
(20 class hrs/wk 1-10 cr) F/W/Sp
Open lab with advanced instruction emphasizing practice and laboratory exercises. Live projects are used, preparing students for job entry in the areas 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 included.

**3.134 INDUSTRIAL FLUID POWER**
(5 class hrs/wk 3 cr)
Course provides background in hydraulic and pneumatic systems mechanics, their components and the operation and function of each.

**3.195 AUTO BODY SKILLS LAB**
(6 class hrs/wk 3 cr) F/W/Sp/Su
Individualized, hands-on instruction to provide additional skills and knowledge in auto rebuilding and refinishing practices. On a space available basis, the study skills lab offers opportunity for special learning activities and additional credit.

**3.198 INDUSTRIAL TECHNICAL SEMINAR/LEADERSHIP**
(1 class hrs/wk 1 cr) F/W/Sp
Leadership development in 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, covering 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), 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 covering RHAC applications such as fittings usage--flare, sweat and braze fittings, refrigeration cycle, common pipe and pipe fittings, copper and aluminum tubing connections, and 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.

**3.294 INDUSTRIAL CONCEPTS**
(2-20 class hrs/wk 1-10 cr) F/W/Sp
A prerequisite introductory course covering competencies required for entrance into various mechanical areas. Students must demonstrate mastery of basic concepts related to industrial operations before receiving a specific project assignment. Note: Content of course may be challenged.

**3.295 POWER TRAIN SYSTEMS**
(20 class hrs/wk 1-10 cr) F/W/Sp
A study of the complete power train system, with emphasis on the theory, application and servicing of clutch systems, manual transmissions, transfer cases, drive lines, universal joints and differential assemblies. Corequisite: Industrial Skills Lab.

**3.296 SUSPENSION/BRAKING SYSTEMS**
(20 class hrs/wk 1-10 cr) F/W/Sp
Fundamental principles of automotive suspension systems, with emphasis on frames, steering systems, alignment and wheel balancing. In addition, a comprehensive study of disc and drum braking systems and their components is included. 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. Emphasis is placed on selection and use of equipment, including electrical test equipment, the oscilloscope, emission test equipment and the dynomometer, to find malfunctions and on making necessary repairs for optimum engine performance.

**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
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)
Advanced instruction and practice in diagnosing and servicing automotive problems; designed to summarize all the learning units in the auto technology two-year program. Emphasis is on the attitudes and philosophy of automotive employees who must frequently 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
Continuation in the basic skills of operating the engine lathe. Students work on a series of exercises on the lathe involving thread cutting, turning between centers, knurling, facing and other basic lathe operations. Prerequisite: 3.390 Machine Tool Tech I.

**3.392 MACHINE TOOL III**
(3 class hrs/wk 2 cr) F/W/Sp
A continuation of Machine Tool I and II. Students learn basic and intermediate operations on the vertical milling machine. Prerequisite: 3.391 Machine Tool Tech II.

**3.393 MACHINE TOOL IV**
(3 class hrs/wk 2 cr) F/W/Sp
Course 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 Tech III.

**3.394 MACHINE TOOL V**
(3 class hrs/wk 2 cr) F/W/Sp
Course requiring 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 Tech IV.

**3.395 MACHINE TOOL VI**
(3 class hrs/wk 2 cr) F/W/Sp
Course continuing of 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 Tech V.

**3.403 MANUFACTURING TECHNOLOGY I**
(16 class hrs/wk 8 cr) F/W/Sp
Introductory information for the student seeking a machinist career. Emphasis is on 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 will be introduced as a base for courses that follow. Co-requisite: 3.415 Machine Tool Skills Lab.

**3.404 MANUFACTURING TECHNOLOGY II**
(16 class hrs/wk 8 cr) F/W/Sp
Involves more advanced engine lathe work, including internal and external tapers and single point threads of various forms. Vertical milling machine operations and surface plate inspection procedures are introduced. Tool selection, cutting speeds and feed rates are emphasized. Prerequisite: 3.403 Manufacturing Technology I or instructor approval; 4.128 Drafting Fundamentals or instructor approval; 4.200 Math I or equivalent. Co-requisite: 3.415 Machine Tool Skills Lab.

**3.405 MANUFACTURING TECHNOLOGY III**
(16 class hrs/wk 8 cr) F/W/Sp
Previously acquired skills are expanded and updated, with right angle trigonometry employed in set-ups. Projects typically require the use of two or more machine tools. Various horizontal milling operations are frequently involved. Prerequisite: 3.404 Manufacturing Technology II, 4.202 Math II or equivalent. Co-requisite: 3.415 Machine Tool Skills Lab.

**3.406 MANUFACTURING TECHNOLOGY IV**
(16 class hrs/wk 8 cr) F/W/Sp
Advanced lathe and milling machine training, including dividing heads and rotary tables and simple tracer lathe work, with emphasis on industry-accepted metal removal rates. Production of iron, steel, and ferrous and non-ferrous alloys is studied. Assigned projects require use of the surface grinder and other abrasive metal removal techniques. Prerequisite: 3.405 Manufacturing Technology III; 4.204 Math III or equivalent. Co-requisite: 3.415 Machine Tool Skills Lab.

**3.407 MANUFACTURING TECHNOLOGY V**
(16 class hrs/wk 8 cr) F/W/Sp
Projects require using a combination of machine tools to produce items such as spur gears and racks. Emphasis is on precision, with tolerances much closer than in previous terms. Metal processing is covered, including heat treating, hardening, tempering and annealing. Prerequisite: 3.406 Manufacturing Technology IV. Co-requisite: 3.415 Machine Tool Skills Lab.

**3.408 MANUFACTURING TECHNOLOGY VI**
(16 class hrs/wk 8 cr) F/W/Sp
Engine lathe and milling machine skills are extended, 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: Machine Tool Skills Lab.

**◆3.409 COMPUTER INTEGRATED MANUFACTURING I**
(2 class hrs/wk 2 cr) F
Course will teach the Computer Aided Manufacturing language, ESPRIT. Part and cutter path description will be taught.

**◆3.410 COMPUTER INTEGRATED MANUFACTURING II**
(2 class hrs/wk 2 cr) W
The Hewlett Packard Series 10 Computer Aided Drafting system will be taught. Drafting, design procedures and documentation will be covered. Prerequisite: 3.409 Computer Integrated Manufacturing I or instructoral approval.

**◆3.411 COMPUTER INTEGRATED MANUFACTURING III**
(2 class hrs/wk 2 cr) Sp
The Hewlett Packard Series 10 C.A.D. System and the ESPRIT C.A.M. System are integrated for complex part programming and production. Programs will be sent to Computer Numerical Controlled (C/N/C) machines. Prerequisite: 3.410 Computer Integrated Manufacturing II.

**◆3.412 MACHINE TOOL PROGRAMMING I**
(3 class hrs/wk 2 cr) F
Course will cover the fundamentals of programming and the procedures for set up and running a Hurco Computer Numerical Controlled milling machine. The conventional Word Address Programming language is taught.

**◆3.413 MACHINE TOOL PROGRAMMING II**
(3 class hrs/wk 2 cr) W
This course will cover the fundamentals of programming and the procedures for set up and running a Computer Numerical Controlled Lathe with A Fanuc 10TE-F control. The conventional Word Address Programming language is taught.

**◆3.414 MACHINE TOOL PROGRAMMING III**
(3 class hrs/wk 2 cr) Sp
This course is an advanced programming course using the Hurco Interactive Milling Language and the Fanuc "FAPT" Interactive Lathe Language. Prerequisite: Machine Tool Programming I or II, and Math III.

**3.415 MACHINE TOOL SKILLS LABORATORY**
(3-6 class hrs/wk 0 cr) F/W/Sp
This lab is offered in conjunction with the Manufacturing Technology major classes each term, providing the opportunity to gain and refine machining skills necessary to be a successful machinist.

**3.444 WELDING METALLURGY I**
(5 class hrs/wk 4 cr) Sp
Introduction to physical and mechanical properties of weld metal and the effect of soldering, brazing and fusion processes on structural and service requirements of metal joints. Investigations 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
Introduction to the basic processes of welding fabrications. Investigates structural characteristics of metals related to quality, low-cost welded assemblies.

**3.446 METALS INVESTIGATION & EVALUATION**
(3 class hrs/wk 2 cr) W
An introduction to metallic structures and behavior of ferrous and nonferrous 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) F
Introduction to metallic structure, including its composition and properties, how it might be recognized, what could be done to improve or hinder its function and how simple evaluation can be made to determine its ability to perform.

**3.511 AUTO BODY BASICS**
(20 class hrs/wk 10 cr) F
Introduction to correct shop procedure, cleanliness, care, use and safety of tools and equipment. Includes types and use of sandpaper and grinding discs; operation and maintenance of paint guns; masking, priming, sealing and panel painting; procedures of metal working; assembly and disassembly of components preparation of vehicle surfaces; plastic material; application of primer and spray painting; and surface finishes.

**3.512 AUTO BODY PROCEDURES**
(20 class hrs/wk 10 cr) W
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
Minor collision damage repair, including alignment of doors, fenders, hood and trunk lids; reforming; curvature of metal; repairing holes in panels; 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
This unit 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.

**3.515 MAJOR COLLISION REPAIR**
(20 class hrs/wk 10 cr) W
This unit covers unitized body repair, and major collision rebuilding vehicle structure, fabrication, and major section replacement. Also covered are panel replacement, custom styling, fabrication, and appearance reconditioning (including replacement of glass, moulding, hardware, headlinings and interior trim).

**3.516 ADVANCED SHOP PROCEDURES**
(20 class hrs/wk 10 cr) Sp
This unit covers detailing final repairs and employer-employee relations; principles of estimating all collision damage, retail labor rates, flat rate time and judgement items; final preparation for occupational employment; principles of insurance claim handling techniques; 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
An independent technical/instructional project course for students in Refrigeration, Heating and Air Conditioning and related fields. Studies involve research and comparative analysis of available energy sources such as solar, wind and mini-hydro.

**3.528 AUTOMOTIVE REFRIGERATION**
(3 class hrs/wk 2 cr)
A study of refrigeration and air conditioning in transportation, including automotive, trucking and marine industries.

**3.529 MOBILE AIR CONDITIONING**
(6 class hrs/wk 3 cr) W/Sp
Study of the fundamental principles of auto and heavy equipment air conditioning systems. Emphasis is on 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 includes emphasis on 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: Trade Electrical Components I.

**3.580 INTRO TO REFRIGERATION /HEATING/AIR CONDITIONING**
(9 class hrs/wk 6 cr) F
Designed to convey theories and principles of the heating and refrigeration technology, including safety and tube types, soldering, piping and handling.

**3.583 PRINCIPLES OF REFRIGERATION**
(6 class hrs/wk 6 cr) W
General lecture/laboratory course dealing with domestic refrigeration system operations, components and electrical diagrams.

**3.584 SHEET METAL BASICS**
(4 class hrs/wk 4 cr) W
Introductory course in use of hand tools, layout procedures, machine forming and fastening procedures.

**3.585 PRINCIPLES OF HEATING**
(6 class hrs/wk 6 cr) Sp
Lecture/laboratory course in usage, repair and maintenance of residential heating systems. Includes instruction in types of controls, heat pumps, advanced troubleshooting and repair.

**3.586 MECHANICAL INSTALLATION PROCEDURES**
(4 class hrs/wk 4 cr) Sp
Basic course 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) F
Introduction of psychrometrics increases 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
Introduction to pneumatic control systems and pneumatic to electric control interfacing.

**3.589 DIAGNOSIS SERVICE AND REPAIR**
(9 class hrs/wk 6 cr) W
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
A lecture/lab introduction to commercial and industrial refrigeration systems and control circuits. Includes instruction in troubleshooting methods, specific repairs and the use of charts and graphs.

**3.592 SYSTEMS DESIGN**
(6 class hrs/wk 4 cr) Sp
Lecture/lab course promoting use of problem-solving techniques and ingenuity in new product development and application. Includes tube sizing and installation.

**4.100 BLUEPRINT READING: GENERAL**
(3 class hrs/wk 1-2 cr) F/W/Sp
An individualized course for vocational students within occupational programs to provide job-related skills interpreting scale drawings, symbols and in the preparation of idea-explanation sketches.

**4.100A BLUEPRINT READING: METALS**
(3 class hrs/wk 1-2 cr)
Individualized course for students in metalworking occupational programs, providing job-related skills in interpreting industrial drawings and symbols and in the preparation of idea-explanation freehand sketches. Topics include dimensions, tolerances, threads, holes, material specifications, notes, lists detail, assembly and fabrication drawings.

**4.100B BLUEPRINT READING: WATER/WASTEWATER**
(3 class hrs/wk 1-2 cr)
Individualized course for students in water/wastewater occupational program. Provides job-related skills in interpreting water/wastewater treatment plant drawings. Topics include architecture; building construction; plot plan; and electrical, plumbing, heating, ventilation and air conditioning plans for treatment plants.

**4.100C BLUEPRINT READING: RHAC**
(3 class hrs/wk 1-3 cr)
Individualized course for students in Refrigeration, Heating and Air Conditioning occupational programs to provide job-related skills in interpreting industrial drawings, symbols, and in the preparation of 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.

**4.108 OCCUPATIONAL SAFETY & HEALTH**
(3 class hrs/wk 3 cr) F/W/Sp/Su
Introduction of accident prevention and first aid, developing safety practices relating to personnel, design, equipment and maintenance.

**4.117 GEOMETRIC TOLERANCING**
(3 class hrs/wk 2 cr)
An intermediate-level course for drafters, technicians and engineers covering 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
Designed to acquaint 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, involves the major factors of metals, time and force. Included are mechanical properties relating to service performance. Prerequisite: 1.110 Elements of Algebra.

**4.123 ILLUSTRATION**
(6 class hrs/wk 4 cr) W
Introduction to techniques and skills involved in graphic production of illustrations for brochures, catalogs and service manuals. Includes production of detailed isometric drawings and exploded assembly drawings, pencil, ink and color assignments. Prerequisite: 4.132 Drafting II or instructor approval.

**4.124 TECHNICAL DRAWING I**
(3 class hrs/wk 2 cr) F/W/Sp
Introductory course, providing instruction and drafting practice related to basic graphic communication and interpretive needs of industrial, occupational and technical students.

**4.128 DRAFTING FUNDAMENTALS**
(6 class hrs/wk 4 cr) F/W
Introduction to 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. Prerequisite: 6.550 Practical Geometry, to be taken concurrently.

**4.129 TECHNICAL DRAWING II**
(3 class hrs/wk 2 cr) W/Sp
Course designed to continue the development of graphic communcation areas covered in Technical Drawing I. Prerequisite: Technical Drawing I.

**4.130 MACHINE PROCESSES**
(3 class hrs/wk 2 cr) F/W/Sp
Designed for students from other majors, this course provides an overview of the machine tool metalworking trades and the relationship between the technical trades. The class consists of lecture-discussion, demonstration and hands-on lab time.

**4.131 DRAFTING I**
(6 class hrs/wk 4 cr) F/W
Course designed to provide basic skills and knowledge in drafting techniques. Includes the use and application of drafting instruments, dimensioning techniques, orthographic projection, pictorial drawings, fasteners and machine finishes. Prerequisite: 4.128 Drafting Fundamentals. MT 101 College Algebra - Technical, WR 115 Introduction to Writing, to be taken concurrently

**4.132 DRAFTING II**
(6 class hrs/wk 4 cr) W/Sp
Course in drafting techniques, continuing work on concepts introduced in 4.131 Drafting I. Emphasizes auxiliary views, section views, tolerances, inking and metric dimensioning. Prerequisite: 4.131 Drafting I. MT 102 Trigonometry: Technical, to be taken concurrently.

**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.

**4.138 FUNDAMENTALS OF COMPUTER-AIDED DRAFTING**
(3 class hrs/wk 2 cr) F/W/Sp
Introductory course for drafters, technicians and engineers on the application and functions of computer-aided drafting. Topics include basic C.A.D. operations, system configurations and hardware, systems evaluation and implementation techniques. Prerequisite: 12 college credits in drafting, 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. MT 102 Trigonometry: Technical, 4.133 Production Methods & Materials, 4.148 Practical Descriptive Geometry, to be taken concurrently.

**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.

◆**4.144 COMPUTER-ASSISTED DRAFTING**
(6 class hrs/wk 4 cr) Sp
Introduces the techniques and skills involved in producing computer drawings. Emphasizes terminology, hardware and software characteristics, design procedures and drawing production. Prerequisite: 4.132 Drafting II. MT 102 Trigonometry - Technical, 4.133 Production Methods and Materials, 4.148 Practical Descriptive Geometry.

**4.145 INTERMEDIATE COMPUTER-AIDED DRAFTING**
(3 class hrs/wk 2 cr) W/Sp
An intermediate-level course for drafters, technicians and engineers in the application and functions of computer-aided drafting. Emphasis is placed on hands-on operation of a desk-top C.A.D. system and its application to drafting and engineering operations. Prerequisite: 4.138 Fundamentals of Computer-Aided Drafting.

**4.148 PRACTICAL DESCRIPTIVE GEOMETRY**
(4 class hrs/wk 3 cr) F
Course in spatial graphics for the drafting and engineering technician. Course 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. MT 102 Trigonometry: Technical, to be taken concurrently.

**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: 4.310 Introductory Physics, MT 102 Trigonometry: Technical.

**4.150 DRAFTING DESIGN PROJECT**
(3 class hrs/wk 2 cr) Sp
Advanced study in an area of student interest, selected or assigned. Problems require analysis, mathematical calculations and use of reference materials. Prerequisite: Department approval or satisfactory completion of four terms of the technical program.

**4.151 WELDING I**
(4 class hrs/wk 2 cr) F/W/Sp
Introductory course stressing safety and equipment familiarization, with lab exercises for skill development in basic gas and electric arc welding. Includes technical information lectures in related subjects.

**4.152 WELDING II**
(4 class hrs/wk 2 cr) F/W/Sp
Designed to provide welding skill level required in minor industrial applications. Includes 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: Technical Drawing I, Technical Drawing II or instructor's approval.

**4.161 MATERIALS TESTING I**
(4 class hrs/wk 3 cr) F
Study of the properties of engineering materials. Fundamental aspects of the behavior of engineering materials. 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.

**4.162 MATERIALS TESTING II**
(4 class hrs/wk 3 cr) W
Study of the properties of engineering materials. Includes elastic and plastic deformation, fracture, creep, fatigue, impact, temperature effects and corrosion; destructive and non-destructive evaluation; and elementary principles of measurement, methodology test equipment, instrumentation and analysis of data.

**4.163 MATERIALS TESTING III**
(4 class hrs/wk 3 cr) Sp
Surveys testing techniques, including bend, elevated temperature, non-metallic creep, flare and burst; corrosion of coated surfaces; and reliable conversion of test data to identify related mechanical properties.

**4.200 MATHEMATICS I**
(4 class hrs/wk 1-4 cr) F/W/Sp/Su
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, including measurement and conversion, integers, algebra, equations, ratio and proportion. Note: A minimum competency level is required to pass this course. Prerequisite: 4.200 Math I or equivalent.

●**4.204 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. Prerequsite: 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
Introduction to arc welding practices on mild steel of various thicknesses and joint configurations in all positions.

**4.241 INTERMEDIATE ARC WELDING**
(14 class hrs/wk 6 cr) W
Continuation of 4.240 Basic Arc Welding, including arc welding of mild steel and special ferrous and non-ferrous alloys. Employs the manual arc, TIG and MIG processes.

**4.242 BASIC OXYACETYLENE WELDING**
(8 class hrs/wk 4 cr) F
Introduction to oxyacetylene welding practices on mild steel of various thicknesses and joint configurations in all positions.

**4.243 WELDING PROJECTS I**
(8 class hrs/wk 4 cr) W
Lecture/laboratory course in fundamentals of welding fabrication and repair. Basic procedures in planning, sketching, cost evaluation, ordering, layout, metal preparation, tack-up and final welding will be introduced. Prerequisite: 4.240 Basic Arc Welding; 4.242 Basic Oxyacetylene Welding.

**4.245 LAYOUT 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
Continuation of 4.241 Intermediate Arc Welding. Preparation for weldor certifications 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
Continuation of 4.243 Welding Projects I, providing 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
Course 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 weldors 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 providing advanced information and skills in welding repair and fabrication. Group or individual projects require knowledge gained from related classes, including blueprint reading, cost estimating, ordering and inventory of materials, layout skills, fabrication and final assembly.

**4.310 INTRODUCTORY PHYSICS**
(3 class hrs/wk 3 cr) F
An introductory course designed for vocational students and others who require knowledge of basic physics principles. Topics include mechanics, heat, electricity, magnetism, light and sound.

**5.400 HOME HEALTH AIDE**
(20 class hrs/wk 4 cr) F/W/Sp
This course will combine structured classroom work, laboratory demonstrations and practice and 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. This program includes instruction in basic anatomy and 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
A study of common pathological diseases, injured and normal tissue and developmental anomalies. Prerequisite: 4.220, 4.221 Integrated Basic Science I, II.

**5.461 DENTAL RADIOLOGY I**
(3 class hrs/wk 2 cr) F
The first of a three-term sequence introducing the principles and hazards of radiation, including safety factors, processing of film, operation of x-ray equipment and anatomical landmarks.

**5.462 DENTAL RADIOLOGY II**
(3 class hrs/wk 2 cr) W
A continuation and review of 5.461 Dental Radiology I. Introduces x-ray techniques and patient considerations, emphasizing production of x-rays using manikins and patients. Prerequisite: 5.461 Dental Radiology I.

**5.463 DENTAL RADIOLOGY III**
(2 class hrs/wk 1 cr) Sp
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
Introduction to dental restorative materials. Includes uses, properties, manipulation, composition, equipment, advantages, disadvantages and brand names.

**5.485 DENTAL MATERIALS II**
(4 class hrs/wk 3 cr) Sp
Introduction to materials used in prosthodontic and laboratory procedures. Prerequisite: 5.484 Dental Materials Lab I.

**5.488 EXPANDED DUTIES I**
(3 class hrs/wk 2 cr) W
Introduction to dental assisting expanded duties delegated by the Oregon State Board of Dental Examiners with practical application in the laboratory.

**5.489 EXPANDED DUTIES II**
(3 class hrs/wk 2 cr) Sp
Continuation of Expanded Duties I (5.488) covering the remaining expanded functions with emphasis on laboratory and practical application in clinic in preparation for the Oregon Board of Dentistry E.F.D.A. exam.

**5.491 DENTAL OFFICE RECORDS**
(1 class hrs/wk 1 cr) Sp
Introduction to dental office records, patient reception, appointment scheduling, record maintenance, financial arrangements, coordination and supply control.

**5.492 OFFICE EMERGENCIES**
(1 class hrs/wk 1 cr) Sp
Course provides familiarization with various emergencies and treatment, including drugs. Emphasizes the responsibility of the dental office team to be prepared for emergencies.

**5.494 CLINICAL PRACTICE I**
(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, aspiration and charting.

**5.495 CLINICAL PRACTICES II**
(5 class hrs/wk 3 cr) W
Second course in three-term sequence, designed to familiarize students with basic dental assistant tasks, restorative procedures and instrumentation. The student gains clinical experience in the campus dental clinic. Prerequisite: 5.494 Clinical Practice I.

**5.496 CLINICAL PRACTICES III**
(5 class hrs/wk 3 cr) Sp
Third course in three-term sequence, designed to familiarize the student with the basic dental assisting tasks, restorative procedures and instrumentation. The various dental specialties are introduced. The student continues to gain clinical experience in the campus dental clinic. Prerequisite: 5.495 Clinical Practice II.

**5.497 DENTAL HEALTH EDUCATION I**
(1 class 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 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 continue to be 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, involving the student with community projects within the school system. Stresses principles of communication and patient motivation. Student continues to study control of dental disease by preventive methods. Evaluation and assessment of instructional materials for various age levels (preschool through geriatric) will be included.

**5.500 ORAL ANATOMY**
(2 class hrs/wk 2 cr) F
Anatomy and histology of the teeth and their supporting structures and the function of oral structures. Classroom experience involves a detailed study of tooth anatomy through use of models.

**5.510 OFFICE PRACTICUM**
(24 class hrs/wk 8 cr) Su
Course designed to give the dental assisting student work experience closely paralleling the field of study. Emphasizes building skills in various dental assisting procedures.

**5.625 CLINICAL OFFICE PROCEDURES I**
(4 class hrs/wk 4 cr) W
A survey of the requirements and qualities for success as a medical assistant. Includes medical techniques, methods and procedures for assisting the physician with examination; medical surgical aseptic procedures; obtaining vital signs; care of equipment and supplies; and drugs and solutions. Prerequisite: 5.630 Medical Terminology I.

**5.630 MEDICAL TERMINOLOGY I**
(3 class hrs/wk 3 cr) F
Introduction to the terminology of anatomy and physiology fundamental to the understanding of the physician's diagnosis and treatment. Includes basic root words, prefixes and suffixes.

**5.633 MEDICAL TERMINOLOGY II**
(3 class hrs/wk 3 cr) W
Continuation of 5.630 Medical Terminology I, emphasizing terminology related to body systems. Prerequisite: 5.630 Medical Terminology I.

**5.634 MEDICAL TERMINOLOGY III**
(3 class hrs/wk 3 cr) Sp
Continuation of 5.633 Medical Terminology II, emphasizing specific pathology and medical practice areas. Prerequisite: 5.633 Medical Terminology II.

**5.711 NURSING I**
(9 class hrs/wk 6 cr) F
Introduction to the role of the nurse in meeting needs common to patients of all ages. Includes fundamentals, normal prenatal care, growth and development tasks for all ages, and beginning communication. Covers physical and mental illness for all ages, with emphasis on problem solving. Labor, delivery and post-partum care also is covered. Independent learning tasks, demonstrations, audio-visual aids, discussion and lecture are used in the classroom. A supervised campus lab is required. Supervised clinical practice is provided, with pre- and post-conferences to evaluate planned patient care. Note: Must be taken in sequence. Individually scheduled tutorial sessions are offered in addition to published schedules.

**5.712 NURSING II**
(14 class hrs/wk 8 cr) W
Second course in sequence 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
Continued study of major illnesses, from pediatrics to geriatrics, including complications of pregnancy. Gives consideration to scope, prevention, diagnosis, treatment and psycho-social aspects of illness, with emphasis on decision making. Includes deviations from normal growth and development 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 extreme deviation. Additional topics include legal aspects and trends in nursing, community health, leadership skills and specialty nursing areas. Note: Must be taken in sequence. Available only to second-year nursing students.

**5.726,5.727 NURSING IN CONTEMPORARY SOCIETY I, II**
(1 class hrs/wk 1 cr) W/Sp
The nursing role is defined based on the history of the profession, current theories on the nature of health and disease, and selected responsibilities of the nurse in society and as practitioner. Reciprocal influences between society and nursing are identified as they relate to biological, sociological, psychological and therapeutic settings. Current issues, trends and practices in nursing are identified. Prerequisite: Instructor approval.

**5.730 TRANSACTIONAL ANALYSIS IN HEALTH CARE**
(8 class hrs/wk 1 cr) W
This course helps students to 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 understandings of behavior.

**5.732 DRUG ADMINISTRATION**
(2 class hrs/wk 2 cr) F
Introduction to major drug classifications, drug administration skills, calculating drug dosages, legal aspects of drug administration and use of drug information resources. Includes general topics in pharmacology, such as drug metabolism and adverse reactions. Note: Available only to admitted ADN students.

**5.733 PHARMACOLOGY**
(3 class hrs/wk 3 cr) W
Course designed for RNs and LPNs. Includes an overview of pharmacology, with emphasis on commonly administered drugs, problems encountered in administration of medications, and some aspects of drug abuse and methods of intervention.

**6.154 ADVANCED PROCESS CONTROL**
(4 class hrs/wk 3 cr) F
Course deals with wastewater treatment process interaction and advance concepts of purification beyond secondary treatment. Included are discussions of phosphorus removal; nitrification and nitrogen removal; filtration; activated carbon; disinfection; materials balance; solids handling and inventory control; and primary, secondary and tertiary process troubleshooting.

**6.158 SANITARY SEMINAR**
(1-3 class hrs/wk 1-3 cr)
Water and wastewater concepts, including chemistry, microbiology, mathematics, hydraulics and practical operational procedures.

**6.164 WATER SOURCES**
(6 class hrs/wk 4 cr) F
Study of surface and groundwater sources. Included for surface water: water rights, classification, selection and management of watersheds, water quality measurement, collection and storage. Included for groundwater: search, measurement and flow. Emphasis 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**
(6 class hrs/wk 4 cr) W
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) Sp
The study of theory and operation of water purification, including mixing, sedimentation, coagulation and flocculation, filtration (via single and mixed media), water softening, removal of nuisance organisms and materials.

**6.168 IN-PLANT PRACTICUM**
(40 class hrs/wk 2-12 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: HE112 First Aid; Instructor Approval.

**6.169 MAP READING**
(7 class hrs/wk 1 cr)
Introduces basic skills necessary to read general road maps, USGS and Forest Service maps, aerial photo maps, topographic maps, plot plans, and property and boundary descriptions. Note: One-day course.

**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 maintainance of 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
Course in a three-term sequence dealing with basic mechanical skills. This course uses skills acquired in the two previous courses to repair and maintain chemical feed pumps, speed reducers, level, temperature and flow sensors, basic instrumentation, and recorder and control circuits.

**6.190 INTRODUCTION WATER/WASTEWATER OPERATIONS**
(12 class hrs/wk 7 cr) F
Introduction to water and wastewater treatment plant operations, including basic hydraulics and flow measurements, water sources, water treatment and distribution, wastewater collection and pre-treatment.

**6.191 WATER SYSTEMS OPERATION**
(12 class hrs/wk 7 cr) Sp
Course develops a basic understanding of water systems operations, including surface water source and watershed management, groundwater sources and development, raw water storage and intakes, coagulation, flocculation, sedimentations, filtration, disinfection, and finished water storage and distribution. Prerequisite: 6.190 Introduction to Water and Wastewater Operations and 4.202 Math II.

**6.192 PRIMARY & SECONDARY TREATMENT**
(12 class hrs/wk 7 cr) W
Course develops a basic understanding of wastewater systems operations, including primary sedimentation, disinfection, aerobic and anaerobic sludge digestion, oxidation ponds, bio-filters and bio-reactors, and solids handling and disposal. Prerequisite: 6.190 Introduction to Water and Wastewater Operations, 4.202 Math II.

**6.193 INTRO TO AQUATIC CHEM & MICROBIOLOGY**
(8 class hrs/wk 4 cr) F
A basic chemistry and microbiology course for water and wastewater technology students. Basic concepts are supported by lab experiments relevant to the water/wastewater field.

**6.194 BASIC AQUATIC CHEMISTRY & MICROBIOLOGY**
(8 class hrs/wk 4 cr) W
A continuation of 6.193 Introduction to Aquatic Chemistry and Microbiology. Basic concepts are applied 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 INTER AQUATIC CHEMISTRY & MICROBIOLOGY**
(8 class hrs/wk 4 cr) Sp
A continuation of Basic Aquatic Chemistry and Microbiology. Basic concepts are applied to common water and wastewater analytical techniques, to include: activated sludge, biochemical oxygen demand, chlorine residual, and fecal coliforms. Prerequisite: 6.194 Basic Aquatic Chemistry and Microbiology.

**6.197 SOLIDS HANDLING**
(7 class hrs/wk 3 cr) W
Course deals with the various processes of solids handling and management. Processes covered include 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
Course 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 102 Trigonometry - Technical.

**6.201 SURVEYING II**
(4 class hrs/wk 2 cr) Sp
Advanced course in surveying practice, stressing practical problems in plane, cadastral, route and construction surveying. Practical applications of contemporary surveying equipment and computational devices are used to help students develop skills as engineering technicians. Prerequisite: 6.200 Surveying I; 6.205 Civil Drafting I.

**6.202 STATICS**
(3 class hrs/wk 3 cr) Sp
A basic course for technicians, involving analysis of forces on structures in equilibrium. Emphasizes problem solving and problem-solving techniques. Prerequisite: 6.214 Technical Physics; MT 106 Introduction to Calculus - Technical to be taken concurrently.

**6.203 STRENGTH OF MATERIALS**
(3 class hrs/wk 3 cr) F
An algebra-based, mechanics of materials course, emphasizing analysis of stresses and strains produced in structural elements under typical loading conditions. From this analysis, students design beams, trusses, columns and footings, using standard techniques and practices. Prerequisite: MT 106 Introduction to Calculus - Technical; 6.202 Statics; 6.216 Technical Physics.

◆**6.204 COMPUTER APPLICATIONS**
(5 class hrs/wk 3 cr) Sp
Advanced course in computer methods for problem solution, with emphasis on the microcomputer as a tool for graphics and analytic problem solving in the engineering field. Prerequisite: MT 173B Microcomputers: BASIC; 6.205 Civil Drafting I; 6.203 Strength of Materials or instructor approval.

**6.205 CIVIL DRAFTING I**
(6 class hrs/wk 3 cr) W
Introductory course in drafting practices and problems related to the civil engineering field. Emphasizes land survey drawings, legal descriptions, mapping and residential design. Prerequisite: 4.132 Drafting II; 6.200 Surveying I.

**6.206 CIVIL DRAFTING II**
(6 class hrs/wk 3 cr) Sp
Advanced course in drafting related to the civil engineering field. Emphasizes preparing drawings for constructing a variety of structures. Includes discussions of piping systems, highway structures, dams, roads, bridges and other structures as introduction to civil engineering structures. Prerequisite: 4.132 Drafting II; 4.133 Production Method and Materials.

**6.210 ENGINEERING DESIGN PROJECT**
(6 class hrs/wk 3 cr) Sp
Advanced course for engineering technicians, emphasizing practical design experience. Students develop engineering designs using contemporary techniques and practices and produce data, drawings and problems for civil engineering projects. Prerequisite: 6.203 Strength of Materials; 6.205 Civil Drafting I; 6.217 Introduction to Soil Mechanics; 6.218 Introduction to Sanitary Engineering.

**6.211 PRINCIPLES OF ROAD DESIGN**
(4 class hrs/wk 2 cr) Sp
Introductory course in road construction and design. Emphasizes calculations for earthwork, drawings for construction and techniques for layout. Prerequisite: 6.205 Civil Drafting I; 6.217 Introduction to Soil Mechanics; 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
An overview of soil characteristics, physical properties and mechanical load carrying characteristics. Emphasizes calculations and procedures for sampling soils. Prerequisite: 6.203 Strength of Materials; 6.201 Surveying I.

**6.218 INTRODUCTION TO SANITARY ENGINEERING**
(2 class hrs/wk 2 cr) F
Designed to give engineering technicians an overview of equipment used in the water/wastewater industry. Topics include watershed management, water and wastewater treatment, pumping installations, water distribution and sanitary sewage collection. Prerequisite: MT 106 Introduction to Calculus - Technical; 6.216 Technical Physics.

**6.220 ENERGY SYSTEMS MANAGEMENT**
(3 class hrs/wk 3 cr)
An entry-level course in energy use and management, dealing 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.

**6.221 SOLAR ENERGY**
(3 class hrs/wk 3 cr) Sp
An intermediate course in solar energy covering the engineering principles of liquid flat plate collector systems. Topic areas include the sun, flat plate collectors, flat plate collector efficiencies, corrosion, heat transfer medium, pumps, heat exchangers, storage, auxillary heaters, heat transportation systems and system controls.

**6.235 APPLIED HYDRAULICS**
(4 class hrs/wk 4 cr) W
A practical course enabling use and understanding of common flow charts for flow and head loss calculations to make open channel flow calculations and to read and use pump curves. Application is made to water distribution and sewage collection systems. Prerequisite: MT 102T Trigonometry: Technical, to be taken prior to or concurrently.

**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
Study of concepts, structures, properties, heat treatment and methods of forming and evaluating metals and alloys. Prerequisite: 6.293 Introduction to Metallurgy or instructor approval.

**6.278 BASIC METALLURGY**
(5 class hrs/wk 2 cr) Su
Introduction to 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
Introduction to theory and applied techniques of liquid penetrant and magnetic particle inspection; industrial applications as an integral part of metals fabrication; and development, testing and inspection processes in quality control.

**6.282 NON-DESTRUCTIVE TESTING II**
(5 class hrs/wk 3 cr) W
Continuation of 6.281 Non-Destructive Testing I, with emphasis on ultrasonic and eddy current methods of testing and inspection.

**6.283 NON-DESTRUCTIVE TESTING III**
(5 class hrs/wk 3 cr) Sp
Continuation of 6.282 Non-Destructive Testing II, with emphasis on x-ray and gamma ray testing and inspection.

**6.284 RADIOGRAPHY**
(6 class hrs/wk 4 cr) Sp
Introduction to 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
Introduction to 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
Study of metallurgical principles, including raw material requirements for metals-processing furnaces and refractories, furnace fuels and combustions, heat flow, energy balances and alloy systems. Prerequisite: CH 101, 102 General Chemistry.

**6.298 METALLOGRAPHY I**
(4 class hrs/wk 3 cr) W
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 consent of instructor.

**6.299 METALLOGRAPHY II**
(4 class hrs/wk 3 cr) Sp
Introduction to 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 DIRECT CURRENT THEORY & APPLICATION**
(10 class hrs/wk 6 cr) F
Introduction to electricity and electronics and basic theories and laws relating to DC electricity. Prerequisite: High school algebra and geometry or equivalent; MT 101 College Algebra: Technical to be taken concurrently; 6.214 Technical Physics to be taken concurrently.

**6.321 ALTERNATING CURRENT THEORY & APPLICATION**
(10 class hrs/wk 6 cr) W
A continuation of 6.320 Direct Current Theory, providing knowledge and use of basic theories and laws relating to AC electricity. Basic usage skills for the oscilloscope, function generator and power supply also are included. Prerequisite: 6.320 Direct Current Theory or instructor approval; MT 101 College Algebra: Technical; MT 102 College Trigonometry: Technical, to be taken concurrently; 6.214 Technical Physics, to be taken concurrently.

**6.322 BASIC SEMICONDUCTORS**
(13 class hrs/wk 8 cr) Sp
Introduction to theory and application of electronic devices, such as semiconductor diodes and BJT/FET transistors; component testing; and troubleshooting. Prerequisite: 6.321 Alternating Current Theory or instructor approval; MT 102 College Trigonometry: Technical.

**6.323 ANALOG CIRCUITS I**
(9 class hrs/wk 5 cr) F
Introduction to circuit theory and practical application of linear circuits with and without feedback, some composed of discrete components and some integrated circuits (OP Amps). Prerequisite: 6.332 Basic Semiconductors or instructor approval.

**6.324 ANALOG CIRCUIT II**
(9 class hrs/wk 5 cr) W
General survey of communications, beginning with oscillators and tuned amplifiers and continuing through AM, FM and microwave transmitters and receivers. Prerequisite: 6.322 Basic semiconductors or instructor approval; 6.323 Analog Circuits I.

**6.325 INTEGRATED SYSTEMS**
(9 class hrs/wk 5 cr) Sp
General survey of electronic integrated systems and robotics, including switching power supplies, transducers, signal conditioning, data recording and control loops. Prerequisite: 6.324 Analog Circuits II or instructor approval.

**6.330 VOCATIONAL ELECTRICITY**
(3 class hrs/wk 2 cr) F/W/Sp
Introduction to basic electrical safety, meter use and DC theory. Emphasizing avoidance of hazardous situations and correct, basic power tool repair.

**6.334 ELECTRICAL FABRICATION**
(1-10 class hrs/wk 1-6 cr)
Course designed to prepare students for electronic assembly and fabrication positions. Teaches occupational skills in safety, hand tool use, soldering techniques, basic electricity, meter usage and printed circuit board and integrated circuit manufacturing processes.

**6.336 TECHNICAL ELECTRICITY I**
(4 class hrs/wk 3 cr) F
Introduction to basic electrical theory, safety and DC meter use. Designed to prepare the student for basic electrical troubleshooting required in other industrial trades. Prerequisite: 1.110 Elements of Algebra.

**6.337 TECHNICAL ELECTRICITY II**
(4 class hrs/wk 3 cr) W
Introduction to basic AC measurements and calculations. Includes basic theory and practical application of AC motors, alternators and motor controls. Prerequisite: 6.336 Technical Electricity I; 4.204 Math III.

**6.338 TECHNICAL ELECTRICITY III**
(4 class hrs/wk 3 cr) Sp
Study of the 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. Concepts covered are 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 mechanically designed, fabricated per schematic and tested per specification. Prerequisite: 6.343 Electronic Lab Skills I.

**6.346 DIGITAL CIRCUITS I**
(9 class hrs/wk 5 cr) F
Analysis and application of basic digital circuits - gates through counters. Prerequisite: 6.322 Basic Semiconductors or instructor approval.

**6.347 DIGITAL CIRCUITS II**
(9 class hrs/wk 5 cr) W
Theory and appliction of digital concepts based primarily on integrated circuits, covering counters through basic digital computing systems. Prerequisite: 6.346 Digital Circuits I or instructor approval.

**6.349 BASIC MICROPROCESSORS**
(9 class hrs/wk 5 cr) Sp
Introduction to medium- and large-scale integrated digital circuits; aimed primarily at microprocessors and support hardware. Prerequisite: 6.347 Digital Circuits II or instructor approval.

● **6.550 PRACTICAL GEOMETRY**
(4 class hrs/wk 4 cr) F/W/Sp
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)
Course provides 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) F
A computer literacy course for vocational agriculture students.

**8.125 SOILS I**
(4 class hrs/wk 3 cr) F
Provides necessary soil science background for work with fertilizers, irrigation, drainage and other management practices. Physical, chemical and biological properties of the soil are discussed in relation to plant growth.

**8.126 SOILS II**
(4 class hrs/wk 3 cr) W
Second phase of soils instruction, dealing with plant nutrition and the proper use of fertilizer and other soil amendments. Diagnosing plant problems, soil testing, fertilizer recommendations, methods of application, storage and handling are emphasized.

**8.127 SOILS III**
(4 class hrs/wk 3 cr) Sp
Third course in sequence, giving practical application to knowledge of fertilizers. Special emphasis is given to field projects to promote understanding and skill.

**8.130 AGRICULTURE CHEMICALS**
(5 class hrs/wk 4 cr) W
Background information in use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of materials, safety in handling, and storage and method of application are emphasized. Students develop ability to interpret and explain to customers the directions and precautions to be observed with agriculture chemicals. Attention also is given 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
A course in ornamental horticulture, including how to plant, train, prune, protect and repair trees. Note: Course is offered alternate years only. Offered 1986-87.

**8.133 ARBORICULTURE II**
(4 class hrs/wk cr) Sp
A course in ornamental horticulture covering how to identify and correct tree problems. Topics will 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 1986-87.

**8.134 ADVANCED AGRICULTURAL CHEMICALS**
(4 class hrs/wk 3 cr) W
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 1987-88.

**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 1987-88.

**8.137 PLANT PROPAGATION**
(5 class hrs/wk 3 cr) Sp
Introduction to principles, methods, techniques and facilities used to propagate ornamentals.

**8.138 IRRIGATION AND DRAINAGE**
(4 class hrs/wk 3 cr) W
Introduction to 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 1987-88.

**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.

**8.143 ANATOMY & PHYSIOLOGY OF FARM ANIMALS**
(4 class hrs/wk 3 cr) W
Basic background in the physiology of farm animals, emphasizing practical information and application. Includes male and female reproductive systems, respiratory and circulatory systems, muscular system, skeletal framework, and exocrine and endocrine systems.

**8.144 ANIMAL NUTRITION**
(5 class hrs/wk 4 cr) W
Applied course in animal nutrition that covers protein, vitamins, minerals, fat, carbohydrates, feed additives and the utilization of nutrients by livestock. Includes methods of determining feed values, types of feed, feed characteristics, nutritional requirements and composition, and methods of feeding.

**8.147 LIVESTOCK SELECTION TECHNIQUES**
(6 class hrs/wk 4 cr) F
Course designed for first-year students interested in competitive livestock judging. Concentrates on techniques, selection and comparative judging of beef, sheep and swine and intensive work on developing oral reasons and terminology. Members of this class are selected for the first step in competitive judging, including travel to collegiate contests.

**8.148 ADVANCED LIVESTOCK SELECTION**
(6 class hrs/wk 4 cr) F
Advanced course in developing judging skills and techniques, with emphasis on oral reasons, market and breed type and characteristics. Members of this class are selected to participate in the top level of intercollegiate competitive livestock judging contests. Prerequisite: 8.147 Livestock Selection Techniques.

**8.150 ANIMAL GENETICS AND SELECTION**
(5 class hrs/wk 4 cr) W
Introduction to basic, practical concepts of improving livestock through a variety of genetic programs, including genetic possibilities, utilizing heritability for production gains, inbreeding coefficient, systems of breeding and improvement programs.

**8.152 BEEF PRODUCTION**
(5 class hrs/wk 4 cr) F
Basics of modern beef production and management, including cattle breeds, mating systems and reproduction, nutrition, marketing, production testing, diseases and parasites, and other management practices. Particular emphasis is on developing beef husbandry skills.

**8.153 SHEEP PRODUCTION**
(5 class hrs/wk 4 cr) W
Fundamentals of modern sheep production, including sheep breeds, nutrition, reproduction, diseases and parasites, wool evaluations, marketing and modern management practices.

**8.154 SWINE PRODUCTION**
(5 class hrs/wk 4 cr) Sp
Introduction to modern swine production, including swine breeds, marketing, breeding, feeding, production testing, diseases and parasites, and production problems.

**8.156 LIVESTOCK DISEASES I**
(4 class hrs/wk 3 cr) W
Course covers the nature of livestock diseases caused by living organisms, including common infectious diseases, diagnosis, treatment and prevention. Modern drugs and medications, immunology and basic microbiology also are included.

**8.157 LIVESTOCK DISEASES II**
(4 class hrs/wk 3 cr) Sp
Course covers the nature of 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
Agricultural instruction includes reproductive organs, hormones, diagnosis of heat, semen collection, insemination techniques, semen evaluation, pregnancy testing, freezing and dilution methods. Hands-on experience is stressed. Note: Recommended for second-year students.

**8.159 TRAINING THE FOAL**
(6 class hrs/wk 2 cr) F
A "hands on" ground training class in which the student is assigned a weanling foal to train for the term. The student may use his/her own foal or a foal 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
A "hands-on" course in which the student actually breaks and trains a horse for riding. The student learns the fundamentals of horse training, including longeing, driving, bitting, riding, reining and backing. Equipment, safety and horse "psychology" will also be taught.

**8.165 PLANT SCIENCE**
(5 class hrs/wk 4 cr) F
A study of the structure and function of flowering plants, with emphasis on crop and ornamental plants. Includes environmental effects on growth and other physiological processes, elementary genetics and recognition of major plant groups.

**8.166 VEGETABLE TECHNOLOGY**
(4 class hrs/wk 3 cr) Sp
Applied study in the major vegetable crops. Cultural practices such as fertilization, irrigation, cultivation, pest control, harvesting, marketing and cost analysis are emphasized. Note: Course offered alternate years only. Offered in 1986-87.

**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
Introductory course to woody plants used for landscape purposes. Students learn to identify each plant by its seasonal characteristics. The form, habit, height, spread, soil requirements, root system, flower, fruit and horticultural usefulness are studied. Plant taxonomy is considered and botanical names are stressed.

**8.169 TREE IDENTIFICATION**
(4 class hrs/wk 3 cr) F
Introductory course in trees and large woody shrubs used for landscaping purposes. Students 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 1986-87.

◆**8.171 FARM BUSINESS ANALYSIS**
(3 class hrs/wk 3 cr) Sp
Basic accounting course designed 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
Beginning Western Equitation 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
Intermediate Western Equitation emphasizes and reinforces skills learned in beginning course. Polishing the use of the aids, skilled movements with the horse and proper seat position are stressed.

**8.200 FARRIER SCIENCE**
(30 class hrs/wk 22 cr) F/W/Sp/Su
Course is designed to give the student 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 II 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 the Food Service. Stations include Baking, Pantry, Garde Manger, Soups and Sauces, Entree Cookery, Vegetable Cookery, Grill & 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. Note: Pre- or Corequisite - 8.337 Stations and Tools, and 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. The students will be 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
Students will be made aware of the hazards of poor sanitation and safety through lecture and assigned readings. They will also be 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
This course is a program orientation designed to give students a thorough first exposure to the history of food service; identification and use of common ingredients; to develop professional work habits and attitudes; to give students 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
Students will study and practice 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
Student will learn skill of dining room service by a combination of lecture, demonstrations, and role playing. In addition they will learn the fundamentals of banquet service, wine service, and building customer relations. Note: two-week class.

**8.350,8.351,8.352,8.353 BANQUETS & BUFFET LAB A,B,C,D**
(3 class hrs/wk 1 cr) F/W/Sp
Each term students will have several opportunities to participate in actual banquets and buffet functions, from small caterings to very large banquets. Set up, production load, banquet & catering plans, service techniques, and organizational skills, costs, and breakdown systems will be presented.

**8.354 BANQUETS & BUFFET LAB E**
(3 class hrs/wk 1 cr) F
Banquets and Buffet E allows students (especially those interested in catering) to acquire banquet experience in addition to the A, B, C, and D classes that are required.

**8.368 CREATING THE MENU**
(10 class hrs/wk 1 cr) F
History of the menu, styles of menus, consideration of nutrition, work load, flow of goods, and sales will be discussed. Note: one-week class.

**8.373 COSTING**
(10 class hrs/wk 1 cr) F
Students learn theory of and become practiced at determining food cost for restaurant and institutional cooking. Note: one-week class.

**8.402 BAKING FUNDAMENTALS**
(8 class hrs/wk 1 cr) F
Course 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. Recognizing and learning causes of common faults in baked goods. Note: two-week class.

**8.404 CHEESE, EGGS & BREAKFAST COOKERY**
(16 class hrs/wk 1 cr) F
Demonstration, lecture, and "hands-on" will be used to take students through fundamentals of purchasing, storing, cooking, and serving of cheese, eggs, omelettes, potatoes, pancakes, crepes, cereals, coffee and tea.

**8.405 SEAFOOD & POULTRY COOKING**
(10 class hrs/wk 1 cr) W
Purchasing, storing, and preparation of the major types of seafood and poultry will be related through a combination of lecturing and "hands-on". Note: two-week class.

**8.407 PANTRY**
(10 class hrs/wk 1 cr) F
Basic preparation and presentation of salads, dressings, hot and cold sandwiches, appetizers, beverages and garnishes. Includes selection and preparation of 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
Fabricating primal and sub-primal cuts of beef, pork and lamb for profitable use in restuarants. Includes knife techniques, portion cutting, safe and sanitary meat handling and storage. Proper cooking procedure and techniques will also be presented. Note: eight-week class.

**8.411 VEGETABLE COOKERY**
(8 class hrs/wk 1 cr) F
Purchasing, preparation and service of green, red, white, and yellow vegetables as well as potatoes, grains, legumes, and pastas will be demonstrated to and practiced by students. Note: two-week class.

**8.414 GARDE MANGER**
(8 class hrs/wk 1 cr) W
History of food presentation and chareuterie, as well as parts of cold kitchen, aspic work, appetizers, and Hors d' oeuvres, and utilization will be covered by lecture and demo and practical application. Note: two-week class.

**8.415 ADVANCED BAKING & PASTRY**
(8 class hrs/wk 2 cr) F/W/Sp
"Roll-in" doughs, cake decorating, petit fours, chocolate and candy making as well as advanced cakes and tortes, breads, and icing are practiced with an emphasis on fine techniques and speed. Note: four-week class.

**8.418 BEVERAGE OPERATIONS & SERVICES**
(4 class hrs/wk 2 cr) F
Through classroom training, students will become knowledgeable in 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
Practical use of food and menus to assure a proper balance of both macro nutrients (carbohydrates, fats, & proteins) and micro nutrients. Vitamins and minerals will be discussed. Fiber needs and prevention of diet related illness will all be covered. Note: two-week class.

**◆9.038 MICROCOMPUTERS: INTRODUCTION**
(3 class hrs/wk 1 cr)
Course is designed for beginners. Learn to operate a computer, develop good work habits and practice with a variety of software and computers. Class will stress hands-on experience. Note: five-week course.

**9.048A WORD PERFECT SELF-STUDY**
(2 class hrs/wk 1 cr)
Introductory course in the basics of word processing. Learn to use Word Perfect on IBM-compatible computers. No experience necessary.

**◆9.048E LOTUS FOR BEGINNERS**
(2 class hrs/wk 2 cr) W/Sp
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 course.

**◆9.048K LOTUS 1-2-3 MACROS**
(15 class hrs/wk 1 cr) W/Sp
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 INTRO TO MS-DOS**
(3 class hrs/wk 1 cr)
Introduction to the computer operating systems with emphasis on file management, directories and subdirectories, batch files and menu development. Note: five-week class.

**◆9.048Q LEADING EDGE WORD PROCESSING**
(2 class hrs/wk 1 cr)
Beginning word processing using the Leading Edge Word Processor on Leading Edge or IBM computers. Note: eight-week class.

**9.148 PREPARATION FOR WELDOR CERTIFICATION**
(8 class hrs/wk 4 cr) F/W/Sp
Course provides information and skill development for the weldor certification test administered by state of Oregon, Dept. of Commerce, Boiler Division. The test is provided upon completion of the course. Prerequisite: 4.152 or 9.152 Welding II or instructor approval.

**9.151 WELDING I**
(4 class hrs/wk 2 cr) F/W/Sp
Introductory course stressing safety and equipment familiarization, with lab exercises in basic gas and electric arc welding. Includes technical information lectures in related subjects.

**9.152 WELDING II**
(4 class hrs/wk 2 cr) F/W/Sp
Designed to provide the welding skill level expected in minor industrial applications. Includes 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, designed for a higher degree of welding competency in trade applications. Standard welding practices, weldor 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)
To receive an operator's certification card. Meets OSHA safety training requirements. Note: one-week class.

**9.313 EMERGENCY MEDICAL TECHNICIAN I**
(9 class hrs/wk 8 cr) F/Sp
A basic training program, with classroom theory, practice exercises and clinical experience in problems encountered by ambulance personnel. Includes overall role and responsibilities of the emergency medical technician in emergency care and operational aspects of the job; developing skill in life-saving techniques and emergency treatment short of that rendered by physicians or by paramedical personnel under direct supervision of a physician; and developing skill in use and care of necessary equipment. Note: Currently consists of evening lectures, 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
Course upgrades skills of basically trained EMTs, a second step in a career development pattern. Includes advanced training in certain aspects of intravenous therapy and airway management. 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 specificed 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 prehospital 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. This class emphasizes the management of respiratory disorders and medical emergencies. 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**
(9 class hrs/wk 10 cr) Sp
Course prepares the Emergency Medical Technician for satisfactory completion of the Paramedic Certification Examination given by the Board of Medical Examiners. Provides advanced skills for assessing and caring for patients with central nervous system disorders, emergencies associated with childbirth, pediatric problems, rescue techniques and crisis intervention. Note: Currently consists of evening lectures, 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)
A review of CPR skills and an introduction to methods and techniques of CPR instruction. Includes lesson plans, use of instructor manual, evaluation of students, processing of forms, records and American Heart Association authorization. Prerequisite: Current American Heart Association CPR card.

**9.321 FIRST RESPONDER RECERTIFICATION**
(8 class hrs/wk 1 cr)
Course is designed for first responders in a medical emergency. Course 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 RE-CERTIFICATION**
(8 class hrs/wk 0 cr)
Course will provide 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, neuro- logical 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. Three lecturers provide a review of medical law and ethics, with question and discussion time planned for each consecutive session. Note: Three-week course. Available only to employees in these health fields.

**9.419 MINI PHYSICAL ASSESSMENT WORKSHOP**
(8 class hrs/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, indentification 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 will be 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)
An introduction to 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.

**9.587,9.588 DIRECT CURRENT I, II**
(1-5 class hrs/wk 1-3 cr)
An introduction to 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)
This class will explore integrated software using Appleworks. Learn to do wordprocessing, 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 will receive "hands- on" experience with dbase III. Topics include: setting up files, records, sorting, editing, sequencing and printing. Note: eight-week course.

◆**9.607J WORD PERFECT 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 course.

**9.607K DESKTOP PUBLISHING ON THE MACINTOSH**
(6 class hrs/wk 3 cr)
Study the use of word processing (Macwrite), technical drawing (Macdraw), and page layout, pagemaker communications (Microphone), software on the Macintosh computer. Will learn the use of the Laser Writer printer as a typesetter. Must provide own Macintosh 512K or Plus.

◆**9.607L WORD PERFECT ADVANCED**
(3 class hrs/wk 1 cr) W
Survey of advanced features of Word Perfect. Previous knowledge of Word Perfect required. Covers merge capabilities, macros, control of printer, columnar typing, database and more. Note: three-week course.

**9.607N ADVANCED DBASE III**
(4 class hrs/wk 1 cr)
Structured programming using DBase III. Hands-on experience designing, documenting, and writing programs. 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 course.

**9.649 M.O.S. INTEGRATED CIRCUIT LAYOUT**
(7 class hrs/wk 6 cr) W
The principles of layout for silicon gate MOS 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)
Medium and large scale integrated digital circuit concepts aimed primarily at microprocessors and support hardware are covered.

**9.672 DIGITAL PRINCIPALS I**
(6 class hrs/wk 3 cr)
Fundamental course in digital concepts and circuits. Includes practical theory of and/or 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, bipolar transistor operations.

**9.673A SEMICONDUCTORS II**
(6 class hrs/wk 3 cr)
Continuation of Semiconductors I. Includes practical theory of bipolar transistors, field effect transistors, thyristors, integrated circuits, and optoelectronic devices.

**9.691 DIGITAL PRINCIPLES II**
(6 class hrs/wk 3 cr)
Continuation of course in digital concepts and circuits. Includes practical theory of sequential logic circuits, combination logic circuits and their applications.

◆**9.695 PROGRAMMING IN BASIC**
(4 class hrs/wk 3 cr)
Introduction to 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. Emphasis will be on hands-on loading and executing word processing, spreadsheets and data base programs among others. Note: five-week course.

**9.722 COMPUTER INTERFACES**
(4 class hrs/wk 2 cr)
Learn about and 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)
To qualify 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, expanding number of specialty shoeing requirements a farrier can meet. Concentration on lameness, building shoes, corrective shoeing and shoeing for specialty horses. Prerequisite: Completion of an approved farrier program and/or practicing or reviewing farrier.

**9.861 LAMBING SCHOOL**
(12 class hrs/wk 0 cr) W
Hands-on experience in delivery and care of lambs including castration, tail docking, injections and general health care. Ewe health and nutrition will also be discussed. Class includes two classroom lectures and three labs at a local area lambing facility. Note: two-week class.

**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 goals of 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, kindergarten and 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 will review existing implementations of LOGO for a variety of microcomputers and explores one(Terrapin for Apple and Commodore 64) in depth. Parents will 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). 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). An opportunity to discuss parenting topics and to help plan and join in activities with their toddler.

**9.949A,9.949B,9.949C LIVING/LEARN WITH TWO-YEAR OLD I,II,III**
(3 class hrs/wk 2 cr)
An active participation class designed for parents and their two year olds. In a lab situation designed to meet the needs of two-year olds, 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 LIVE/LEARN WITH KINDERGARTENER I,II,III**
(5 class hrs/wk 3 cr)
A kindergarten cooperative designed for parents and their kindergartener. In the lab situation designed to meet the needs of kindergarten children, 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/LEARNING PRESCHOOLER I,II,III**
(2-5 class hrs/wk 2-3 cr)
A preschool cooperative designed for parents and their three, four and five year old children. In the lab situation designed to meet the needs of preschool children, 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)
This course is designed for parents of teenagers for the purpose of improving their relationships with their children. Emphasis is placed on effective communication skills, mutual problem solving, and assuming responsible behavior. Recognition is given to the strengths families have and means of increasing personal growth for both parents and adolescents. Note: five-week class.

**9.955 UNDERSTANDING CHILD ABUSE**
(1 class hrs/wk 1 cr)
Identification, reporting, prevention and treatment of child abuse will be explored and discussed. Professionals from the community will discuss the legal, medical, and emotional treatment aspects.

**9.956 STEP PARENTING**
(2 class hrs/wk 1 cr)
Step-parenting will be discussed from several vantage points: current stage of the family, the spouses, the children. Emphasis will be on 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)
Single parenting addresses the unique challenges, satisfactions and frustrations of heading a single parent family. Using a discussion format students will cover personal and family values clarification, time management, dating, remarrying, legal aspects, budget and credit information and basic child development, discipline and child care selection. Note: five-week class.

**9.962 EFFECT. PARENTING: HEALTHY RELATIONSHIPS**
(2 class hrs/wk 1 cr)
Enhancing family relationships through improved communication, sharing of time and traditions, affirming one another, recognizing and developing family identity and strengths is the focus of this class. Note: 5-week class.

**9.962A EFFECTIVE PARENTING: MANAGING STRESS**
(2 class hrs/wk 1 cr)
A discussion class looking at the sources of family stress with an emphasis on creative ways of coping and managing it. Note: 5-week class.

**9.962B EFFECTIVE PARENTING:RESPONSIBLE CHILDREN**
(2 class hrs/wk 1 cr)
A discussion class in which parents will: explore parenting styles that encourage children to develop responsibility, identify ways to delegate and share household tasks, discuss appropriate responsibilities for different aged children. The Situational Parenting model will be used. Note: five-week class.

**9.962C PARENT-TOT GYM**
(1 class hrs/wk 0 cr)
A gym class for parents and their toddlers. An opportunity to direct and participate in child's active exploration of the gym and apparatus. A chance to sing, dance, march, and pretend with your child.

**9.962D PEG: EFFECTIVE PARENTING**
(2 class hrs/wk 1 cr)
This course is designed for parents of school age children. Emphasis is placed on effective communication skills, mutual problem solving, and appropriate and responsible behavior. Parents are given recognition of their strengths and skills. Note: eight-week class.

**9.962E FAMILY MATH**
(4 class hrs/wk 0 cr)
The activities used in Family Math will develop problem-solving skills. There will be an emphasis on 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.

**9.962F TAKING CHARGE OF YOUR FAMILY'S HEALTH**
(2 class hrs/wk 1 cr)
Become an activated health consumer. Save time, money, and anxiety about your family's everyday health care needs. Learn to use simple, clear, effective methods for the home care of common minor illness and injury in young children and adults. Know when to call the doctor. Note: five-week class.

**9.962G KIDS, PARENTS AND COMPUTERS**
(1.5 class hrs/wk 0 cr)
This course will acquaint children and parents with the power of the computer as a tool for learning while learning, sharing decision making and problem solving and communication will be experienced. Note: six-week class.

**9.965,9.966,9.967 LIVE/LEARN CHILD 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 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.

**9.972,9.973,9.974 CONCERNS & SKILLS YOUNG PARENT I,II,III**
(15 class hrs/wk 0 cr)
A series of courses designed especially for pregnant & parenting teens. Each class will include 3 components: 1. Discussion of issues and topics relating to the needs and development of young parents as people. 2. Time will be divided each week: A. Actively interacting with own child---instructor as model. B. Observing behavior in on-site infant-toddler day care center. C. Opportunity to satisfy student's playful needs. 3. Presentation and discussion of parenting concerns and skills. Note: two-week class.

**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. Skills that help balance the work-family lifestyle, general parenting skills and home management will be included. Note: six-week class.

# Alpha-Numerical Courses

Courses marked with the following symbols will fulfill General Education Requirements:

◆ Computer Competency
◀ Humanities/Arts
● Math/Science
■ Social Sciences

**AA 104 INTRODUCTION TO GRAPHIC COMMUNICATIONS**
(3 class hrs/wk 3 cr) F/W
An introduction to mass communication through journalism, graphic design and printing technology. Students will be exposed to terminology, techniques and career opportunities in each of these areas.

**AA 120 LAYOUT AND PASTEUP 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; preparation of mechanical art. Prerequisite: AA 104 Introduction to Graphic Communications, may be taken concurrently.

**AA 121 SURVEY OF VISUAL DESIGN**
(6 class hrs/wk 3 cr) W
Introduction to design through experimentation in black and white composition. Emphasizes developing sound design judgment based on thorough understanding of art elements and principles. Prerequisite: AA 104 Introduction to Graphic Communications, may be taken concurrently.

**AA 174 SCREEN PRINTING**
(6 class hrs/wk 3 cr) F/W/Sp
Practice in screen printing techniques, using hand-cut paper, lacquer and aqua stencils, tusche and glue, and photostencil materials; and 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 will be stressed. Matting, papers and presentation also are included. Prerequisite: AA 120 Layout and Pasteup Procedures; AA 224 Typographical Design; AA 229 Typesetting; AA 263 Process Camera.

**AA 222 GRAPHIC DESIGN II**
(6 class hrs/wk 3 cr) W
The study and development of marks, symbols, logos, design systems and corporate identity programs. The design's adaptability, application, practicality and integrity are examined. Prerequisite: AA 221 Graphic Design I.

**AA 223 GRAPHIC DESIGN III**
(6 class hrs/wk 3 cr) Sp
A course in color and black and white illustration/design. Individual work and study is emphasized. Prerequisite: AA 222 Graphic Design II.

**AA 224 TYPOGRAPHICAL DESIGN**
(6 class hrs/wk 3 cr) F/W
An introduction to letterforms, developing fundamental awareness of type and typographic design. A study of the evolution of typography, art of calligraphy, hand-built letterforms and transfer lettering, emphasizes typography as a working tool. Prerequisite: AA 104 Introduction to Graphic Communications, may be taken concurrently.

**AA 225 PACKAGING AND THREE-DIMENSIONAL DESIGN**
(6 class hrs/wk 3 cr) W
Introduction to 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 226 TYPOGRAPHICAL DESIGN II**
(6 class hrs/wk 3 cr) F
Continuation in the study, use and design of letterforms. Emphasis will be placed on creating original type variations and form manipulation.

**AA 228 PORTFOLIO PREPARATION--PROF. PRACTICES**
(6 class hrs/wk 3 cr) Sp
Emphasis will be re-evaluation of previously produced projects, organization and production of the business card, resume and portfolio. Current job opportunities; methods in merchandising job talents; action before, during and after the interview; and business practices and ethics are covered. Intended for second-year graphic design students. Prerequisites: AA 222 Graphic Design II; AA 223 Graphic Design III, to be taken concurrently.

◆**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**
(6 class hrs/wk 3 cr) Sp
Class projects explore and develop skills in the use of various tools, materials and techniques. Conceptual development of illustration dealing with written materials will be examined. The intent of the course is to make the student aware of illustrative possibilities and processes. Prerequisite: AA 104 Introduction to Graphic Communications; AR 131 Drawing I; AR 132 Drawing II; AR 133 Drawing III, may be taken concurrently.

**AA 261 STUDIO PHOTOGRAPHY**
(3 class hrs/wk 2 cr)
Introduction to applied studio photography, including the nature of light, equipment, portraiture, still-life, special effects, copying, exposure determination and use of filters. Includes both demonstrations and individual projects. Note: A limited number of cameras are available for check-out. Prerequisite: JN 134 Introduction to Photography.

**AA 262 PHOTOGRAPHY: ART & TECHNIQUE**
(3 class hrs/wk 2 cr)
Advanced darkroom technique, including toning, reducing, Sabbatier effect, direct-positive and color processing. Projects encourage application of these techniques in the student's field of interest. Prerequisite: JN 234 Intermediate Photography or instructor approval.

**AA 263 PROCESS CAMERA**
(6 class hrs/wk 3 cr) W/Sp
Course teaches function and use of the process camera for making line and halftone negatives and 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.

**AA 299 SPECIAL PROJECTS**
(2-10 class hrs/wk 1-5 cr) F/W/Sp
In coordination with the instructor, the student may 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 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 INTRO 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 104 GENERAL ANTHROPOLOGY LAB**
(2 class hrs/wk 1 cr)
Exercises in anthropological reconstruction, museum display and/or laboratory analysis. Prerequisite: Instructor approval.

**■AN 107 ANTHROPOLOGY TODAY**
(3 class hrs/wk 3 cr)
Surveys contemporary issues in anthropology as presented in popular media. Popular books, films and television offerings will 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)
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: AN 103 Introduction to Cultural Anthropology recommended as prerequisite; may be taken concurrently.

**■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
Introduction to 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
Introduction to formulating and analyzing rations for livestock, balancing nutritional needs and choice of ingredients in relation to cost and suitability. Includes economics of livestock feeding and performance indicators. 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, including 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
A survey of the principle concerns of art and artists, ancient to modern times.

**◄AR 115 BASIC DESIGN I**
(6 class hrs/wk 3 cr) F/W
Introduction to 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 II**
(6 class hrs/wk 3 cr) W/Sp
An introductory study of concepts of color, its properties, combination, relatedness, proportions and interaction. Prerequisite: AR 115 Basic Design or consent of instructor. 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 131 DRAWING I**
(6 class hrs/wk 3 cr) F/W
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
A continuation of AR 131 Drawing I, with an emphasis on composition and drawing complex forms. Prerequisite: AR 131 Drawing I or consent of instructor. 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 133 DRAWING III**
(6 class hrs/wk 3 cr) Sp
A continuation of AR 132 Drawing II with an emphasis on drawing very complex forms, composition and form invention. Exploration of a variety of drawing techniques and materials. Prerequisite: AR 132 Drawing II or consent of instructor. 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 154 BEGINNING CERAMICS**
(6 class hrs/wk 3 cr) F/W/Sp
Introduction to clay as an expressive material. Covers composition of clay bodies and basic forming processes: slab, pinch, coil, press mold and potter's wheel. Emphasis is on form and surface treatment; some firing and glazing included. 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
Exploration of 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
Exploration of 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
Exploration of 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: AR131 Drawing I or consent of instructor.

**◄AR 186 WATERCOLOR: LANDSCAPE**
(6 class hrs/wk 3 cr) Sp
Exploration of 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: AR131 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
Three-term sequence covering the history, aesthetics and significance of the visual arts as they reveal man's concept of his place in time and space. Includes related contemporary thought in the fields of anthropology, religion, psychology and media studies. AR 201 Ancient Art; AR 202, Art of the Middle Ages; AR 203, Modern Art. Note: Courses need not be taken in sequence.

**◄AR 211 SURVEY OF VISUAL ARTS: NON-WESTERN**
(3 class hrs/wk 3 cr)
Studies art from various non-Western cultures; considers style, subject, values and social functions. Topics selected from Native American, East Indian, Asian, Persian and African art.

**◄AR 212 SURVEY OF VISUAL ARTS: OREGON**
(3 class hrs/wk 3 cr)
Studies contemporary art in Oregon based on the presentations of work of various Oregon artists.

**◄AR 213 SURVEY OF VISUAL ART: 20TH CENTURY**
(3 class hrs/wk 3 cr) Sp
Surveys modern art beginning with Post-Impressionism and considering subsequent movements, including Cubism, Futurism, Surrealism, Expressionism and Abstract Expressionism.

**◄AR 234 FIGURE DRAWING**
(6 class hrs/wk 3 cr) W
Introductory course in drawing the nude figure. Major emphasis will be 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: AR131 Drawing I or instructor approval.

**◄AR 254 CERAMICS II**
(6 class hrs/wk 3 cr) F/W/Sp
Clay construction for the experienced student, with advanced throwing and handbuilding, glazing and firing techniques. 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: AR154 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
Exploration of 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: AR131 Drawing I or consent of instructor. Offered alternate years.

**ARE 211 FARM AND RANCH MANAGEMENT**
(5 class hrs/wk 5 cr) W
Agriculture as a business; the decision-making process; tools of decision making; acquiring, organizing and managing land, labor and capital resources; reasons for success and failure.

**AS 101 RUDIMENTS OF METEOROLOGY**
(1 class hrs/wk 1 cr)
Descriptive treatment of weather phenomena, including winds, air masses, fronts, clouds and precipitation. Note: Video course.

**AS 111,112,113 AEROSPACE STUDIES I**
(1 class hrs/wk 1 cr) Sp
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
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. It is intended to orient students to the field of business and to help 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
Operations of the IBM PC Disk Operating System are introduced to the novice computer user. Note: Three-week class.

**◆BA 110B USING THE PERSONAL COMPUTER–LOTUS**
(4 class hrs/wk 1 cr) F/W/Sp
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
Introductory course provides 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
Application of computers to solve business problems, with an emphasis on 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; store keeping and personnel.

**BA 200 PRINCIPLES OF ACCOUNTING I**
(3 class hrs/wk 3 cr) F
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
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
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: BA201 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
To understand 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
Techniques of account construction and preparation of financial statements. Emphasis is on 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, dividends.

**BA 212 MANAGERIAL ACCOUNTING**
(4 class hrs/wk 4 cr) Sp/Su
Course 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.

**BA 215 COST ACCOUNTING I**
(3 class hrs/wk 3 cr) W
Course relates theory to practical problems in analysis and control of material, labor and overhead costs in manufacturing. Emphasizes the job cost system. Prerequisite: 2.530 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. Introduction to 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
Topics covered deal with financing a business, emphasizing the tax environment, analysis of financial statements, working capital management, short- and long-term financial planning, budgeting and control. Prerequisite: 2.531 Practical Accounting II or BA 201 Principles of Accounting II.

**BA 223 PRINCIPLES OF MARKETING**
(4 class hrs/wk 4 cr) F/W/Sp/Su
General survey of the nature, significance and scope of marketing. Emphasis is on customers (marketing analysis and strategy); business marketing decisions in promotion, distribution and pricing; and control of marketing programs.

**BA 224 PERSONNEL MANAGEMENT**
(3 class hrs/wk 3 cr) F/W
Course deals primarily with the first-line supervisor, emphasizing the supervisor's relations with subordinates, colleagues, boss and the union in a wide variety of situations.

**BA 226 BUSINESS LAW**
(4 class hrs/wk 4 cr) F/W/Sp
Introduction to the framework of the law as it affects a business, how the law operates, how it is enforced and how it is used in business. Includes the origins of law, the relations of business to society and the law, evolution of business within the framework of the law and the historical development and present-day applications of the law of contracts.

**BA 229 PERSONAL FINANCE**
(3 class hrs/wk 3 cr)
A thorough study of home financing, installment buying, insurance, investments, wills and other phases of managing family finances.

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

**BA 242 INTRODUCTION TO INVESTMENTS**
(3 class hrs/wk 3 cr)
Course 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
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)
Course designed for students wanting information on 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)
Course designed to give each student the skill needed to develop a plan for a new or existing small business. Each student will actually develop a business plan as the term project.

**BA 250B SMALL-BUSINESS DECISION MAKING**
(3 class hrs/wk 3 cr)
Course designed to enable 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
Course covers the federal income tax laws, emphasizing the importance of adequate and suitable financial records. Helps the taxpayer compute required reports and taxes due. At class option, special interests, such as farming and manufacturing, may be discussed.

**BA 269 PRINCIPLES OF BANK OPERATION**
(3 class hrs/wk 3 cr)
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)
Course 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 200, BA 201 Principles of Accounting I and II.

**BA 272 HOME MORTGAGE LENDING**
(3 class hrs/wk 3 cr)
Subject is presented from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. Includes the mortgage 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)
Course directed toward bank personnel who know little about marketing as it pertains to banking. Includes fundamental concepts and philosophy of marketing; market information and research; product distribution, promotion and pricing strategies; and market planning.

**BA 274 INTERNATIONAL BANKING**
(3 class hrs/wk 3 cr)
Introductory course for those working in international departments, as well as for those involved in the domestic activities of their banks. Presents the basic framework and fundamentals of international banking: how money is transferred from one country to another; how trade is financed; what the international agencies are and how they supplement the work of commercial banks; and how money is changed from one currency to another.

**BA 275 BANK MANAGEMENT**
(3 class hrs/wk 3 cr)
Survey of new trends in the philosophy and practice of management. Study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management.

**BA 276 AGRICULTURAL FINANCE**
(3 class hrs/wk 3 cr)
Reflecting the rapid growth of the off-farm agri-business sectors, this course emphasizes general principles associated with evaluation of management and use of capital, rather than land and labor resources, which are more closely aligned with agriculture production.

**BA 278 LAW AND BANKING**
(3 class hrs/wk 3 cr)
Introduction to basic American law, presenting the rules of law which underlie banking. Topics include jurisprudence, the court system and civil procedure, contracts, quasi-contracts, property, torts and crimes, agencies, partnerships, corporations, sales of personal property, commercial paper, bank deposits and collections, documents of title and secured transactions. Emphasizes the Uniform Commercial Code.

**BA 279 BANK INVESTMENTS**
(3 class hrs/wk 3 cr)
Introduction to the nature of primary reserves and loanable funds and how their uses are determined. Analyzes the primary and secondary reserve needs of commercial banks, sources of reserves and their random and cyclical fluctuations and shows the influence of these factors on investment policy. Analysis is followed by a study of yield changes as they affect a bank's long-term holdings.

**BA 282 TRUST FUNCTIONS AND SERVICES**
(3 class hrs/wk 3 cr)
Course 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)
Course deals with 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)
Each of the subject areas of BI 164 Nature Photography I are pursued in greater depth. Note: A 35mm SLR camera, flash unit, tripod and macro equipment are required.

**BI 221,222,223 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 221, structure and function of the cell, basic biochemistry, tissues, integumentary system, skeletal system and muscular system; BI 222, respiratory system, urinary system, fluid and electrolyte balance, endocrine system, blood and cardiovascular system; BI 223, lymphatic and immune systems digestive system, metabolism, nervous system, senses and reproductive system. Prerequisite: CH 102, CH 104, or CH 201 General Chemistry or concurrent enrollment in any of these chemistry courses.

**BI 234 MICROBIOLOGY**

(6 class hrs/wk 4 cr)

Introductory course in microbiology. All forms of microbial life are considered, 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)

A survey of 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

Introduction to the interrelationships between the physical environment and wild animal populations. Examines the history of wildlife conservation and natural resource use, man's relationship to his natural environment, dynamics of animal populations, principles and practices of fisheries and wildlife management, and the role of wildlife biologists.

**BI 252 WILDLIFE RESOURCES: BIRDS**

(3 class hrs/wk 3 cr) Sp

An introduction to 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

BO201 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

An introduction to basic chemistry and laboratory skills. Designed for students preparing for CH 101 or CH 104 General Chemistry courses. Prerequisite: 4.200 Math I, 1.110 Elements of Algebra to be taken concurrently.

**CH 101,102 GENERAL CHEMISTRY**

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

Introductory two-quarter sequence for vocational students and students preparing for CH 201. Includes inorganic, 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

A three-term survey of the principles of inorganic, physical, organic, nuclear and biological chemistry for students in science-related fields, including health occupations, agriculture, animal science and home economics. Prerequisite to CH 104: 1.110 Elements of Algebra or equivalent; high school physical science or equivalent. Prerequisite to CH105: MT 100 Intermediate Algebra, and CH 104 General Chemistry. Prerequisite to CH106: CH 105 General Chemistry.

**CH 201,202,203 GENERAL CHEMISTRY**

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

A three-term sequence for science and engineering students. Introduces physical and chemical aspects of inorganic and organic chemistry. Topics include atomic structure, chemical bonding, chemical equilibrium, rates of reaction, acids and bases, oxidation and reduction, nuclear chemistry, organic chemical compounds and polymers. Note: Must be taken in sequence. A calculator with scientific notation is required. Prerequisite to CH 201: CH 102 General Chemistry, high school chemistry or equivalent; MT 101 College Algebra to be taken concurrently. Prerequisite to CH 202: MT 101 College Algebra.

**CH 226,227,228 ORGANIC CHEMISTRY**

(3-6 class hrs/wk 3-4 cr) F/W/Sp

An introductory course in structures and reactions of carbon compounds, including hydrocarbons; compounds with functional groups containing oxygen, nitrogen, sulfur and halogen atoms; and compounds of biological interest. Note: Must be taken in sequence. Prerequisite to CH 226: Ch 104, 105, 106 or CH 201, 202, 203 General Chemistry sequence.

**CH 234 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
Introduction to major types of criminal behavior, role of offenders, factors which contribute to the production of criminality or delinquency, changes of law in crime control and treatment processes.

**CJ 110 INTRODUCTION TO LAW ENFORCEMENT**
(3 class hrs/wk 3 cr) F
Exploration of theories, philosophies and concepts related to role expectations of line enforcement officers, with emphasis on patrol, traffic and public service responsibilities and their relationship to administration of the justice system.

**CJ 120 INTRODUCTION TO THE JUDICIAL PROCESS**
(3 class hrs/wk 3 cr) F/Sp
Survey of justice process from arrest to returning the offender to society; the jurisdiction of city, county, state and federal police agencies; and the constitutional rights of individuals in America.

**CJ 130 INTRODUCTION TO CORRECTIONS**
(3 class hrs/wk 3 cr) F/Sp
Examination of total correctional process from law enforcement through administration of justice, probation, prisons and correctional institutions and parole. History and philosophy oriented.

**CJ 132 INTRODUCTION TO PAROLE AND PROBATION**
(3 class hrs/wk 3 cr) W
Introduction to use of parole and probation as a means of controlling criminal offenders within the community. Includes philosophy, historical development and contemporary functioning of the agencies and officers.

**CJ 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. WR 123 English Composition must be taken concurrently.

**CJ 200 POLICE AND PUBLIC POLICY**
(3 class hrs/wk 3 cr) W
In-depth exploration of the roles of administration of justice practitioners, concentrating on role expectations among the various agencies and the public.

**CJ 201 JUVENILE DELINQUENCY**
(3 class hrs/wk 3 cr) W
Defines and surveys the development and patterns of delinquent behavior, institutional control and treatment, and legal methods of dealing with delinquency.

**CJ 202 VIOLENCE AND AGGRESSION**
(3 class hrs/wk 3 cr) F/Sp
An exploration and analysis of violence and aggression as viewed from a biological, psychological and sociological perspective. Includes topics such as homicide, suicide, rape, assault, mob violence, terrorism and violence within the family.

**CJ 210 INTRODUCTION TO CRIMINAL INVESTIGATION**
(3 class hrs/wk 3 cr) W
Introduces the fundamentals of criminal investigation theory and history, from the crime scene to the courtroom. Emphasizes techniques appropriate to specific crimes.

**CJ 216 CRIMINAL JUSTICE MANAGEMENT**
(3 class hrs/wk 3 cr) F/Sp
An examination and analysis of traditional concepts, techniques, policies and operational systems in the police component of the criminal justice system. Special attention will be given to contemporary methods of police administration.

**CJ 220 INTRODUCTION TO SUBSTANTIVE LAW**
(3 class hrs/wk 3 cr) W
Surveys the historical development and philosophy of law and constitutional provisions; definition and classification of crimes and their application to the system of administration of justice; and legal research, case law and concepts of law as a social force.

**CJ 222 PROCEDURAL LAW**
(3 class hrs/wk 3 cr) W
Reviews the development of English common law and U.S. case law; the constitutional and statutory provisions relating to arrest, search and seizure; and the rights and responsibilities of citizens and criminal justice personnel agencies.

**CJ 225 CORRECTIONS LAW**
(3 class hrs/wk 3 cr) Sp
An examination of past and present appellate court cases involving due process issues pertaining to prisoners, probationers and parolees.

**CJ 226 CONSTITUTIONAL LAW**
(3 class hrs/wk 3 cr) W
A study of 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
Exploration of 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
An exploration of philosophy and programs of juvenile and adult probation supervision, after care, parole, half-way homes, work-and educational-release furlough, executive clemency and interstate compact practices. The dilemma of surveillance -- custody/control factors vs. supervision/treatment -- will be investigated.

**CJ 280 CWE LAW ENFORCEMENT**
(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su
An instructional program designed to give students practical experience in supervised employment related to law enforcement. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**CJ 280A CWE CORRECTIONS**
(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su
An instructional program designed to give students practical experience in supervised employment related to corrections. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**◆CS 121 COMPUTER LITERACY**
(3 class hrs/wk 3 cr) F/Sp
An introductory course on 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)
An introduction to 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)
A course introducing 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. Prerequisite: At least one programming language.

**◆CS 211 INTRODUCTION TO COMPUTER SCIENCE**
(5 class hrs/wk 4 cr) F/W/Sp
A course designed to teach 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
A study of 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) F/Sp
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) W
An introduction to 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) F
Course introducing the student to the task of developing commercial applications using structured design techniques, the syntax of the 74 and 8X 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)
Students design and 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) W
An 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 240C C LANGUAGE AND UNIX**
(4 class hrs/wk 5 cr) Sp
This course 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
Course designed for student majors other than business or economics. Emphasizes such major economic activities as supply and demand, fiscal policies of the United States, Federal Reserve functions, unemployment and international trade.

**■EC 201 PRINCIPLES OF ECONOMICS I**
(3 class hrs/wk 3 cr) F
An introduction to American capitalism, national income accounting, employment theory and fiscal policy.

**■EC 202 PRINCIPLES OF ECONOMICS II**
(3 class hrs/wk 3 cr) W
An introduction to monetary policy, economics of the firm and resource allocation. Prerequisite: EC 201 Principles of Economics.

**■EC 203 PRINCIPLES OF ECONOMICS III**
(3 class hrs/wk 3 cr) Sp
An introduction to 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 covering 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 covering 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)
A 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
A first, detailed look at the theory and policy of manpower economics, the role of trade unions, the causes of unemployment, the problems of maintaining full employment, negotiation techniques, and methods of settling labor disputes, including grievance procedures, conciliation and arbitration.

**■EC 220 CONTEMPORARY U.S. ECONOMIC ISSUES**
(3 class hrs/wk 3 cr)
Application of economic principles to selected issues affecting the US economy, including poverty, pollution and urbanization. Prerequisite: Instructor approval.

**ED 200 INTRODUCTION TO EDUCATION**
(3 class hrs/wk 3 cr) F/W/Sp
An overview of public elementary and secondary education to serve as an introduction for students considering careers in education. Emphasis is placed on 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
To enhance 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
Course 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
To assist students in developing their leadership potential through classroom discussion and field experience opportunities, both on the campus and in the community.

**ED 210 THEORY PRACTICUM IIA**
(15 class hrs/wk 6 cr) F/W/Sp
Students are assigned to a public school to develop competencies in the social foundations of education. The main objective of this course is to help students assess their interests in and potential for making teaching their career. Students will meet 10 hours during the term in seminar to discuss and assess their field experience.

**ED 280 CWE MEDIA**
(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 media. 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.

**◄EN 101,102,103 SURVEY OF ENGLISH LITERATURE**
(3 class hrs/wk 3 cr) F/W/Sp
Studies of representative works in English literature, for their inherent worth and for their reflection of the times in which they were written. EN 101, ballads through Milton; EN 102, Defoe through the Romantics; EN 103, Browning through Joyce. Note: No prerequisite, but EN 104, 105, 106 Introduction to Literature sequence is highly recommended.

**◄EN 104 INTRODUCTION TO LITERATURE**
(3 class hrs/wk 3 cr) F
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 are read in entirety when possible, with emphasis on elements such as structure, style, imagery, figurative language and musical devices.

**◄EN 107,108,109 WORLD LITERATURE**
(3 class hrs/wk 3 cr) F/W/Sp
Discusses masterpieces of western literature from the ancient world to the present.

**◄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
Intended for the above-average reader who wants to improve study skills and increase reading efficiency skills of speed, comprehension and vocabulary. Entrance to the course is determined by a placement exam or a designated level of achievement in Developmental Reading. Prerequisite: Testing placement or instructor approval.

**EN 199 READINGS AND CONFERENCE**
(1-3 class hrs/wk 1-3 cr)
A seminar allowing the student to select a specific literary topic (e.g. genre, theme, character type, style, influence, technique, an author's canon, etc.) for independent study with periodic guidance from an instructor.

**◄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.

**◄EN 211 ATHLETICS IN LITERATURE**
(3 class hrs/wk 3 cr)
Study of the literature of sports and its reflection of our culture and world. Course focuses mostly on works of 20th century American writers. Special emphasis will be placed on evolved myths of the athlete and 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, Transcendentalsim through Realsim and Naturalism; EN255, Naturalism to the present.

**◄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, and points out our literary and artistic indebtedness to the Biblical heritage.

**FN 225 NUTRITION**
(4 class hrs/wk 4 cr) F/W/Sp
Introduction to nutrients, their functions, sources, effects of deficiency and individual recommended daily allowances. Includes digestion and metabolism, socio-economic influences, infant nutrition and obesity. Current areas of interest in nutrition and food fads are discussed. Note: A background in chemistry is recommended.

**GE 101 ENGINEERING ORIENTATION**
(2 class hrs/wk 2 cr) F/W/Sp
Engineering oreintation course: develops skills in problem solving; introduces DC electric circuits. Prerequisite or Corequisite: MT 101 College Algebra.

**◆GE 102 ENGINEERING ORIENTATION**
(3 class hrs/wk 2 cr) F/W/Sp
A science, engineering-oriented introduction to FORTRAN programming. Topics covered are: input/output, arithmetic statements, transfer and control statements, arrays and subprograms. Prerequisite: MT 101 College Algebra.

**GE 103 ENGINEERING ORIENTATION**
(2 class hrs/wk 2 cr) F/Sp
Problem solving in elementary statics and strength of materials. Prerequisite: MT 101 College Algebra.

**GE 115 ENGINEERING GRAPHICS**
(6 class hrs/wk 3 cr) W/Sp
Introduction to graphic communication, including multiview and pictorial representation, conceptual design, spatial analysis, engineering applications, graphic analysis and solutions, and industrial procedures. Prerequisite: MT 101 College Algebra, or to be taken concurrently.

**GE 211 STATICS**
(4 class hrs/wk 4 cr) F
Introductory course in 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.

**GE 212 DYNAMICS**
(4 class hrs/wk 4 cr) W
A study of the dynamics of rigid bodies, including the kinematics and kinetics of single particles and systems of particles, linear momentum, moments of momentum, relative motion, energy and impulse momentum. Prerequisite: GE 211 Statics, Math 201 Calculus.

**GE 213 STRENGTH OF MATERIALS**
(4 class hrs/wk 4 cr) Sp
An introductory course in the mechanics of deformable bodies in equilibrium, treating the internal effects of external forces upon bodies and the interrelationships between stress and strain. Prerequisite: GE 211 Statics, MT 201 Calculus.

**GE 221 ELECTRICAL CIRCUIT FUNDAMENTALS**
(6 class hrs/wk 4 cr) F/W
Fundamentals of operating electrical circuits, including the resistive, inductive and capacitive elements driven by direct current and sinusoidal signals. Prerequisite: MT 210 Calculus.

**GE 222 ELECTRICAL CONTROL FUNDAMENTALS**
(6 class hrs/wk 4 cr) Sp
Operational amplifiers, steady-state power, resonance three-phase circuits, mutual inductance, the phasor and frequency dormains. Prerequisite: MT 202 Calculus; GE 221 Electrical Cirucit Fundamentals.

■ **GEO 105 NATURAL ENVIRONMENTS**
(3 class hrs/wk 3 cr) F
Survey of the physical environment, covering basic concepts of map interpretation, earth structure, land form processes, weather, climate, soils, natural vegetation and water resources.

■ **GEO 106 WORLD REGIONAL GEOGRAPHY**
(3 class hrs/wk 3 cr) W
Regional survey of the world, with emphasis on the influence of geographical conditions upon world affairs. Detailed examination of physical features and settlement patterns in the United States and in representative nations in other areas of the world.

■ **GEO 107 CULTURAL GEOGRAPHY**
(3 class hrs/wk 3 cr) Sp
Survey of man's major cultural characteristics and economic activities, as found in the United States and selected foreign countries. Emphasizes principles of economic development and resource utilization in advanced and developing nations.

**GEO 190 ENVIRONMENTAL STUDIES**
(3 class hrs/wk 3 cr)
Introduction of representative problems in man's relationship with the environment, with emphasis on the Pacific Northwest.

■ **GEO 207 GEOGRAPHY OF OREGON**
(3 class hrs/wk 3 cr)
Regional survey of Oregon landforms, climate, natural resources and history of settlement. Makes detailed examination of regions within the state, with emphasis on significant issues in evnironment 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)
Introduction to representative problems in man's relationship with the environment. Emphasis is on significant problems occuring 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
Survey course providing liberal-arts students and non-science majors with a broad background in physical sciences. GS 104, fundamental principles of physics; GS 105, principles of chemistry; GS 106, nuclear energy, astronomy, meteorology and earth science. Note: May not be taken if six or more hours of college-level chemistry or physics have been completed. Prerequisite: 1.110 Elements of Algebra or equivalent.

● **GS 107 OCEANOGRAPHY**
(3 class hrs/wk 3 cr) F
Introductory course in oceanography, examining the four major categories of oceanographic study: geological, physical, chemical and biological. Emphasizes the geological and geophysical aspects of the seafloor; physical and chemical properties of seawater, waves, tides, ocean circulation and currents; marine ecosystems; and ocean utilization.

● **GS 112 ASTRONOMY**
(3 class hrs/wk 3 cr) F/Sp
Introductory course covering 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
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, emphasizing field study of plants, animals, land, water and climate. Includes courses such as Columbia River Biology, Malheur Ecology, Yaquina Bay Biology, Cascade Lakes Ecology and Crater Lake Ecology. Note: Most courses involve a weekend 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 will be screened for transferable credit. The number of credits given depends upon the nature of the study and the amount of effort needed to accomplish the task.

**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
An overview of LBCC programs, services and degree requirements. Skills designed to promote college success will be 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 116 HUMAN POTENTIAL & SELF MOTIVATION**
(2 class hrs/wk 2 cr)
A small-group experience that stresses positive attitude development and discovery of personal potential. Includes self-confidence, interpersonal understanding, goal setting and clarification of personal values.

**HD 190 ASSERTIVENESS TRAINING**
(1 class hrs/wk 1 cr) F/W/Sp
Facilitates learning communication skills based on a foundation of respect for self, respect for others and respect from others.

**HD 204 ELIMINATING SELF-DEFEATING BEHAVIOR**
(2 class hrs/wk 2 cr) F/W/Sp/Su
Learn to eliminate behaviors that prevent you from effectively using your potential, such as smoking, overeating, perfectionism, lack of motivation or excessive worry.

**HD 206 COPING SKILLS FOR STRESS**
(2 class hrs/wk 2 cr)
A practical "how to" class in physical and mental relaxation. Students learn the "fight or flight" theory and how long-term stress affects the body. Also develops increased understanding of how nutrition and exerices contribute to relaxation.

**HD 208 CAREER PLANNING**
(3 class hrs/wk 3 cr)
Helps define career, develop personal awareness and practice decision making. A combination of lecture and group discussions teaches methods of career selection, emphasizing development as an on-going process.

**HD 290 APPLIED ASSERTION**
(2 class hrs/wk 2 cr) F/W/Sp
This course 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
This course helps students develop self-confidence in working with preschool children by actively particpating 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)
A study of 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 will be presented. The course will follow a gender-based focus and include cross-cultural material.

**HDF 222 PARTNER RELATIONSHIPS**
(3 class hrs/wk 3 cr)
This course focuses on interpersonal relationships in a changing society. Love, sexual standards, sexuality, expectations for partner relationships, and communication will be covered. In addition, the various pressures and stresses (societal, personal, economic, legal, and interpersonal) will be studied.

**HDF 225 CHILD DEVELOPMENT**
(3 class hrs/wk 3 cr)
This course is designed to provide an introduction to basic issues and current research on the topic of the growth and development of children within a family context. While concerned with human development through the middle childhood years, special emphasis will be placed on the early years, including prenatal and infant development. The course will be presented primarily through lectures, with occasional films and guest speakers.

**HDF 226 GROWING YEARS**
(3 class hrs/wk 3 cr)
How and why children develop the way they do is the subject of The Growing Years, a television course. The principle theme of The Growing Years is the Interplay of biological factors, individual personality, social structure, and other environmental forces in shaping the growing child. Topics range from 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)
This course is designed to develop 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)
Study of the family as an influence in the socialization and general development of individuals. Contemporary family practices, styles and issues as developmental factors will be discussed, and new ways of approaching family roles explored.

**HDF 290 FOOTSTEPS**
(3 class hrs/wk 3 cr)
This course provides students with a theoretical framework for understanding the dynamics of communication between parents and children. Note: Presented in conjunction with the Oregon Public Broadcasting System telecourse and includes bi-weekly meetings.

**HE 112 EMERGENCY FIRST AID**
(10 class hrs/wk 1 cr)
The course 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 201 A LIVING LOOK AT DEATH**
(3 class hrs/wk 3 cr)
Death, a universal concern without universal perspectives. Through a variety of teaching techniques, sutdents will be assisted to a better understanding of this puzzling aspect of life. Different cultural perspectives will be the primary focus of this course.

**HE 207 STRESS MANAGEMENT**
(3 class hrs/wk 3 cr)
Course is designed for students to develop a clear understanding of the meaning of stress in their everyday life. Student will learn how they react and adjust to stressons. Relaxation techniques will be 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
First aid instruction and practice in first aid skills that will enable one to take care of himself and to be able to aid others in the event of an accident or illness.

**HE 261 CARDIO PULMONARY RESUSCITATION**
(9 class hrs/wk 1 cr)
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
Course is an exploration of 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)
Introduction to home economics as a dynamic profession, world wide in scope, which 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 HONOR COLLOQUIUM**
(3 class hrs/wk 3 cr) F/W/Sp
An interdisciplinary course that 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.

**HS 207 COUNSELING ADULT CHILDREN OF ALCOHOLICS**
(2 class hrs/wk 2 cr)
Course will provide 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
Survey of the origin and development of contemporary western civilization, emphasizing the influence of specific countries and historical periods. HS 101, Ancient to Medieval era; HS 102, Medieval era through French Revolution; HS 103, French Revolution to present.

**HST 191 CHINA: SOCIETY AND CULTURE TO 1911**
(3 class hrs/wk 3 cr)
Introduces Chinese society and culture from prehistoric times to foundng 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)
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
Survey of the history of the United States of American. HS 201, Colonization to Jackson presidency; HS 202, Jackson presidency to WWI, HS 203, WWI to present.

**HST 215 SOCIAL HISTORY OF OREGON**
(3 class hrs/wk 3 cr)
Designed to familiarize 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)
Examination of the origins and growth of the labor movement in the U.S. from the colonial period through industrialization and up to the legitimization of organized labor in '30s and '40s. Stress placed on the impact of industrialization upon labor and its politcal, economic and ideological consequences.

**■HST 224 LABOR TODAY**
(3 class hrs/wk 3 cr)
Examination of the continuing interactions among unions, management and government and the changing conditions of work due to technological development and the globalization of production. Emphasis on 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)
Exploration of the historical events that influenced 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)
Course is intended as a survey of the industrial development of man's use of metals and the socio-economic impacts of the development of metals and materials technologies. The course will emphasize the relationship of science technology and society.

**IS 252 INTRODUCTION TO INTERNATIONAL STUDIES**
(3 class hrs/wk 3 cr)
Introduces first and second-year students to non-western cultures by reading novels, viewing films and interviewing guests from non-western countries. Students learn that all cultures must meet the needs of people, but the manner in which these needs are met is what makes cultures unique.

**JN 134 INTRODUCTION TO PHOTOGRAPHY**
(3 class hrs/wk 2 cr) F/W/Sp
Introduction to black and white photography, including skills in exposure, camera handling, composition, developing and printing. Note: A limited number of cameras are available for check-out.

**JN 199 NEWSPAPER MAKEUP**
(4 class hrs/wk 2 cr) F/W/Sp
Supervised work on the college's student newspaper (The Commuter) to gain practical experience in application of graphic arts skills. Note: May be repeated for a maximum of 6 credits. Prerequisite: AA 120 Layout and Pasteup Procedures; AA 263 Process Camera; or instructor approval.

**JN 215 JOURNALISM LAB**
(3 class hrs/wk 1 cr) F/W/Sp
Supervised work on the college's student newspaper (The Commuter) in reporting, photography, editing or advertising. Note: Course serves as the lab for JN 216, 217 Reporting I and II, JN 218 Copy Editing and Makeup; may also be taken independently from those courses. Note: May be repeated for up to 6 credits.

**JN 216 REPORTING I**
(3 class hrs/wk 3 cr) F/W/Sp
Introduction to basics of journalistic writing, with emphasis on assignments to be used in the student newspaper. Students study interviewing and other news gathering techniques, effective writing of news and features, and journalistic ethics while gaining reporting experience. Prerequisite: JN 215 Journalism Lab, to be taken concurrently.

**JN 217 REPORTING II**
(3 class hrs/wk 3 cr) Sp
Journalistic writing emphasizing feature writing, in-depth reporting, interpretive writing and interviewing skills. Students submit articles for publication, generally in the student newspaper. Prerequisite: JN 216 Reporting I; JN 215 Journalism Lab, to be taken concurrently.

**◆JN 218 COPY EDITING AND MAKEUP**
(3 class hrs/wk 3 cr) W
Introduction to copy editing, page makeup, photo editing, headline writing and editorial decision-making, with skills applied to production of the student newspaper. JN 215 Journalism Lab, to be taken concurrently.

**JN 225 ADVERTISING & PUBLIC RELATIONS**
(3 class hrs/wk 3 cr) Sp
Overview of advertising and public relations, including public information methods, copywriting, design, marketing, use of printing technology and historical and journalistic perspectives on the fields.

**JN 234 INTERMEDIATE PHOTOGRAPHY**
(3 class hrs/wk 2 cr) F/W/Sp
Introduces refinements in black and white photography, with emphasis on photojournalism techniques. Composition, lighting, exposure, darkroom techniques and approaches to documentary assignments will be 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
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
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
Performance-oriented class using vocal music that presents different problems and styles. Note: Each class may be repeated for up to 6 credits.

**MP 131/231 MADRIGALS-CHAMBER CHOIR**
(2 class hrs/wk 1 cr) F/W/Sp
Study and performance of early to contemporary literature. Note: Each class may be repeated three times for credits.

**MP 151/251 REHEARSAL AND PERFORMANCE**
(2-6 class hrs/wk 1-3 cr)
Course offers credit for music rehearsal directly related to Performing Arts Department performance. Note: Each class may be repeated 3 times for credit.

**MP 171/271 INDIVIDUAL LESSONS PIANO**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in piano. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 174/274 INDIVIDUAL LESSONS VOICE**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in voice. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 178/278 INDIVIDUAL LESSONS BASS**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in bass. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 180/280 INDIVIDUAL LESSONS GUITAR**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in guitar. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 181/281 INDIVIDUAL LESSONS FLUTE**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in flute. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 183/283 INDIVIDUAL LESSONS CLARINET**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in clarinet. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 184/284 INDIVIDUAL LESSONS SAX**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in saxophone. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 186/286 INDIVIDUAL LESSONS TRUMPET**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in trumpet. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MP 188/288 INDIVIDUAL LESSONS TROMBONE**
(1 class hrs/wk 1 cr) F/W/Sp
Individual instruction in trombone. Note: Requires additional tutorial fee. Each may be repeated for up to 3 credits. Prerequisite: Instructor approval.

**MS 111 MILITARY SCIENCE I**
(1 class hrs/wk 1 cr) F/W/Sp
Organization and purpose of ROTC; outline of ROTC and how ROTC functions as part of the U.S. Army.

**MS 112 MILITARY SCIENCE I ARMY OFFICER**
(1 class hrs/wk 1 cr)
Description 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)
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
History of the American soldier from 1775 to present; weaponry and tactics of the American Army.

**MS 212 MILITARY SCIENCE II-LEADERSHIP DEVELOP.**
(2 class hrs/wk 2 cr)
A close look at effective leadership; includes practical exercises through use of case studies.

**MS 213 MILITARY SCIENCE II-BASIC MILITARY OPER.**
(2 class hrs/wk 2 cr)
A short outline of basic U.S. Army tactics in a variety of situations, plus skills necessary to accomplish the missions.

**● MT 100 INTERMEDIATE ALGEBRA**
(4 class hrs/wk 1-4 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
Introduction to relations and linear, quadratic, exponential, polynomial and logarithmic functions. Includes theory of equations, linear inequalities, systems of equations, matrices and determinants. Prerequisite: MT 100 Intermediate Algebra 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 with emphasis on 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
Introduction to 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
Mathematics for students in technical programs with emphasis on solving applied problems. Includes oblique triangle trigonometry, trigonometric identities and equations, complex numbers, exponential and logarithmic functions and analytic geometry. Prerequisite: MT 101T College Algebra: Technical or equivalent.

**●MT 106 ELEMENTARY CALCULUS: TECHNICAL**
(4 class hrs/wk 4 cr)
Mathematics for students in technical programs with emphasis on solving applied problems. Includes differential and integral calculus. Prerequisite: MT 102T Trigonometry: Technical or equivalent.

**●MT 110 ANALYTIC GEOMETRY**
(4 class hrs/wk 4 cr) F/W/Sp/Su
Introduction to conic sections, polar coordinates, polar graphs, vectors, translations and rotations. Prerequisite: MT 102 Trigonometry or equivalent.

**●MT 161 MATH BIOLOGICAL/MANAGEMT/SOCIAL SCIENCES**
(4 class hrs/wk 4 cr) F/W/Sp
Survey of linear equations, inequalities, linear programming, the simplex methods and game theory. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**●MT 162 MATH BIOLOGICAL/MANAGEMT/SOCIAL SCIENCES**
(4 class hrs/wk 4 cr) F/W/Sp
Mathematics of finance, survey of probability and probability models, with an introduction to statistics. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**●MT 163 MATH BIOLOGICAL/MANAGEMT/SOCIAL SCIENCES**
(4 class hrs/wk 4 cr) F/W/Sp
Intuitive development of the calculus of polynomial, exponential and logarithmic functions, and extrema theory and applications. Prerequisite: MT 100 Intermediate Algebra or equivalent.

**◆MT 173B MICROCOMPUTERS: BASIC**
(4 class hrs/wk 3 cr) F/W/Sp/Su
Introduction to the BASIC language for computing devices and its use in solving problems related to the student's field of interest.

**◆MT 173P MICROCOMPUTERS: PASCAL**
(4 class hrs/wk 3 cr)
Introduction to the PASCAL language for computing devices and its uses in solving problems related to the student's field of interest.

**◆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 233B Advanced Basic Programming.

**◆MT 175 MICROCOMPUTER ASSEMBLY PROGRAMMING**
(4 class hrs/wk 3 cr) F/W/Sp
Introduction to microcomputer assembly level programming. Topics include use of registers, modes of addressing, 1- and 2-Byte arithmetic operations, use of the hardware stack, list processing and bit processing. The 6502 microprocessor will be used. Prerequisite: A high level programming language such as BASIC, FORTRAN, COBOL, etc.

**●MT 191,192,193 MATH FOR ELEMENTARY TEACHERS**
(3 class hrs/wk 3 cr) F/W/Sp
Development of the basic mathematical concepts and understanding for teaching elementary and middle school mathematics. Topics to be covered include problem solving, whole numbers, computation, fractions, ratio, proportion, decimals, integers, measurement, probability, statistics and geometry. Prerequisite: MT 100 Intermediate Algebra. MT 199 must be taken concurrently.

**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 that 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
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
Introduction to ordinary differential equations, applications, series solutions to differential equations, and LaPlace transforms. Prerequisite: MT 203 Calculus.

●◆**MT 233 INTRO TO NUMERICAL COMPUTATION**
(4 class hrs/wk 4 cr)
Computer programming and numerical methods applied to problems in business, mathematics, physics, biology, engineering and other sciences. Prerequisite: MT 200 Calculus; knowledge of a high level language, preferably FORTRAN or BASIC.

●**MT 241 ELEMENTARY LINEAR ALGEBRA**
(4 class hrs/wk 4 cr)
Covers matricies, 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
Fundamentals of music for the non-music major: music reading, simple chord structure, introduction to harmony, singing and selected instruments (recorder and piano).

◄**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 GROUP PIANO**
(2 class hrs/wk 2 cr) F
Classroom instruction for the beginning piano student.

**MU 134,135 GROUP VOICE**
(2 class hrs/wk 2 cr) W
Classroom instruction for the beginning voice student. Note: Must be taken in sequence.

◄**MU 161 MUSIC APPRECIATION**
(3 class hrs/wk 3 cr) F/W/Sp
A general survey of many music styles, with emphasis on developing music listening skills.

◄**MU 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)
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 and rates, training and education, and career patterns. The course also covers naval courtesy and customs, military justice, leadership and nomenclature. Course 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
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 of 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)
Course outlines the theory and employment of weapons systems. Student explores the processes of detection, evaluation, threat analysis, weapon selection, delivery, guidance and explosives. Fire control systems and major weapon types are discussed, including capabilities and limitations. 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
Survey of 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. Course also treats 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 111 STENOGRAPHY I**
(5 class hrs/wk 1-3 cr) F/W/Sp
Introduces the theory of Gregg shorthand, including the alphabet, brief forms, phrasing and abbreviating principles. Students advance at their own rates.

**OA 112 STENOGRAPHY II**
(5 class hrs/wk 1-3 cr) F/W/Sp
Course provides completion of shorthand theory and review of all principles. Develops ability to construct new outlines rapidly from dictation and lays a solid foundation for further development of dictation and transcription skill. Students advance at their own rate. Prerequisite: OA 111 Stenography I or equivalent.

**OA 114 ALPHABETIC SHORTHAND**
(5 class hrs/wk 3 cr) F/W
Course designed for people needing 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, hi-frequency words, hi-frequency letter groups, prefix and suffix rules, and phrasing and abbreviating principles. Emphasizes development of speed and accuracy in dictation and transcription.

**OA 115 STENOGRAPHY REFRESHER**
(5 class hrs/wk 1-4 cr)
Course designed for the individual who already has a shorthand background and desires to review theory as well as build shorthand speed and transcription accuracy. Note: This course may be repeated for credit. Prerequisite: OA 112 Stenography II or equivalent; OA 121B Basic Production Typing or equivalent.

**OA 121A TYPING I: KEYBOARDING**
(5 class hrs/wk 1-2 cr) F/W/Sp
Beginning typing 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 will be using 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
Continued emphasis on development of speed and accuracy. Introduction to typing of letters and manuscripts. Individualized instruction; students may advance at their own rate. Note: Five-week class.

**OA 122 TYPING II**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Continued units on correspondence, tabulation, business forms, manuscripts, secretarial projects, speed and accuracy, and number proficiency. Provides individualized instruction; students advance at their own rate. Prerequisite: OA 121B Basic Production Typing or equivalent.

**OA 123 TYPING V SKILL BUILDING**
(5 class hrs/wk 3 cr) F/W/Sp/Su
Course provides special emphasis on speed and accuracy, with special drills to work on numbers and remedial techniques. Note: This course may be repeated for credit. Prerequisite: OA 121A Typing Keyboarding or equivalent.

**OA 124 TYPING III**
(5 class hrs/wk 1-3 cr) F/W/Sp/Su
Continued units on correspondence, tabulation, business forms, manuscripts, secretarial projects, speed and accuracy, and number proficiency. Provides individualized instruction; students advance at their own rate. Prerequisite: OA 122 Typing II or equivalent.

◆ **OA 201A WORD PROCESSING--WORD PERFECT**
(4 class hrs/wk 1 cr) F/W/Sp/Su
Basic class in using Word Perfect 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 121 Typing Keyboarding.

◆ **OA 201B INTRODUCTION TO WORD PROCESSING**
(3 class hrs/wk 1 cr) F/W/Sp
A course for students who have little or no computer experience. Includes hands-on experience on the personal computer with both DOS and Micro-Use Word, a word processing package similar to Word Star. Note: Five-week class. Prerequisite: OA 121A Typing Keyboarding.

◆ **OA 202A ADVANCED WORD PERFECT**
(4 class hrs/wk 1 cr)
Course adds to the student's basic skills in the use of Word Perfect software. Includes working with columns of text, macros, merge/sort, mailing lists and envelopes. Note: five-week pass/no pass course.

**OA 211 APPLIED STENOGRAPHY I**
(6 class hrs/wk 3 cr) W/Sp
A thorough and extensive review of Gregg shorthand, advanced principles, phrases, shortcuts and dictation covering vocabularies representative of various types of business. Basic skills of office work are stressed. Prerequisite: OA 112 Stenography II or equivalent, with a minimum of 70 wpm.

**OA 212 APPLIED STENOGRAPHY II**
(6 class hrs/wk 3 cr) W/Sp
A continuation of OA 211 Applied Stenography I, emphasizing speed, accuracy and secretarial standards. Included are legal and technical dictation and transcription. Prerequisite: OA 211 Applied Stenography I or equivalent.

**OA 214 APPLIED ALPHABETIC SHORTHAND**
(5 class hrs/wk 3 cr) Sp
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. Emphasis is placed on developing transcription skills, including correct forms, punctuation, capitalization and spelling. Prerequisite: OA 121A Typing Keyboard; 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 transfer to a four-year college or university. Includes the study of motion, forces, momentum and energy, vibrations, wave motion, sound and light, optics, heat, electricity and magnetism, elementary atomic and nuclear physics, and special relativity. Note: Must be taken in sequence. Calculator with trigonometric functions, 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
Calculus-based principles of physics for students in science and engineering. Includes mechanics, electricity and magnetism, wave motion, light, sound and heat. Note: Must be taken in sequence. Calculator with trigonometric functions, logarithms, scientific notation, and linear regression required. Prerequisite to P 211: MT 200 Calculus; MT 201 Calculus to be taken concurrently. Prerequisite to P 212: P 211 General Physics, MT 201 Calculus; with MT 202 Calculus to be taken concurrently. 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. Course 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 objetives and number of hours worked. Prerequisite: CWE coordinator approval.

**PE 180 BEGINNING BASKETBALL: WOMEN**
(3 class hrs/wk 1 cr)
Basic basketball skills and concepts. Begins with fundamentals and works towards a full court situation.

**PE 180 INTERMEDIATE BASKETBALL: WOMEN**
(3 class hrs/wk 1 cr) W
Course designed to advance the beginning basketball player's skills toward better success in a game situation. Prerequisite: PE 180 Beginning Basketball Women.

**PE 180 ADVANCED BASKETBALL: WOMEN**
(3 class hrs/wk 1 cr) F/W
Prepares the student for competition at the intercollegiate level. Note: Requires five meetings a week plus participation in 30 games. Prerequisite: Instructor approval.

**PE 180 ADVANCED SOFTBALL: WOMEN**
(3 class hrs/wk 1 cr) Sp
An advanced women's fast pitch softball course which will emphasize the finer aspects of the fast pitch game, including offensive and defensive skills and coaching strategies. Prerequisite: Instructor approval.

**PE 180 ADVANCED VOLLEYBALL: WOMEN**
(3 class hrs/wk 1 cr) F
This course is designed to prepare students for competition at the intercollegiate level. The emphasis of the course is on the development of skills for competitive play. Prerequisite: Instructor approval.

**PE 185 AQUATIC FITNESS: C0-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Water exercises using muscles of a specific area of the body while submerged in water.

**PE 185 ARCHERY: CO-ED**
(3 class hrs/wk 1 cr) F/Sp
Introduction to fundamentals of archery, safety and proper use of equipment.

**PE 185 BEGINNING BADMINTON: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstrates singles and doubles play, plus teamwork involved.

**PE 185 INTERMEDIATE BADMINTON: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
More advanced instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstrates singles and doubles play, plus teamwork involved.

**PE 185 BODY CONDITIONING: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Instruction and practice in exercises that condition the body. Designed to develop a level of strength, flexibility and endurance which enables one to maintain an erect carriage, complete one's work, participate in active recreation and possess a reserve of energy.

**PE 185 BEGINNING BOWLING: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Course stresses bowling fundamentals. Provides basic foundation from which students may progress to advanced bowling skills.

**PE 185 INTERMEDIATE BOWLING: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Course increases skills and techniques of bowling. Rules and courtesies of the game as well as social and recreational value to the student are stressed.

**PE 185 ADVANCED BOWLING: CO-ED**
(3 class hrs/wk 1 cr) W/Sp
An advanced class for increasing skills and techniques of bowling. Rules and courtesies of the game as well as social and recreational value to the student are stressed.

**PE 185 CROSS COUNTRY: CO-ED**
(3 class hrs/wk 1 cr) F
Activity course designed to improve each individual's cardiovascular system through distance running. Also deals with training methods and procedures for improvement of distance runners and strategies which may be employed in cross country running.

**PE 185 DANCE AEROBICS: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
An exercise program choreographed to music, designed to tone, trim and firm all body muscle groups as it strengthens and conditions the cardiovascular system.

**PE 185 BEGINNING GOLF: CO-ED**
(3 class hrs/wk 1 cr) F/Sp
Introduction to the mental and physical needs involved in golf, including grip, stance, swing techniques, rules, strategy and etiquette.

**PE 185 INTERMEDIATE GOLF: CO-ED**
(3 class hrs/wk 1 cr) Sp
A more detailed presentation of golf techniques and strategy, designed to improve and correct basic swing errors.

**PE 185 ADVANCED GOLF: CO-ED**
(3 class hrs/wk 1 cr) Sp
Intercollegiate as well as recreational golf, emphasizing development of skills during competitive play.

**PE 185 BEGINNING GYMNASTICS: CO-ED**
(3 class hrs/wk 1 cr)
Instruction and practice in tumbling and use of gymnastic apparatus.

**PE 185 INTERMEDIATE GYMNASTICS: CO-ED**
(3 class hrs/wk 1 cr)
Intermediate instruction and practice in tumbling and use of gymnastic apparatus.

**PE 185 JOGGING: CO-ED**
(3 class hrs/wk 1 cr) F/Sp
Instruction and practice in jogging to increase maximum amount of oxygen that the body can process in a given time.

**PE 185 BEGINNING JUDO: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Judo is a contact sport, emphasizing the fundamentals of Kodokan judo skills with the philosophy of cultivation of one's mind and body to the fullest. Emphasizes defensive and offensive workouts.

**PE 185 INTERMEDIATE JUDO: CO-ED**
(2-3 class hrs/wk 1 cr) F/W/Sp
More in-depth course in judo as a contact sport, emphasizing fundamentals of Kodokan judo skills with the philosophy of the cultivation of one's mind and body to the fullest. Emphasizes defensive and offensive workouts.

**PE 185 BEGINNING KARATE: CO-ED**
(2-3 class hrs/wk 1 cr) F/W/Sp
Introduction to basic TAE Kwon Do (Korean Karate). Includes blocks, kicks, punches, forms and some freestyle, with emphasis on establishing and maintaining good body condition.

**PE 185 INTERMEDIATE KARATE: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Karate skills will be taught in blocking, kicking, punches and forms, with emphasis on body condition and physical fitness. Prerequisite: Basic skills acquired in TAE Kwon Do or beginning Karate course, or instructor approval.

**PE 185 BEGINNING MODERN DANCE: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Introduction to the use of the human body in space and time, examining elements of modern dance technique.

**PE 185 INTERMEDIATE MODERN DANCE: CO-ED**
(3 class hrs/wk 1 cr)
Development of technique through exposure to historical and contemporary modern dance trends. Prerequisite: Three credits of PE185 Beginning Modern Dance or instructor approval.

**PE 185 BEGINNING RACQUETBALL: CO-ED**
(2 class hrs/wk 1 cr) F/W/Sp
Instruction and practice in stances, grips, service strokes, scoring rules and strategy. Demonstrates singles and doubles play.

**PE 185 INTERMEDIATE RACQUETBALL: CO-ED**
(2 class hrs/wk 1 cr) F/W/Sp
More advanced instruction and practice in racquetball, with a detailed presentation of technique and strategy.

**PE 185 RELAXATION: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
A course designed to increase skill in relaxation techniques.

**PE 185 SOFTBALL: CO-ED**
(3 class hrs/wk 1 cr) Sp
Provides instruction and experience in fundamental softball skills, as well as providing game experience. Emphasizes slow pitch rather than fast pitch style of play.

**PE 185 BEGINNING SWIMMING: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Instruction and practice in individual basic water skills and safety while in or about the water.

**PE 185 INTERMEDIATE SWIMMING: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Instruction and practice in individual water skills and safety while in, on or about the water. Provides opportunity to learn elements of good swimming.

**PE 185 ADVANCED SWIMMING: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Instruction and practice in skills to increase endurance and versatility in the water.

**PE 185 BEGINNING TENNIS: CO-ED**
(3 class hrs/wk 1 cr) F/Sp
Instruction and practice in rules, etiquette, grip, stance, forehand and backhand drives, service, volley, lob, overhead smash, receiving, playing position and class play, and game strategy for both singles and doubles.

**PE 185 INTERMEDIATE TENNIS: CO-ED**
(3 class hrs/wk 1 cr) F/Sp
Advanced tennis strategies and skills.

**PE 185 ADVANCED TENNIS: CO-ED**
(3 class hrs/wk 1 cr) Sp
This course is designed to prepare students for competition, emphasizing development of skills for competitive play. Prerequisite: Instructor approval

**PE 185 ADVANCED TRACK: CO-ED**
(3 class hrs/wk 1 cr) Sp
Develops sophisticated skills and techniques for intercollegiate competition.

**PE 185 TRACK SKILLS: CO-ED**
(3 class hrs/wk 1 cr) W/Sp
Individualized practice in and concentration on development of skills and techniques in selected track and field events.

**PE 185 BEGINNING VOLLEYBALL: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Introduction to skills and techniques basic to volleyball, including different offensive and defensive forms of team play, strategies, etiquette and rules of the game.

**PE 185 INTERMEDIATE VOLLEYBALL: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
This course is designed for the player who has mastered beginning volleyball skills. A major emphasis will be to increase player abilities within a team situation.

**PE 185 ADVANCED VOLLEYBALL: CO-ED**
(3 class hrs/wk 1 cr)
This course is designed to increase skill levels and mental strategies. Course emphasis is to increase player abilities within a team situation.

**PE 185 AEROBIC WEIGHT TRAINING: CO-ED**
(3 class hrs/wk 1 cr) F/W/Sp
Students are exposed to an exercise program designed to increase strength, flexibility, coordination with a major emphasis placed 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
Introduction to fundamental baseball skills.

**PE 190 INTERMEDIATE BASEBALL: MEN**
(3 class hrs/wk 1 cr) F/W/Sp
Course allows student to refine basic baseball skills in hitting, fielding and throwing. Team offensive and defensive strategies and alignments will also be covered.

**PE 190 ADVANCED BASEBALL: MEN**
(3 class hrs/wk 1 cr) Sp
Course designed to prepare students for intercollegiate competition in baseball.

**PE 190 BASEBALL CONDITIONING: MEN**
(3 class hrs/wk 1 cr) W
Physical conditioning with emphasis on developing strength and agility for better efficiency in baseball skills.

**PE 190 BASEBALL SKILLS: MEN**
(3 class hrs/wk 1 cr) W
Offers students the opportunity to learn and improve individual baseball skills.

**PE 190 BEGINNING BASKETBALL: MEN**
(3 class hrs/wk 1 cr)
Basic basketball skills and concepts for the beginner. Begins with fundamentals and works toward a full court situation.

**PE 190 INTERMEDIATE BASKETBALL: MEN**
(3 class hrs/wk 1 cr) F/W
Course is designed to advance the beginning basketball player's skills toward better success in a game situation. Prerequisite: PE 190 Beginning Basketball Men.

**PE 190 ADVANCED BASKETBALL: MEN**
(3 class hrs/wk 1 cr) F/W/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
Course designed to develop skills fundamental to flag football. Note: Organization of class will depend upon skill level.

**PE 194 PROFESSIONAL ACTIVITIES**
(4-6 class hrs/wk 2 cr) F/W/Sp
Courses providing technical information for prospective teachers of various physical education activities. Includes six-week sessions in softball, personal conditioning, basketball and volleyball, and a 12-week session in swimming.

**PE 199 TRIATHLON TRAINING**
(4 class hrs/wk 2 cr) Sp
Triathlon Training is designed for the beginning and/or intermediate triathlete. The class uses the benefits of swimming, cycling and running to increase total overall fitness, develop strength, proficiency and endurance.

**PE 231 LIFETIME WELLNESS**
(3 class hrs/wk 3 cr) F/W/Sp
A course designed for students who want to increase their general fitness and gain knowledge in lifetime wellness strategies. Specific emphasis is on nutrition, stress management and physical fitness.

**PE 232 BACKPACKING/ORIENTEERING**
(3 class hrs/wk 3 cr) F/Sp/Su
Course designed to prepare the individual for safe, challenging and enjoyable wilderness trips. Emphasizes physical conditioning, equipment, clothing, food, safety and the use of map and compass.

**PE 280 CWE 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
Riding and Theory I teaches the fundamentals of Western riding, including safety, equipment, saddling, mounting, the aids, balance and control.

**◄PHL 201 PROBLEMS OF 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.

**PS 104 PROBLEMS IN AMERICAN POLITICS**
(3 class hrs/wk 3 cr)
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)
The student is required to make an in-depth review of current knowledge about a political science topic. Intended primarily for the political science major to develop skills in independent research. Prerequisite: WR 123 English Composition.

**PS 201 AMERICAN GOVERNMENT**
(3 class hrs/wk 3 cr) F
First course of a three-part sequence, focusing on the structure of power in the United States and the functions, sources and uses of power in American politics.

**PS 202 AMERICAN GOVERNMENT**
(3 class hrs/wk 3 cr) W
Second course of a three-part sequence, focusing on public policy-making: what political institutions do and how they do it. Also emphasizes mechanisms and outcomes of the policymaking process.

**PS 203 AMERICAN GOVERNMENT**
(3 class hrs/wk 3 cr) Sp
Third course of a three-part sequence, focusing on local political institutions and the relationship of citizens to them, especially the significance and operation of participatory institutions.

**PS 204 GOVT REGULATION OF BUSINESS & ECONOMY**
(3 class hrs/wk 3 cr)
An analysis of selected U.S. national government policies and regulatory devices in areas of business and the economy. Emphasis on 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
An examination of the historical development of relations among nations, emphasizing predominant economic and political characteristics of the contemporary international system. Topics include problems of development, imperialism, world environmental and resource issues, and international conflict.

**PS 207 INTRODUCTION TO POLITICAL SCIENCE**
(3 class hrs/wk 3 cr) F/W/Sp
Introduction to 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)
An analysis of selected U.S. foreign policy decisions and problem areas. Emphasis on attempts to provide world order and management of 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
A study of 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. Integrating physiological, intrapsychic and social/behavioral perspectives on human thought and behavior.

**PY 111 PERSONAL DEVELOPMENT**
(3 class hrs/wk 3 cr) F/W/Sp
A small-group experience in interpersonal communication and group dynamics, emphasizing communication of feelings and self-responsibility.

**PY 198 RESEARCH TOPICS**
(1 class hrs/wk 1 cr)
In-depth examination of a selected psychological topic, intended primarily for the psychology major, to develop skills in independent research. Prerequisite: WR 123 English Composition; 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
Introduction to the use of objective, scientific procedures in the study of behavior and mental processes. Provides brief overview of the scope of psychology followed by a more concentrated study of biological and developmental processes, perception and consciousness. Note: Recommended for second-year students.

**PY 202 GENERAL PSYCHOLOGY**
(3 class hrs/wk 3 cr) W/Sp
Survey of current knowledge in 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
Survey of current knowledge about personality and its assessment; conflict and stress; abnormal psychology, including methods of therapy; and social psychology. Note: Recommended for second-year students. Prerequisite: PY 202 General Psychology.

**PY 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. Emphasis is on learning to use social psychology in life situations. Note: Will not substitute for PY 201, 202, 203 General Psychology sequence.

■**PY 217 SOCIAL PSYCHOLOGY II**
(3 class hrs/wk 3 cr)
Surveys the influence of psychology on culture, society, groups and individuals. Topics include altruism, aggression, sexual behavior, social exchange, cooperation and competition, environment and social behavior. Emphasis is on learning to use social psychology in life situations. Note: Will not substitute for PY 201, 202, 203 General Psychology sequence.

**PY 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
Course provides student with an introduction to the field of recreation and leisure as a profession. Includes personal leisure awareness and self-evaluation.

**SD 101 ELEMENTS OF SUPERVISION**
(3 class hrs/wk 3 cr) F
Introduction to responsibilities of a supervisor in industry, such as organization, duties and responsibilities, human relations, grievance, training, rating, promotion, quality-quantity control and management-employee relations.

**SD 107 SUPERVISORY PSYCHOLOGY**
(3 class hrs/wk 3 cr) W
Course assists 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.

**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)
A study of 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.

**SO 198 RESEARCH TOPICS**
(1 class hrs/wk 1 cr)
The student is required to make in-depth review of current knowledge about a sociological topic. Intended primarily for the sociology major to develop skills in independent research. Prerequisite: WR 123 English Composition.

■**SO 204 GENERAL SOCIOLOGY**
(3 class hrs/wk 3 cr)
Introduction to the sociological perspective: the components of society and social organization, culture, socialization and stratification.

■**SO 205 GENERAL SOCIOLOGY**
(3 class hrs/wk 3 cr)
Analysis of major sociological institutions: family, political, economic, religious and educational.

■**SO 206 GENERAL SOCIOLOGY**
(3 class hrs/wk 3 cr)
Survey of social issues and movements. Stresses application of basic concepts to contemporary problems in group life.

■**SO 222 MARRIAGE RELATIONSHIPS**
(3 class hrs/wk 3 cr) F/W/Sp
A sociological approach to the institution of marriage, including preparation for marriage, mate selection, adjustment to marriage, marital problems to expect and solve, and the changing styles of family relationships. Prerequisite: SO 204 General Sociology or instructor approval.

**SO 280 CWE SOCIOLOGY**
(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su
An instructional program designed to give students practical experience in supervised employment related to sociology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**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
An introduction to Spanish, stressing speaking and reading with exercises in elementary composition. Note: Students whose competence already exceeds the scope of any course within the sequence will not be admitted. Must be taken in sequence, but entrance is permitted at any level.

**SPN 199 SPECIAL STUDIES: SPANISH**
(1 class hrs/wk 1 cr)
Selected topics focusing on Spanish culture. Note: Can be taken up to 3 times for credit.

**◄SPN 201,202,203 SECOND-YEAR SPANISH I, II, III**
(4 class hrs/wk 4 cr) F/W/Sp
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: SN 103 First-Year Spanish, or three years high school Spanish equivalent or instructor approval.

**SPN 280 CWE SPANISH**
(6-42 class hrs/wk 2-14 cr) F/W/Sp/Su
An instructional program designed to give students practical experience in supervised employment related to Spanish. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

**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. An integrative review of the six social sciences: anthropology, history, sociology, economics, political science, psychology.

**◄TA 111 INTRODUCTION TO THEATRE**
(3 class hrs/wk 3 cr) F/W/Sp
Provides an overview of the history and literature of western theatre and of major dramatic forms. Emphasizes reading and watching plays critically and thoughtfully, with an appreciation of the collaborative nature of theatre arts. 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 acting as an art form. An experience-oriented performance course designed for all students to increase understanding as a performer and an audience member.

**◄TA 122 FUNDAMENTALS OF ACTING II**
(3 class hrs/wk 3 cr) F/W/Sp
Continues study begun in TA 121 of basic theory and techniques of acting as an art form. Experience-oriented performance course recommended for students interested in pursuing acting occupationally or recreationally. Prerequisite: TA 121 Fundamentals of Acting I or instructor approval.

**◄TA 123 FUNDAMENTALS OF ACTING III**
(3 class hrs/wk 3 cr)
A continuation of TA 122 Fundamentals of Acting II. Prerequisite: TA 122 Fundamentals of Acting II 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)
Intended to further polish a student actor's skills, primarily through improvisation, sensory awareness exercises and theatre games, the course also increases imaginative and spontaneous problem-solving abilities.

**TA 161 FUNDAMENTALS OF TECH THEATRE: SCENERY**
(5 class hrs/wk 4 cr) F
Introduction to 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
Introduction to the basic equipment and methods of stage lighting.

**TA 163 FUNDAMENTALS OF TECH THEATRE: SOUND**
(5 class hrs/wk 4 cr) Sp
Introduction to basic principles of sound; the equipment and equipment operation for sound reinforcement in the theatre; and the role and responsibility of the stage manager in relationship to sound, lighting and other technical operations.

**TA 180/282 REHEARSAL AND PERFORMANCE**
(2-6 class hrs/wk 1-3 cr) F/W/Sp
Course offers credit for participation 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
Course offers credit for preparation of 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)
Individually arranged projects in theatre design of scenery, lighting, costumes or properties, directing, audition material and model making. Prerequisite: Instructor approval; For TA 290: 3 credits of TA 190 Projects in Theatre. Note: Each may be repeated for up to 9 credits.

**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)
A study of poetry, prose, drama and nonfiction through performance. In-class activities increase skills in analyzing literature.

**TA 270 STAGE MAKE-UP**
(3 class hrs/wk 3 cr)
A study of the principles and techniques of basic stage makeup.

**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, resume writing, etc.

**WR 110 INTRO WRITING FOR INTERNATIONAL STUDENTS**
(3 class hrs/wk 3 cr)
A survey of basic conventions, purposes and strategies of standard written English designed especially to meet the special needs of international students. Emphasizes sentence variety, paragraph development, improvement of fluency in writing expository prose and confidence in the student's own ability to write acceptably and effectively at the college level. Note: This course does not satisfy institutional writing requirements for transfer students. Placement determined by pre-enrollment testing.

**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 process 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. Prerequisiste: WR 121 English Composition.

◄**WR 240 PERSONAL JOURNAL WRITING**
(3 class hrs/wk 3 cr) F/W/Sp
Studies the use of journals for recording observations, reflecting thoughts of personal and public interest, preserving one's past, noting ideas for poems or stories, exploring one's identity, or practicing and experimenting with writing styles. Emphasis is given to the journal as a place to practice writing and to respond to entries offered for class review. 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.), using workshop sessions in which students discuss the exercises and stories of their classmates. Note: May be repeated for up to 6 credits.

◄**WR 242 INTRODUCTION TO IMAGINATIVE WRITING**
(3 class hrs/wk 3 cr) F/W/Sp
Introduction to basic techniques of poetry writing such as rhythm, rhyme and imagery, with additional discussion of the more technical aspects of the craft. Students may be asked to work with certain fixed traditional forms, but major emphasis will be placed on fostering and developing individual style. Note: May be repeated for up to 6 credits.

**WR 243 INTRODUCTION TO IMAGINATIVE WRITING**
(3 class hrs/wk 3 cr) F/W/Sp
Advanced course in style and technique designed to allow students to further their skills in fiction, drama or poetry. Major emphasis placed on revision of work in progress. Course is conducted in a workshop fashion. 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)
Exploration of role conflict and ambiguity; methods and tools for change; and alternative behaviors, attitudes and world views.

■**WS 101 INTRODUCTION TO WOMEN'S STUDIES**
(3 class hrs/wk 3 cr)
Examination of the research and theories of sex-role stereotyping from the sociological perspective. Examines the diversified roles and status of women in the community and their involvement in education, politics, business, economics, religion and the family.

●**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. Prerequisite: High school science and math; concurrent enrollment in chemistry and math. Recommended for science majors.

# FACULTY AND ADMINISTRATIVE STAFF

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**Schultz, Gregory D.**
Supervisor, Purchasing. AA, Hesston Junior College; BS, Bethel College. At Linn-Benton since 1984.

**Scott, Peter C.**
Director, Science and Technology Division. BS, Oregon State University; PhD, Purdue University. At Linn-Benton since 1968.

**Sharman, Ronald**
Faculty, Water/Wastewater Technology. AS, Linn-Benton Community College; BS, Oregon State University. At Linn-Benton since 1979.

**Siebler, William A.**
Faculty, Mathematics. BA, Western Washington State University; MS, San Francisco State University. At Linn-Benton since 1968.

**Snyder, Paul K.**
Media Specialist. BS, Portland State University; MS, Western Oregon State College. At Linn-Benton since 1974.

**Spilde, Mary**
Director, Training and Economic Development Center, Linn County, Community Education. BS, LLB, University of Edinburgh, Scotland; MEd, Oregon State University. At Linn-Benton since 1980.

**Stewart, Marti Ayers**
Training Specialist, Training and Economic Development Center, Community Education. BA, MA, Western Michigan University. At Linn-Benton 1970-79 and 1986 to present.

**Sult, Larry**
Faculty, History, Philosophy and Religion. BA, University of California, Los Angeles; MA, San Diego State University. At Linn-Benton since 1981.

**Talbott, Robert D.** Director, Student Development Division. BS, Humboldt State University; MS, University of Washington. At Linn-Benton since 1968.

**Tetz, Clarice**
Secretary, Vice President for Instruction. Secretarial degree, Northwestern School of Commerce. At Linn-Benton since 1979.

**Tolbert, James A.**
Faculty, Graphic Arts. BS, MA, California Polytechnic State University. At Linn-Benton since 1976.

**Trautman, Dale**
Faculty, Electricity/Electronics. BS, MEd, Oregon State University. At Linn-Benton since 1978.

**Trimpe, Lynn**
Faculty, Mathematics. BS, MST, University of Missouri. At Linn-Benton since 1979.

**Truman, Marcia**
Coordinator, Newport Center, Community Education. BA, Bowling Green University. At Linn-Benton since 1979.

**Ulrich, Robert**
Faculty, Mathematics. BS, MAT, PhD, University of Washington. At Linn-Benton since 1978.

**VanLaere, Margaret Susan**
Faculty, ABE/GED, Student Development. BA, MA, University of Wisconsin. At Linn-Benton since 1983.

**Vee, Regina**
Faculty, Psychology and Sociology. BA, Northern Illinois University. At Linn-Benton since 1973.

**Waibel, Mona**
Coordinator, Sweet Home Center, Community Education. Related business experience. At Linn-Benton since 1973.

**Walzak, Al**
Faculty, Business Management. BS, Portland State College; MEd, Oregon State University. At Linn-Benton 1969-78 and 1985 to present.

**Watson, Diane**
Guidance Counselor. BAE, Univeristy of Florida; MA, University of Northern Colorado. At Linn-Benton since 1985.

**Weber, Roberta (Bobbie)**
Coordinator, Parent Education, Community Education. BA, Seattle University; MS, University of Wisconsin, Madison. At Linn-Benton since 1977.

**Westfall, Betty**
Faculty, Mathematics. BS, Idaho State University, MEd, University of California at Santa Barbara. At Linn-Benton since 1986.

**Weyant, Charles E.**
Faculty, Learning Resource Center. BA, The American University; MA, Wayne State University; MS, Simmons College. At Linn-Benton since 1984.

**White, Jane**
Faculty, Language Arts. BA, MA, Michigan State University. At Linn-Benton since 1978.

**Widmer, Jason (Jay)**
Faculty, Ceramics, Community Education. BA, Oregon State University. At Linn-Benton since 1974.

**Williams, Barbarajene**
Faculty, Language Arts. BS, University of Wisconsin, Plateville; MA, Arizona State University. At Linn-Benton since 1969.

**Williamson, Linda**
Faculty, Parent Education, Community Education. BS, MS, Oregon State University. At Linn-Benton since 1976.

**Wilson, Evon**
Faculty, Associate Degree Nursing. BSN, MSN, University of Oregon School of Nursing. At Linn-Benton since 1979.

**Wojahn, Sally**
Coordinator, Financial Aid. BS, MEd, Oregon State University. At Linn-Benton since 1981.

**Wolff, Susan**
Assistant to Director, Training and Economic Development Center, Community Education. BS, Montana State University. At Linn-Benton 1976-84 and 1986 to present.

**Wood, Dennis**
Faculty, Welding. AA, Chabot College; journeyman weldor; AWS certified welding OC-1 inspector. At Linn-Benton since 1976.

**Yu, Kitson**
Faculty, Data Processing/Business Management. BS, MS, Troy State University. At Linn-Benton since 1981.

**Zimmer, Sandra S.**
Faculty, Fine Arts. BA, Kearney State College; MA, University of Northern Colorado. At Linn-Benton since 1972.

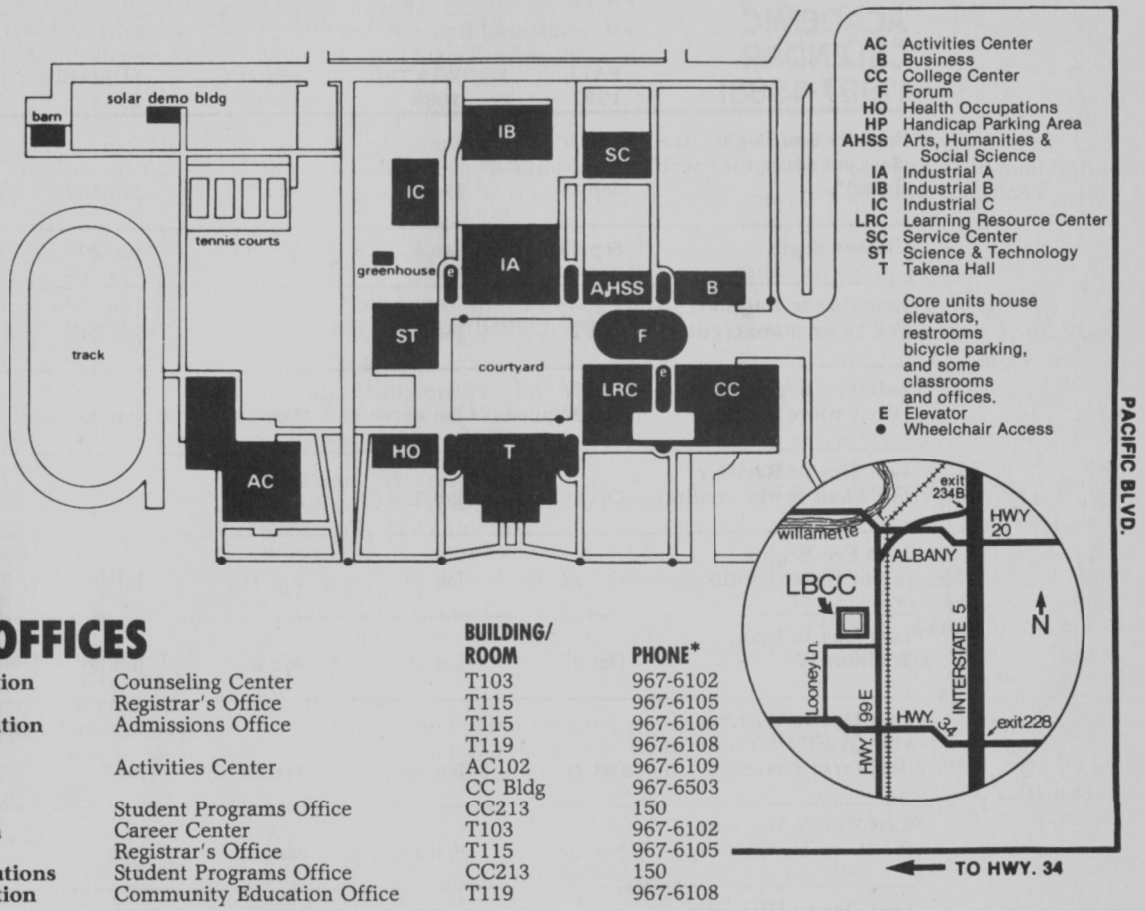
## ACADEMIC CALENDAR (1987-1988)

| | FALL 1987 | WINTER 1988 | SPRING 1988 | SUMMER 1988 |
|---|---|---|---|---|
| **Registration Begins (see class schedule for specific times)*** | Sep 16 | Dec 7 | Mar 7 | Jun 10 |
| **Classes Begin** | Sep 28 | Jan 4 | Mar 28 | Jun 20 |
| **Last Day to Register For 12 or more credits** | Oct 2 | Jan 8 | Apr 1 | Jun 24 |
| **Late Fee Begins (12 or more credits)** | Sep 28 | Jan 4 | Mar 28 | Jun 20 |
| **Last Day to Register For 11 or fewer credits** | Oct 16 | Jan 22 | Apr 15 | Jul 7 |
| **Late Fee Begins (11 or fewer credits)** | Oct 12 | Jan 18 | Apr 11 | Jul 5 |
| **Last Day to Drop Without W** | Oct 9 | Jan 15 | Apr 8 | Jun 30 |
| **Last Day to Withdraw and Qualify for a Refund (full-term classes)** | Oct 16 | Jan 22 | Apr 15 | Jul 7 |
| **Last Day to Request P/NP or AU Option** | Nov 13 | Feb 19 | May 13 | Aug 4 |
| **Last Day to Officially Withdraw** | Nov 13 | Feb 19 | May 13 | Aug 4 |
| **Final Exams** | Dec 14-16 | Mar 14-16 | Jun 6-8 | |
| **Graduation**** | | | | Jun 9 |
| **Last Day of Term** | Dec 18 | Mar 18 | Jun 10 | Aug 25 |
| **Holidays** | Veterans Day Nov 11 Thanksgiving Nov 26-27 | Presidents Day Feb 15 | Memorial Day May 30 | Independence Day Jul 4 |

*Registration dates are tentative

**Deadline to apply for graduation is Feb. 12, 1988

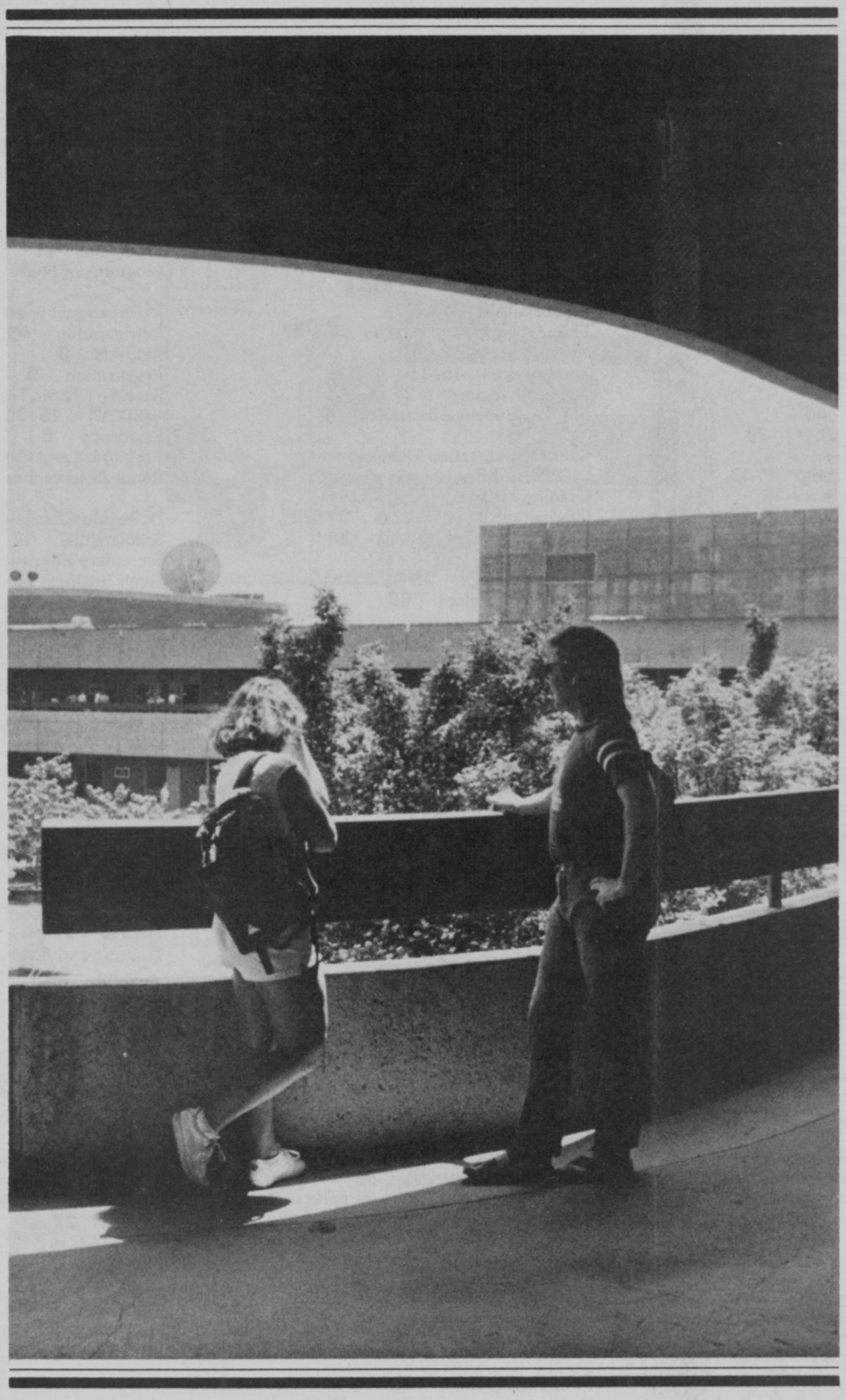
# LINN-BENTON COMMUNITY COLLEGE CAMPUS MAP




## CAMPUS OFFICES

| | | BUILDING/ ROOM | PHONE* |
|---|---|---|---|
| **Academic Information** | Counseling Center | T103 | 967-6102 |
| **Adding Courses** | Registrar's Office | T115 | 967-6105 |
| **Admission Information** | Admissions Office | T115 | 967-6106 |
| **Albany Center** | | T119 | 967-6108 |
| **Athletics** | Activities Center | AC102 | 967-6109 |
| **Bookstore** | | CC Bldg | 967-6503 |
| **Car Pooling** | Student Programs Office | CC213 | 150 |
| **Career Information** | Career Center | T103 | 967-6102 |
| **Changing Courses** | Registrar's Office | T115 | 967-6105 |
| **Clubs and Organizations** | Student Programs Office | CC213 | 150 |
| **Community Education** | Community Education Office | T119 | 967-6108 |
| **Cooperative Work Experience** | Placement Office | T103 | 967-6102 |
| **Dropping Courses** | Registrar's Office | T115 | 967-6105 |
| **Financial Aid** | Financial Aid Office | T105 | 967-6104 |
| **Handicapped Services** | Disabled Student Services | LRC203 | 299 |
| **Health Problems** | Public Safety & Services | CC123 | 322 |
| **Housing** | Student Programs Office | CC213 | 150 |
| **Jobs** | Placement Office | T103 | 967-6102 |
| **Loans** | Financial Aid Office | T105 | 967-6104 |
| **Lost and Found** | Public Safety & Services | CC123 | 322 |
| **Parent Education** | Albany Center | T119 | 384 |
| **Parking & Traffic Rules** | Public Safety & Services | CC123 | 322 |
| **Payment of Tuition** | Registrar's Office | T115 | 967-6105 |
| **Refunds** | Registrar's Office | T115 | 967-6105 |
| **Scholarships** | Financial Aid Office | T105 | 967-6104 |
| **Small Bus. Dev. Center** | Training & Econ. Dev. Center | CC119 | 967-6112 |
| **Student Association** | Student Programs Office | CC213 | 150 |
| **Student Rights & Respons.** | Director of Student Programs | T115 | 967-6105 |
| **Study Skills** | Developmental Center | LRC202 | 291 |
| **Training & Econ. Dev. Center** | | CC119 | 967-6112 |
| **Transcripts** | Registrar's Office | T115 | 967-6105 |
| **Veterans' Affairs** | Veterans' Office | T115 | 967-6104 |
| **Withdrawal from College** | Registrar's Office | T115 | 967-6105 |

**Dial 928-2361 and ask for extension number if no direct number is available.*



Linn-Benton Community College
6500 SW Pacific Boulevard
Albany, OR 97321-3774

Admissions: (503) 967-6106
Registration: (503) 967-6105