Linn-Benton Community College
General Catalog 1978-1980

Calendar

Fall Term 1978

Registration begins	August 28
Classes begin	September 25
Last day to register	
for 10 or more credits	September 29
for 9 or less credits	October 13
Last day to drop without a "W"	October 6
Last day to add	October 13
Last day for refunds	October 27
Thanksgiving holiday	November 23, 24
Last day to request P/NP option	December 8
Last day to officially withdraw	December 8
Final exams	December 11 - 13
Last day of Fall Term	December 15
Christmas recess	December 18 - 29

Winter Term 1979

Registration begins	December 4
Classes begin	January 2
Last day to register	
for 10 or more credits	January 5
for 9 or less credits	January 19
Last day to drop without a "W"	January 12
Last day to add	January 19
Last day for refunds	February 2
Last day to request P/NP option	March 9
Last day to officially withdraw	March 9
Final exams	March 12 - 14
Last day of Winter Term	March 16
Spring recess	March 19 - 23

Spring Term 1979

Registration begins	March 5
Classes begin	March 26
Last day to register	
for 10 or more credits	March 30
for 9 or less credits	April 13
Last day to drop without a "W"	April 6
Last day to add	April 13
Last day for refunds	April 27
Memorial Day holiday	May 28
Last day to request P/NP option	June 1
Last day to officially withdraw	June 1
Final exams	June 4 - 6
Graduation	June 8
Last day of Spring Term	June 8

Summer Term 1979

Registration begins	May 29
Classes begin	June 18
Last day to register	
for 10 or more credits	June 22
for 9 or less credits	July 6
Last day to drop without a "W"	June 29
Independence Day holiday	July 4
Last day to add	July 6
Last day for refunds	July 20
Last day to request P/NP option	August 17
Last day to officially withdraw	August 17
Final exams--ten week session	August 23, 24
Last day of Summer Term	August 24

The information contained in the catalog and/or schedule of classes reflects an accurate picture of Linn-Benton Community College at the time of publication. However, conditions can and do change. Thus, the college must, as in the past, reserve the right to make any necessary changes in the matters discussed herein, including procedures, policies, calendar, curriculum, course content, emphasis, and costs.

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 Vice President O. Robert Adams, Rm. 110 College Center Bldg., Linn-Benton Community College, 6500 S.W. Pacific Blvd., Albany, Oregon 97321. Telephone: 928-2361, ext. 202.

For information about admissions and career guidance, or a free copy of the catalog, contact:
Admissions
Rm. 112 College Center
Linn-Benton Community College
6500 S.W. Pacific Blvd.
Albany, OR 97321
Telephone: (503) 928-2361, ext. 346

Financial Aids information, including scholarships, grants and loans:
Office of Financial Aids
107 College Center
Linn-Benton Community College
6500 S.W. Pacific Blvd.
Albany, OR 97321
Telephone: (503) 928-2361, ext. 367

Photographs: Joan White, Oscar Palmquist

Basic Calendar for 1979-80

Fall Term 1979

Classes Begin	Sept. 24
Thanksgiving Holiday	Nov. 22-25
Fall Term Ends	Dec. 15

Winter Term 1980

Classes Begin	Jan. 2
Winter Term Ends	March 15

Spring Term 1980

Classes Begin	March 24
Memorial Day Holiday	May 26
Spring Term Ends	June 7

Summer Term 1980

Classes Begin	June 16
Independence Day Holiday	July 4
Summer Term Ends	August 29

Table of Contents

The College

Raymond J. Needham, President
O. R. Adams, Vice-President
A. Lee Archibald, Dean of Students
Vernon E. Farnell, Dean of Business Affairs
Jack V. Liles, Dean of Instruction

Linn-Benton Community College is a public two-year college which serves the educational needs of adults in its two-county district. It is one of 13 comprehensive community colleges in Oregon, with admission open to any district resident beyond high school age.

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 fields related to their fields of study. A wide variety of credit and non-credit Community Education classes are offered on the Albany campus; in the Corvallis, Lebanon and Sweet Home Centers; and at many other locations throughout the district. There are special progams in adult basic education and high school continuation and for the vocationally disadvantaged and handicapped.

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. Linn-Benton offers a well-rounded activities program, many of them planned by students and paid for with student fees.

College policies and practices are directed by a locally elected seven-member Board of Education under guidelines established by the State Board of Education. More than 300 local citizens actively participate in college governance through membership in advisory and budget committees. Faculty, staff and students serve on all campus advisory committees.

The college is supported by local taxes, state and federal funding, and student tuition.

State Superintendent of Public Instruction

Verne A. Duncan

Oregon Board of Education

Sedley N. Stuart, Chairperson, Gresham
Wanda Silverman, Vice Chairperson, Portland
Kenneth L. Smith, Warm Springs
Joyce Benjamin, Eugene
Ellis H. Casson, Portland
Frank Dost, Corvallis
Wally McCrae, Pendleton

LBCC Board of Education

Virgil H. Freed, Chairperson, Corvallis
David Cooper, Sweet Home
Kenneth H. Haevernick, M.D., Lebanon
H.L. Hammond, Jr., Corvallis
Russell W. Tripp, Albany
Ethel Yocum, Albany

Philosophy

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

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

History

The drive to establish Linn-Benton Community College began in 1963 with a cooperative effort 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 area.

In 1966, through a local election, the Linn-Benton Community College District was formed and a year later the first classes were held in rented facilities. In 1970, following voter approval of a $6.1 million bond issue, 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.

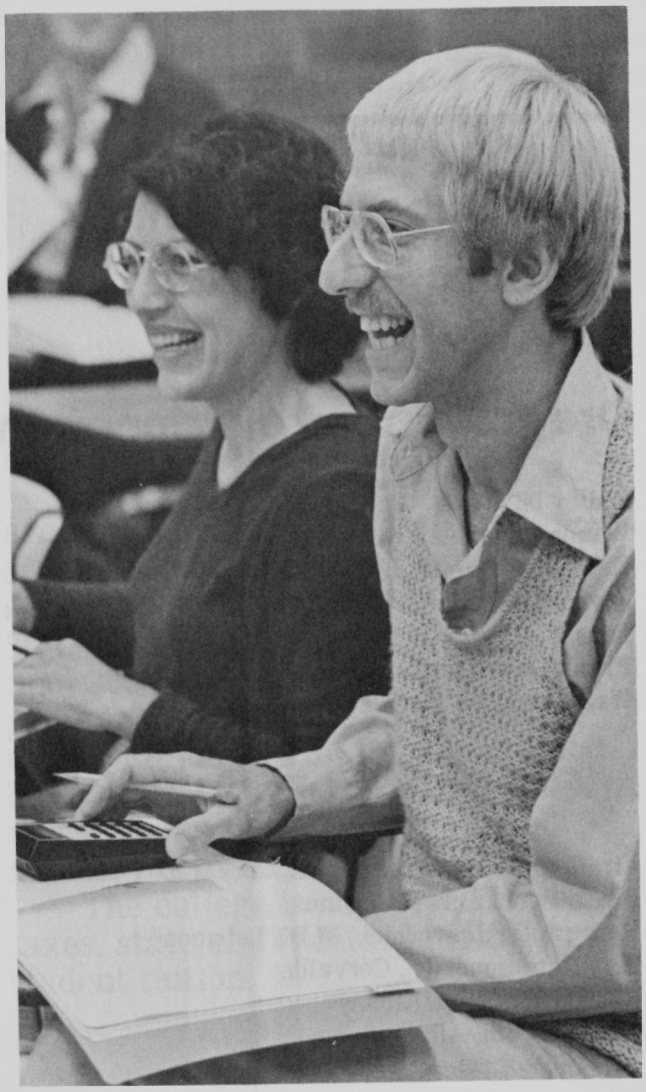
As the campus has grown so has the student body, from 2,800 students the first year to more than 17,000 persons taking one or more classes in 1977-78.

The Campus

The 104-acre main campus is centrally situated in the district two miles south of the city of Albany and 11 miles east of Corvallis. The twelve major campus buildings encircle an open courtyard and are connected by covered walkways. The contemporary brick structures have been erected gradually since 1970 in accordance with a master building plan. A new theater-classroom-office building will be completed in 1979.

There are more than 85 classrooms, shops and instructional laboratories, many geared to individualized learning. Facilities have been designed with needs of the handicapped in mind. A barn, small greenhouse, solar-heated energy information center, and physical education and sports facilities are included in the campus complex.

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



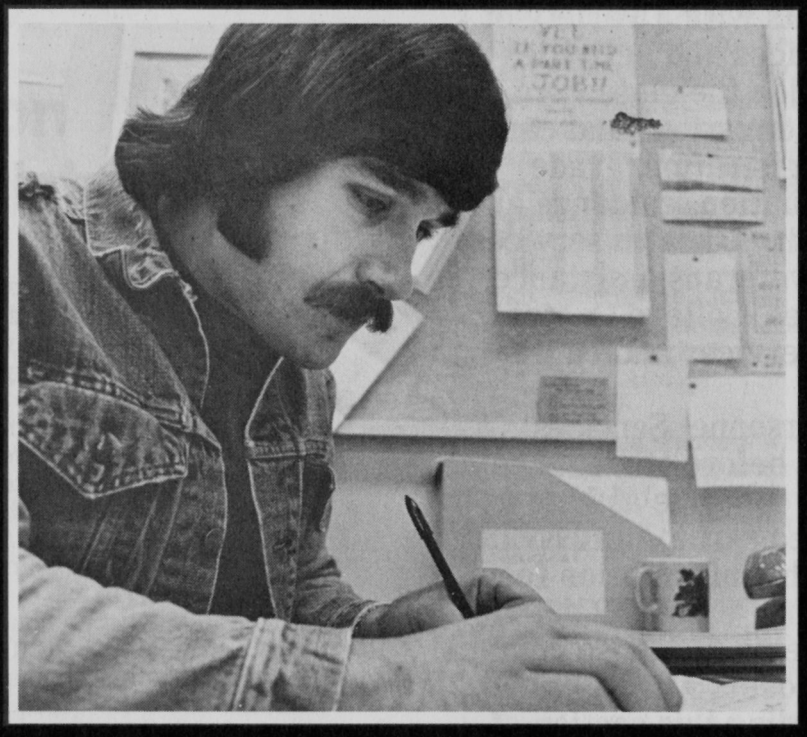
Accreditation

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

Nondiscrimination

The college adheres to the principles embodied in the Oregon and Federal Fair Employment Practices legislation. Its affirmative action policies ensure equal employment and admission opportunities to all persons without regard to sex, race, color, religion, creed, national antecedents, economic need or age. Linn-Benton Community College encourages students to make career choices based on interests, needs and abilities, without regard to the traditional roles of men, women or minorities.

Services



Services

Dean of Students: A. Lee Archibald

Student Personnel Services provides students with a variety of supportive services and activities within and outside the classroom. These include admissions and career information, registration, grade reporting, graduation, guidance and counseling services, health services, financial aids, veterans assistance, student activities, College Center services, food services and career placement.

Student Personnel Services activities begin before students enter the college and continue as long as they are enrolled. The Admissions Office acts as the information focal point for Student Personnel Services. Students may also contact the Dean of Students' Office with questions regarding this section of the catalog.

staff:
Jon Carnahan, Director of Admissions and Registrar
Sue Cripe, Assistant Registrar
Milton Weaver, Veterans Coordinator and Admissions Officer

Admission and Registration

GENERAL POLICY

The only entrance requirement is that applicants be beyond high school age (18 years) or have completed high school or its equivalent.

Students applying to enter an occupational program must be 18 years of age and must, in the judgment of the administration, be able to benefit from the instruction offered. Admission to occupational programs varies slightly, but is generally first-come, first-served. Date of the completed application process is an important consideration. The college reserves the right to give a higher priority to district residents in specific occupational and vocational programs.

The Admissions Office is designed to be the 'front door' of Linn-Benton Community College, and is available to all prospective and enrolled students. Information concerning admissions procedures and programs are among the services provided in this center.

FULL-TIME ADMISSIONS (10 OR MORE CREDITS)

New Students:

1. Application for Admission.
2. Official copy of high school transcript if graduated one year prior to date of application, G.E.D. test scores or equivalent.
3. Comparative Guidance and Placement Examination. *Note Exceptions.

Transfer Students:

1. Application for Admission.
2. Official copy of all previous college transcripts.
3. Comparative Guidance and Placement Examination. *Note Exceptions.

*Students who have taken the S.A.T. with standard scores of 450 on each part or the A.C.T. with standard scores of 19 on each part will be exempt. Transfer students who have passed 15 college credits will also be exempt.

PART-TIME ADMISSIONS (9 OR FEWER CREDITS)

Part-time and non-credit students do not have to apply for admission or secure transcripts from previous schools attended unless they intend to graduate from Linn-Benton Community College.

LIMITED ENROLLMENT

1. Application for Admission.
2. Sign Limited Enrollment Agreement Form. Students will be admitted on a limited enrollment basis for one term only due to the following circumstances:

a. Full-time (matriculated) students who do not complete the application process one week prior to the beginning of the term of application.
b. Students entering a one term program at LBCC.

Extension of the Limited Enrollment Status must be petitioned through the Director of Admissions and Registrar.

READMISSION

Matriculated students who have discontinued after one year or more, not counting summer term, may apply for reenrollment in the Admissions Office by completing a Reenrollment Application.

ADMISSION OF HIGH SCHOOL STUDENTS PART-TIME SIMULTANEOUS

Enrollment of high school students is allowed without special permission if:

1. The class(es) meet(s) after normal high school hours.
2. Enrollment is 9 or fewer credits.
3. Enrollment is limited to classes which require no special admission clearance.

Admission to specific classes and programs is on a space available basis.

FULL-TIME OR NON-SIMULTANEOUS

High school age students who have been released from compulsory attendance under ORS 339.030 may wish to attend the community college. They may be accepted for enrollment subject to review by the Director of Admissions. Enrollment is on a space available basis.

FOREIGN STUDENT ADMISSION

Foreign student admission is on a selective basis. Those desiring to enroll in classes at Linn-Benton Community College should contact the Director of Admissions for specific admission requirements. Applications should be on file at least one month prior to the preferred quarter of entry.

ADMISSION TO HEALTH OCCUPATION PROGRAMS

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

The following programs have established waiting lists. Students interested in one of these programs should complete the application process as outlined below.

*Associate Degree Nursing
*Dental Assistant
*Nursing Assistant

***ASSOCIATE DEGREE NURSING (RN TWO YEARS)**

ADN applicants must: (1) have application and transcripts on file by March 1; (2) complete the National League for Nursing Pre-Nursing and Guidance Examination prior to March 1; the dates for the administration of this examination are available through the Admissions, Developmental Center & Testing Offices; (3) have total application file reviewed by the Admissions Committee; (4) be available for admission interview; (5) if accepted, file a complete physical exam form. Specific admissions criteria for the ADN program are available in the Admissions Office.

ADN applicants will be notified of the disposition of their applications by June 1. Individuals are required to complete application no later than March 1, to be considered for the Fall class. Program prerequisites: 1.110 Elem of Alg and 1.205 Basic Chem or CH104 Gen Chem or equivalent. High school equivalent will be accepted if taken within past five years. For further information regarding the admission of Associate Degree Nursing applicants, students should contact the Admissions Office.

***DENTAL ASSISTANT (FOUR QUARTERS)**

Two classes are offered each year, one beginning Winter Term, in January, and one beginning Summer Term, in June. Dental Assistant applicants are encouraged to: (1) have application and transcripts on file by November 1 for the Winter Term class, or May 1 for the Summer Term class; (2) complete the Comparative Guidance and Placement (CGP) Examination. (3) be available for admissions interview.

Applicants will be notified of the disposition of their applications by December 15, or June 1. The Dental Assistant Program begins each Summer and Winter quarter and continues for four quarters. For further information students should contact the Admissions Office.

***NURSING ASSISTANT (THREE MONTHS)**

Those wishing admission to the Nursing Assistant program must: (1) have application and transcripts on file. (2) be available for admissions interview.

Individuals are encouraged to apply at least one month prior to the beginning of the quarter for which they wish to attend. Notification will be at least two weeks prior to the beginning of the quarter. Students who are accepted for the Nursing Assistant program are required to complete the standard physical examination form and questionnaire available through the Admissions Office. For further information students should contact the Admissions Office.
*See General Policy.

CLASSIFICATION OF RESIDENCY

Oregon revised statutes 341.290 provides that an operating district shall establish tuition rates and fee schedules, subject to the approval of the state board or its authorized representative. 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, and students who do not reside in the state.

An out-of-state or non-resident student is defined as an unemancipated student whose parent or legal guardian is domiciled outside of Oregon or outside the Linn-Benton Community College district at the time of the student's registration; or an emancipated student who is domiciled outside of Oregon or outside of the Linn-Benton Community College district at the time of his/her registration. An emancipated student is one who is over the age of 21, or, if under the age of 21, is married or has a domicile independent of that of his/her parent or legal guardian, and receives no financial support from his/her parents or guardian.

Changes in Domicile:

1. A student who graduates from a Linn-Benton Community College district high school after one year of regular attendance and who matriculates as an entering freshman shall be considered a resident student. If, however, such a student later transfers to an institution outside of the Linn-Benton Community College district and subsequently seeks to enroll again at Linn-Benton Community College, his/her residency classification shall be re-examined and determined on the same basis as for any other transfer student.
2. A student whose non-resident parent or guardian moves to the Linn-Benton Community College district and establishes a domicile during a school term shall be entitled to registration as a resident student at the beginning of the next term.

3. When an emancipated student or the parent or legal guardian of an unemancipated student changes his/her residence to another district or state during the school year, the student shall continue to be assessed the resident fee until the beginning of the next term. Thereafter, the student will be assessed the non-resident or out-of-state fee.
4. An emancipated student who comes to the Linn-Benton Community College district shall pay a non-resident or out-of-state fee unless he/she established residence at least 90 days prior to the time of his/her registration.
5. Residence, once established, is presumed to continue until such time as sufficient evidence is provided to refute the presumption.
6. An unemancipated resident student, enrolled at Linn-Benton Community College who remains in this state when his/her parents move from Oregon shall be entitled to classification as a resident student so long as his/her attendance (except summer sessions) at an institution in this state is continuous.

In the preceding paragraphs, the term residence is used as meaning domicile. Generally accepted legal definitions of domicile are as follows: (1) establishment to which, whenever he or she is absent, there is the intention of returning; (2) that place in which a person has voluntarily fixed the habitation of himself or herself not for a special or temporary purpose, but with the present intention of making a permanent home for an unlimited or indefinite period.

A student whose official record shows a domicile outside of the Linn-Benton Community College district or a transfer from an institution in another state is prima facie a non-resident and the burden is upon the student to prove that he is a resident of the Linn-Benton Community College district. The regulations outlined above are general and incomplete. Applicants with questions concerning the policies, should consult the Director of Admissions.

Registration Procedures

CREDIT CLASSES

1. Complete all admission requirements.
2. Pre-registration advisor conferences are required for:
   a. all new students registering for 10 or more credit hours.
   b. students being sponsored by a special program, such as CETA, DVR, etc.
   c. students on probation or in danger of failure.
   d. students changing their major or those who have questions regarding their major.
   e. students enrolling for courses which require counselor approval as specified in the schedule of classes.

   In addition, any student who wishes counseling assistance in planning a program is encouraged to contact the Guidance Center, or faculty advisor.
3. All continuing students in the following vocational programs should register the first week of registration to insure their position in their classes. Spaces remaining in the program after the first week of registration will be made available to both new and continuing students.

   Auto Body Repair
   Automotive Technology
   Construction Technology
   Drafting Technology
   Electricity/Electronic Technology
   Engineering Technology
   Machine Tool Technology
   Recreational Vehicle/Small Engine Repair
   Refrigeration, Heating & Air Conditioning Technology
   Science Lab Technician
   Wastewater Technology
   Welding
4. Full tuition payment is required at the time of registration, plus insurance premium if insurance is desired. Contact the Financial Aids Office 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 Aids 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 Office windows with full tuition payment or payment authorization from the Financial Aids Office.

Social Security Number is required to positively identify your records. An alternate assigned number is available upon request to the Registrar.

COMMUNITY EDUCATION CLASSES

Registration materials are available in class during the first and second class meetings, or students may pre-register in the campus Registration Office; the Benton Center, Corvallis; the Lebanon Center, Lebanon; or the Sweet Home Center, Sweet Home.

Tuition Schedule

Following are tuition & fee charges for credit & non-credit class for the 1978-79 school year. Tuition and fees are subject to change by action of the LBCC Board of Education.
(Services Fee included—see below)

Credit Classes	District	Out-of District	Out-of State
Per credit	$ 10.70	$ 18.70	$ 46.70
Minimum Charge	$ 21.40	$ 37.40	$ 46.70
*Maximum Charge	$128.40	$224.40	$560.40
**Per Credit over 18 Credits	$ 10.70	$ 18.70	$ 46.70

*12 to 18 Credits
**Non-refundable

NON-CREDIT & COMMUNITY EDUCATION TUITION SCHEDULE

Contact Hours	Reimbursable	*Non-Reimbursable
Less 10	$ 5.00	6.00
10-18	$10.00	$12.00
19-22	$15.00	$18.00
23-36	$20.00	$24.00
37-50	$30.00	$36.00
51-60	$40.00	$48.00

*An additional Supply and lab fee may be charged.

Non-credit students wishing to receive benefits and services related to the Linn-Benton Community College identification card, may pay a special service fee of $2.00 each per term.

SPECIAL FEES AND EXPENSES

Add fee per quarter
  First add ..... No Charge
  All others (each transaction) $2.00
Drop fee ..... No Charge
Credit by Examination (per credit) $3.00
Career Guidance and Placement
  Examination $5.00
*Student Medical Insurance
  (12 months starting Fall Term) $87.75
Late registration fee
  Ten credit hours or more,
  beginning first week ..... $2.00 per day
  Maximum Charge $10.00
  Nine credits or fewer, beginning
  third week $1.00
Official copy of LBCC transcripts $1.50
Unofficial copy of transcripts ..... $.50

Special fees for some physical education classes, such as bowling and golf, may be charged.

*Rates shown are subject to change. Please check with Registrar's Office for current expenses.

LBCC SERVICES FEE

Each student is assessed a $.70 per credit charge to a maximum of $8.40 for full-time enrollment. The service fee is included in the $10.70 per credit tuition and fee charge listed above. The income derived from the fee is used to support a variety of extracurricular activities and programs including athletics, artist and lecturer guest appearances, clubs and organizations, and a variety of campus recreational and social activities. More information regarding activities supported by the service fee is available in the Office of the Dean of Students.

UNIQUE PROGRAMS - 78-79

Students in the Chemeketa Area Education District are allowed to enroll in LBCC unique programs (Agriculture Technology; Construction Technology; Water/Wastewater Technology; Heating, Air Conditioning and Refrigeration; Metallurgical Technology; Small Engine and Recreational Vehicle Repair; Heavy Equipment Mechanics/Diesel; and Culinary Arts and Restaurant Management) at resident tuition rates. Priority in these programs may be given to resident students when applications exceed available openings.

CHANGE OF PROGRAM

Adding a course: A student taking 10 or more credits may add a course only during the first week of class. A student taking fewer than 9 credits may add a course during the first week or, with the instructor's written permission, during the second or third week.

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

Students changing to another section of a course due to cancellation of a class or for other reasons must officially add the new section. No add charge will be assessed in this case.

AUDITING CLASSES

Students may enroll as auditors on a space available basis after the first day of classes. Charges for auditing will be the same as for regular credit enrollment.

REFUNDS

A full-time student withdrawing from school by the end of the fifth week receives a full refund of tuition less $15. A part-time student with nine or fewer credits receives a full refund less $5. Withdrawals after that date receive no refund.

Students officially reducing their credit load to a lower tuition level during the first five weeks of class receive a refund of the difference in tuition amounts, to the $21.40 minimum charge.

A student officially withdrawing from a non-credit class during the first half of the course receives a full refund of tuition less $2.50 processing fee.

Students who withdraw without giving written notice to the Registration Office forfeit all claims to refund of tuition or fees.

Classes cancelled by the College entitle the student to a 100 percent refund or reenrollment without additional cost.

Academic Regulations

OCCUPATIONAL-TECHNICAL AND LOWER DIVISION CREDITS

In general, a class which meets one hour per week for one term will yield one credit; a class meeting three hours per week, three credits. A lab class usually yields one credit for each two hours of lab time.

Courses which have been approved for transfer to four-year colleges and universities are, generally, those numbered from 100 to 299. It should be emphasized that there may be exceptions. Those courses which are generally non-transferable have course numbers below 99. Some technical courses are acceptable for transfer to selected four-year institutions.

Questions regarding transferability of courses should be referred to the Coordinator of Admissions.

TRANSFERRING LBCC CREDITS

Lower division credits may be transferred to most colleges throughout the United States. Lower division students may transfer up to 108 credit hours to schools in the Oregon State System of Higher Education. Even though D grades are passing, many schools will not accept credits for which a D has been given. This is especially true if the course is in the student's major field. P credits may be limited or recalculated for GPA purposes upon transfer. We encourage students who are planning to transfer to work with an advisor in planning an appropriate transfer program. IT IS RECOMMENDED THAT YOU CORRESPOND WITH THE COLLEGE OR UNIVERSITY TO WHICH YOU WILL BE TRANSFERRING TO PLAN A PROGRAM OF CLASSES.

STUDENT CREDIT LOAD

Students are considered full-time if they register for 12 or more credit hours. Students may mix their 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. Working students should adjust their work schedules accordingly or register for fewer class hours. In most areas, there are suggested curricula to cover one or two years of study. Students who are employed may schedule a two-year equivalent curriculum over an extended period of time.

Lower division studies students should plan to schedule an average of 15 credits per term in order to accumulate 90 credits in a six quarter (two year) period. No more than 18 credits may be taken in any single term without additional charge of tuition for each credit except when required by the student's major department. This additional charge is non-refundable.

CREDIT LIMIT RULE

It is the rule of four-year Oregon state institutions that after a student has completed *108 credit hours, regardless of where the work was taken, the remaining credit requirements must be completed at a four-year institution. *This is equal to full-time attendance for seven quarters.

LBCC CREDIT BY EXAMINATION

If presently enrolled students believe they have mastered the material presented in a certain course offered by LBCC or have had equivalent work experience, they may request credit by examination ('challenge'). This may be accomplished by: (1) enrolling in the class and presenting a request directly to the instructor (without additional cost if a full-time student), or (2) applying at the Registrar's Office and pay$3 per hour fee.

Students may challenge no more than 15 credits in one quarter without special approval from the Registrar. Instructors have the option to grade or give a pass/no pass mark.

COLLEGE LEVEL EXAMINATIONS PROGRAM (CLEP)

LBCC is an approved 'Open Center' for administration of the CLEP Examination. In addition, LBCC now accepts CLEP scores for college credit which may be posted to an LBCC transcript under 'Advanced Standing'. The examinations are administered through the Developmental Center at LBCC.

ADVANCED PLACEMENT TESTS

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

Students should request that Advanced Placement Scores be forwarded to the LBCC Admissions Office.

GRADING SYSTEM

A--Exceptional and Outstanding Work
B--Above Average College Work
C--Average Work
D--Barely Passing Work
F--Failing Work, No Credit Given
I--Incomplete Work
W--Withdrawal
P--Pass
NP--No Pass
NE--No Entry
AU--Audit

Incomplete Rule: Uncompleted work must be completed by the end of the following term with the exception of Summer or it is automatically changed to a 'W'.

Grade Points: Quarter term grades are assigned points as follows:

A--4 Grade Points Per Credit
B--3 Grade Points Per Credit
C--2 Grade Points Per Credit
D--1 Grade Point Per Credit
F--0 Grade Points Per Credit, No Hours Attempted
*W--0 Grade Points Per Credit, No Hours Attempted
P--Credit Earned, Not Computed in GPA
NP--0 Grade Points Per Credits, No Hours Attempted
NE--0 Grade Points Per Credit
AU--0 Grade Points Per Credit

*A 'W' is not recorded for individuals who withdraw prior to and during the first two weeks of the quarter.

INSTRUCTOR WITHDRAWALS

Class attendance is most important to the learning process. Students are expected to attend each class meeting for which they have registered. When absence for some unavoidable reason does occur, it is the obligation of the student to contact the instructor to determine if make-up work is possible and the amount.

A 'Non Attendance' instructor withdrawal may be issued by an instructor to a student who does not attend class for a two week period and has not made previous arrangements.

PASS (P) OPTION

Certain courses listed in the schedule have an 'OPT' designation indicating that each student in that class has the option of taking the course for the usual letter grade or taking it on a pass (P) basis. The maximum number of 'P' credits allowed toward an LBCC degree is 16 hours, not including those with mandatory pass (P) grading. Students should consult a counselor before choosing the pass (P) grade. It is not advisable for a student to choose the 'P' grade for a major course in his field of study. Students process requests for pass (P) grades through class instructors. Students planning to transfer to a four-year institution should check that institution's requirements regarding 'P' grades.

PROBATION

Probation applies to students who are registered for 10 or more credits at the beginning of the third week of the term.

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

Transfer students who are on probation or who have been suspended from another institution of higher education are automatically admitted to Linn-Benton Community College on probation. At the completion of one quarter carrying 10 or more credits a transfer student's probation status is based only on the grade point average earned at Linn-Benton Community College and will be consistent with the above.

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

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

HONOR ROLL

Students who obtain a grade point average of 3.33 or better and have carried a 10 credit load or more of graded work, are placed on the Honor Roll List for that quarter.

RECORDS INFORMATION

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

TRANSCRIPTS AND RECORDS

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

It is the policy of the LBCC board of education that the Registrar shall not release an official or unofficial copy of any part of records of a student who has failed to make payment of an emergency loan, deferred payment, or other college debt or obligation.

WITHDRAWAL FROM SCHOOL

Individuals who find they can no longer attend should officially withdraw from school. Students who withdraw on or before Friday of the fifth week may expect a tuition refund.*
*See Refunds.

Degrees, Diplomas, Certificates Graduation Requirements

LBCC offers the Associate of Science, Associate of Arts and Associate of General Studies degrees. The requirements for these degrees, which are presented below, are subject to approval of the Board of Education, as well as the State Department of Education, Division of Community Colleges.

Associate of Science: This degree is awarded to those students who complete the requirements of a departmental curriculum, when such requirements represent the completion of an organized two-year program. Associate of Arts: This degree is awarded to students who complete the requirements of the lower division Liberal Arts program. Associate of General Studies: This degree is awarded to students who complete the requirements outlined below.

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

GENERAL REQUIREMENTS FOR ASSOCIATE OF SCIENCE DEGREE (AS)

1. Complete required courses as outlined in a vocational or technical program with minimum credits ranging from 90 to 96 credit hours. Individual programs, by exception and approval from the Dean of Instruction, may require up to 108 credit hours.
2. Earn at least 24 credits at Linn-Benton Community College and be enrolled during the term the degree requirements are completed.
3. Maintain an accumulative grade point average of at least 2.00.
4. Complete the following required general education courses:

1.102 WR121	Occupational Writing or English Composition	3 credits
1.103 SP111 SP112	Occupational Speech or Beginning Oral Communications or Intermediate Oral Communications	3 credits
1.110 4.202 2.515	Elements of Algebra or Math II or Business Math	4 credits
HE250 HE252 9.317	Health and/or Nirst Aid and/or Multi-Media First Aid and/or	
	P.E. Activity Courses	4 credits
	Electives	6 credits
	Courses to be elected by the student from other than major area.	

GENERAL REQUIREMENTS FOR ASSOCIATE OF ARTS DEGREE (AA)

1. Complete 90 quarter credits of transfer course work including' required general education courses.
2. Earn at least 24 credits at Linn-Benton Community College and be enrolled during the term the degree requirements are completed.
3. Maintain an accumulative grade point average of at least 2.00.
4. Complete the following required general education courses:

All courses must be transfer credit

WR121	English Composition	3 credits
WR122	English Composition or	
WR123	English Composition	3 credits
SP111	Beginning Oral Communications or	
SP112	Intermediate Oral Communications	3 credits
HE250	Health and/or	
HE252	First Aid or	
	P.E. Activities	6 credits
	*Humanities	9 credits
	*Social Sciences	9 credits
	*Science and/or Math	12 credits

*The Humanities group includes such courses as Art, Drama, Foreign Languages, Literature, Music, Philosopy and Speech.

The Social Sciences include such courses as History, Psychology, Sociology, Political Science, Anthropology, Economics and Geography.

The Science and Math group includes such courses as Mathematics, Biology, Geology, Physics, Botany and Physical Science.

GENERAL REQUIREMENTS FOR ASSOCIATE OF GENERAL STUDIES DEGREE (AGS)

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

1.102	Occupational Writing or	
WR121	English Composition	3 credits
1.103	Occupational Speech or	
SP111	Beginning Oral Communications or	
SP112	Internediate Oral Communications	3 credits
1.110	Elements of Algebra or	
4.202	Math II or	
2.515	Business Math	4 credits
HE250	Health and/or	
HE252	First Aid and/or	
9.317	Multi-Media First Aid and/or	
	P.E. Activity Courses	4 credits
	*Humanities, Social Science and/or Math/Science Courses	21 credits

*The Humanities group includes such courses as Art, Drama, Foreign Languages, Literature, Music, Philosophy and Speech.

The Social Sciences include such courses as History, Psychology, Sociology, Political Science, Anthropology, Economics and Geography.

The Science and Math group includes such courses as Mathematics, Biology, Geology, Physics, Botany and Physical Science.

WAIVERS AND EXCEPTIONS

1. The Dean of Students Office, in cooperation with the Dean of Instruction, processes waivers and exceptions to degree, diploma and certificate requirements.
2. Petition for waiver forms are available in the Admissions or Registrar's Office.
3. The General Education requirements in the Associate of Science and Associate of General Studies degree may be waived based on individual competencies through a college testing program.

COMMUNITY EDUCATION CLASSES

Those who enroll for a Community Education class may use the class for graduation purposes in the Associate of General Studies or Associate of Science degrees: (1) if it is a credit class; (2) if it is listed in the catalog it may be used in the fulfillment of elective or specified graduation requirements; (3) if it is not listed in the catalog it may be used in the fulfillment of elective requirements upon approval.

CERTIFICATES

Certificates are awarded to those who have completed specific requirements within a vocational major. They are awarded by a division of the college on the recommendation of the instructional staff within that field. Business, nursing assistant, welding, dental assistant and sewage treatment plant operators are commonly awarded certificates.

Generally, students must complete a minimum of 36 credits to qualify for the one year certificate. Individuals should refer to specific sections of the catalog to determine requirements.

HIGH SCHOOL COMPLETION PROGRAMS

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

1. High School Continuation--the High School Continuation program is offered in cooperation with the 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 permission and approval of the high school (Simultaneous Enrollment). Instruction is based on individual requirements and individual study. The high school evaluates the student's educational records and determines which courses the student must take to meet the high school's graduation requirements. The diploma is issued by the local school district.
2. Oregon Competency Based Adult High School Diploma--The primary purpose of this program is to assist those individuals 18 years of age or older or those high school age students who have been released from compulsory attendance under ORS 339.30, in completion of the credits required of all high school graduates in Oregon. LBCC evaluates the student's educational records and life's experience and assists in planning a study program that will meet individual need.
3. LBCC offers the GED high school certification examination through the Guidance Center.

Staff:
Rita Lambert, Director (and Assistant to Dean of Students)
Diane Tsukamaki, Financial Aids Officer
Violet Cooper, Placement Officer

Financial Aids and Placement

Financial Aids

It is the intent of Linn-Benton Community College to provide an opportunity for college attendance by students who cannot pay the full cost of college education. LBCC financial aids are intended to supplement family and student resources through loans, grants and/or part-time employment. To determine the amount a family and student can contribute LBCC relies on the College Scholarship Need Analysis Service (CSS).

The CSS Financial Aid Form can be used to apply for a Basic Grant at no cost. In addition, the form can be used to apply for all federal and state grant, work, and loan programs. When used to apply for all aid, a minimum of $4.50 is charged. Use of the CSS service assures every student equal treatment. Processing an application through CSS usually requires six weeks.

APPLICATION PROCEDURES FOR 1978-79

Applications for aid are available from the Financial Aid Office or from you high school counselor.

1. File the Financial Aid Form with CSS. CSS will forward information to the Basic Grant program if you request them to do so. To apply for a State Need Grant, request on the form that a copy be sent to the State Scholarship Commission in Eugene, Oregon.
2. Complete and return the Linn-Benton Financial Aid Application.
3. Upon receiving your application, LBCC may request additional information such as an affidavit of independence or a transcript of aid received elsewhere.

Applications will be received by the Financial Aid Office throughout the entire school year. However, financial aid dollars are limited. Students who apply after May 1 may find that financial aid monies are not available. If you wish to know before the beginning of the term what financial monies you will receive, apply a minimum of two months prior to the start of the term. Each applicant will be notified by a letter whether or not he/she qualified for financial aid.

STUDENT COSTS

Individual student costs vary according to differences in course of study, transportation, housing and many other factors. Below you will find examples of student budgets showing average costs while attending LBCC.

STUDENT BUDGETS

Nine Month (3 Quarter) Budgets:

	Single (Living With Parents)	Single (Living Away)	Married (One Dependent)
Tuition & Fees	$ 385.20	$ 385.20	$ 385.20
*Books & Supplies	$ 200.00	$ 200.00	$ 200.00
Rent & Food	$ 200.00	$1700.00	$3600.00
Personal Expenses	$ 600.00	$ 600.00	$ 900.00
Transportation	$ 600.00	$ 600.00	$ 600.00
Day Care			$1200.00

*Book and supply costs vary greatly. Check with Admissions for current information.

DEFERRED PAYMENTS

Entering and returning full time students may apply to have up to two-thirds of their tuition deferred. Under the deferred tuition plan students who are temporarily unable to pay the full amount of their tuition can 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, (50 cents per month on $60) is charged borrowers.

Deferred Payments will be denied students who have failed to make proper payment of previous emergency loans or deferred payments. In addition, late fees and collection agency costs may be added to the student's unpaid balance. Failure to make proper payment will result in the institution not releasing an official transcript or any part of the student record.

Types of Assistance

BASIC EDUCATION OPPORTUNITY GRANTS(BEOG)

Grants are available for students carrying six or more credits. Awards usually range from $50 to $900 each year. The federal government determines awards based on the applicant's financial need.

SUPPLEMENTAL OPPORTUNITY GRANTS (SEOG)

This is a cash grant program for students with exceptional financial need. Grants vary from $200 to $1000 per year depending on the need of the applicant and cannot exceed fifty percent of a student's total financial aid award.

STATE NEED GRANTS

The Oregon State Scholarship Commission provides cash grants to full time students with exceptional financial need. The grants, ranging from $200 to $500 a year, are transferable to other colleges and universities in the state of Oregon. Grants may be renewed for four years if the student remains in good academic standing and need continues. (See item 1 in application procedures).

COLLEGE BOARD GRANTS

Twenty-five full year tuition-free grants to Linn-Benton Community College are awarded annually to presently enrolled high school students in Linn or Benton County. High school seniors should apply through their high school principal or counseling office before April 15.

NURSING STUDENT MONIES

Students accepted into the Associate Degree Nursing program who will be attending LBCC full time may apply for Nursing Grant and Loan monies. Awards are based on financial need and availability of funds. Application procedures are the same as those described above. Nursing awards are not made until late August when federal funding is known.

STUDENT PART-TIME EMPLOYMENT

A federally supported Student Work Program provides on and off campus employment for students with financial need. Work schedules are assigned by supervisors, and students are paid a minimum of $2.65 an hour for work performed. Higher wages are paid to returning student workers and for jobs requiring specialization. Employment during the school term may not exceed 20 hours per week. When possible, students are placed in jobs compatible with their career goals.

NATIONAL DIRECT STUDENT LOANS

Students in good standing who have financial need may qualify for long term, low-interest loans. Loans may be made for up to $1500 per academic year, although the average is about $600. No interest is charged while the borrower is in college or in deferred repayment status, (active military or serving in Peace Corps or Vista). Interest of three percent per year is charged during repayment period. The borrower's first payment is normally due nine months after leaving college, except when deferment status is obtained. The loan may be prepaid to reduce interest. Teachers of handicapped children or teachers in certain low-income schools may have a percentage of the loan cancelled for every year of service, not to exceed fifty percent of the loan.

GUARANTEED STUDENT LOANS

Loans of up to $1500 per academic year are available to students through their own bank. Loan repayments do not begin until nine months after the borrower leaves college. Annual interest on Guaranteed Student Loans is seven percent. If the borrower's adjusted gross family income is $25,000 or less, the federal government will pay the interest until the repayment period begins. The loan may be prepaid to reduce or eliminate interest charges. The student obtains the application form from the LBCC Financial Aid Office and takes it to the lending institution of his or her choice, after the College certifies: (a) that the applicant is accepted or enrolled as a full time student in good standing; (b) that the applicant's estimated educational expenses are reasonable; (c) the amount and types of financial aid and income the student received from other sources.

EMERGENCY LOANS

Short-term emergency loans of up to $65 are available to any full time student who has been in attendance at LBCC four or more weeks. Loans will be approved for any reasonable education-related costs except tuition. Loans are normally repayable within five weeks of issue date. Ten percent simple annual interest is charged, (54 cents per month on $65).

Emergency loans will be denied students who have failed to make proper payment of previous emergency loans or deferred payments. In addition, late fees and collection agency costs may be added to the student's unpaid balance. Failure to make proper payment will result in the institution's not releasing an official transcript or any part of the student record.

LAW ENFORCEMENT EDUCATION PROGRAM (LEEP)

Financial assistance to pay the cost of tuition and books is available to some law enforcement personnel. Proof of financial need is not required. Law Enforcement Education application forms are available from the Financial Aid Office.

SCHOLARSHIPS

Several community service organizations and business establishments have offered scholarship assistance for LBCC students. It is recommended that interested individuals contact the Financial Aid Director or high school principal or counselors for additional information.

COMMUNITY AGENCIES

Other federally supported programs to assist students may be found in local communities. Individuals who have been unemployed or underemployed and who wish to train for a vocational program should inquire at their local Employment Office about CETA. The Employment Office also has educational monies for some welfare recipients. If you have a disability the Vocational Rehabilitation Division may assist you with educational expenses.

Academic Eligibility

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

STANDARDS OF SATISFACTORY PROGRESS FOR STUDENTS RECEIVING FINANCIAL AID OR VETERANS BENEFITS

1. Satisfactory progress toward educational goals as it relates to credit and term completion will be the basis for continued financial aid and certification of veterans.
2. Credit completion, as it relates to aid eligibility or veteran certification, will be based on the student's academic load, (half-, three-quarter, or full time) at the time of original certification or term the student originally receives aid. Students awarded aid or certification as full time students will be required to complete twelve or more credits with a minimum of a 2.0 grade point average. Three-quarter time students will be required to earn a minimum of nine credits with a minimum grade point average of 2.0. Half-time students will be required to complete six quarter credits with a minimum grade point average of 2.0. A minimum grade point average of 2.0 is also required to graduate.
3. At the conclusion of any term in which a student fails to meet his/her minimum criteria, the Financial Aid Office or Veterans Office will review the student's progress and at its option, terminate the aid or certification, or allow the student not more than one additional term to correct the deficiency. Any student failing to meet the minimum criteria for two terms will be denied aid or certification except where there is a showing of extenuating circumstances as determined by the Financial Aid Office or Veterans Office.
4. Students awarded aid or certified on a full time basis will be allowed eight terms of attendance for program completion. After the eighth term of attendance, the student's progress will be reviewed and upon approval of the Financial Aids or Veterans Office, the student may be given one additional term. Students awarded aid or certified on a three-quarter basis will be allowed twelve terms of attendance with one term extension upon review. Students awarded aid or certified on a half-time basis will be allowed sixteen terms of attendance with one term extension upon approval. Total credits earned by students enrolled on a three-quarter time and half-time basis will also be considered when reviewing maximum terms of attendance.
5. The official records will show all transactions of withdrawals or drops beginning the third week of any term. The last day of attendance will also be listed on the withdrawal form.
6. Students certified as veterans will be allowed to enroll for thirty credits of courses designated as 'deficiency courses' and no more than four full time terms in the Adult Basic Education/General Education Development Program. Additional deficiency courses and time may be approved upon request.
7. Each student receiving financial aid or being certified as a veteran will be given a copy of the College's policy concerning satisfactory progress at the time of the initial award or certification.
8. Based on extenuating circumstances, requests for exceptions to the Linn-Benton Community College 'Standards of Satisfactory Progress' may be made to the Director of Financial Aid or Veterans Director and appealed to the Dean of Students.

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

G.I. BILL (VETERANS' BENEFITS)

Prospective students who are eligible for veterans' benefits should contact the college Admissions and Veterans' Information Office for information on V.A. approved programs of instruction, prior to making application for benefits. Upon receipt of the veteran's application with necessary supporting documents, the LBCC veterans' clerk will certify enrollment and forward the complete application package to the Veterans Administration regional office in Portland. In most cases this will complete the application process for educational allowance. It should be noted that this application procedure is separate from application for admission to the college.

Veterans must comply with the Standards of Satisfactory Progress set forth in the Financial Aid Section above under the heading of Academic Progress.

VETERANS' ASSISTANCE OFFICE

The staff of the VAO helps veterans and their dependents follow up on their application for veterans' benefits when necessary. A full-time member of the staff is the Veterans' Representative on campus, an employee of the Veterans Administration. The VROC is the veteran student's basic resource for communications with the V.A. and should be consulted freely about payment problems, as well as the full range of veterans' benefits. The office, as a whole, works to expedite and facilitate any dealings veterans have with the V.A.

Placement

PART-TIME EMPLOYMENT

The LBCC Placement Service assists students seeking part-time and summer employment. Students who have made application for work are referred to job listings obtained from local employers.

PLACEMENT SERVICES

The LBCC Placement Office offers a number of services to graduates, alumni, and students needing help in getting jobs. Employment opportunities available to applicants range from entry level, low-skill positions, to professional careers. Job openings may be for part-time, for temporary or for full-time work.

In addition to job referrals, applicants can get help in deciding on individual job-search plans, in resume making and in developing effective interview techniques.

Permanent credential files may be established with the Placement Office upon request.

For detailed information on Placement Office services, contact the Placement Officer, CC-119 or phone 928-2361 ext. 297.

ALUMNI

Alumni activities include seminars and workshops for up-grading skills, group tours (sponsored by the LBCC Travel Club), and an alumni newsletter.

The newsletter, THE REUNION, contains information on present and future events of particular interest to alumni, planned tours and human-interest stories about former LBCC students.

Alumni are invited to participate in these activities and to become members of the Alumni Association. For further details, contact the alumni advisor, Placement Officer, 928-2361, ext.297.

Staff:
Robert Talbott, Director
Janet Brem, Guidance Counselor
Brian Brown, Guidance Counselor
Joyce Easton, Health Counselor
Raymond Miller, Guidance Counselor
Blair Osterlund, Counseling Psychologist
Ann Marie West, Guidance Counselor

Guidance Services and Health Center

Brochures, catalogs and class schedules are available to help students become acquainted with LBCC. All matriculated students have the opportunity to talk with a counselor about programs, goals, and classes. During the first week of classes the student association offers assistance to new students through information booths, maps and programs.

ADVISING

All new full-time students have an appointment with a professional counselor who assists them in evaluating their academic records and in selecting courses that are appropriate for a chosen major. LBCC provides advising assistance for students throughout the school year through the cooperation of counselors and teachers. When students need help in planning their class schedules they should contact their major instructor or the Division Office for their particular majors. The following list indicates which division each major is in.

BUSINESS DIVISION

(B 111 - Office) Phil Clark, Director
Accounting
Accounting Technology
Administrative Secretary
Banking & Finance
Business Administration
Business Education
Culinary Arts & Restaurant Management
Data Processing
Educational Secretary
General Business (1 year)
Legal Secretary

Management
Marketing
Medical Receptionist
Medical Transcriptionist (1 year)
Office Administration
Secretarial Services (1 year)
Supervisory Training

COUNSELING CENTER
(CC 110 - Office) Bob Talbott, Director
Associate of General Studies
Basic Transfer Program
Elementary Education
Home Economics
None (For the use of students taking 9 or fewer credits only)
Secondary Education
Undecided (Lower Division)
Undecided (Occupational - Technical Program)

HEALTH OCCUPATIONS DIVISION
(HO 121 - Offiee) Doreen Lorenz, Director
Associate Degree Nursin; (RN)
Dental Assistant (1 Year)
Dental Hygienist
Nursing Assistant (1 Term)

HUMANITIES & SOCIAL SERVICES DIVISION
(H/SS 101 - Office) Ken Cheney, Director
Anthropology
Art (Fine Arts)
Criminal Justice
 Administration
 Corrections
 Law Enforcement
Performing Arts (Drama, Dance, Music, Speech)
Social Science
Economics
English (Literature, Composition, Creative Writing)
Geography
Graphic Communications/Journalism
 Design
 Printing Technology
 Journalism
History
Philosophy and Religion
Political Science
Psychology
Sociology

INDUSTRIAL & APPRENTICESHIP DIVISION
(IA 141 - Office) Marv Seeman, Director
Auto Body Repair
Automotive Technology
Construction Technology (Carpentry)
Apprenticeship
Heavy Equipment Mechanics/Diesel
Machine Tool Technology
Metallurgical Technology
Refrigeration, Heating and Air Conditioning
Small Engine/Recreational Vehicle Repair
Welding

PHYSICAL EDUCATION & HEALTH DIVISION
(AC 102 - Office) Dick McClain, Director
Physical Education & Health

SCIENCE TECHNOLOGY DIVISION
(ST 121 - Office) Pete Scott, Director
Agriculture
Animal Technology
Architecture
Biology
Chemistry
Drafting Technology
Electricity/Electronics
Engineering
Engineering Technology
Fire Science
Fisheries Biology
Forestry
General Science
Mathematics
Physics
Pre-Dental
Pre-Medical
Pre-Nursing
Pre-Veterinary Medicine
Science Lab Technician
Water/Wastewater Technology
Wildlife Biology

SPECIAL SERVICES
(HO 201 - Office) Mel Gilson, Coordinator
Adult Education (High School Completion)

If you are unable to locate your major or division, check with the Guidance Center.

COUNSELING

Professional counselors are available to help students deal with academic, vocational, or personal problems. The Guidance Center is open from 8 a.m. to 5 p.m. weekdays, including the noon hour. During the first week of class there are counselors available from 6:30 to 8:30 p.m. Counselors are available in the evening certain days of the week. Contact the Guidance Center or Community Education offices for exact days and times.

The following classes are offered through Guidance Services.

0.695 ASSERTIVENESS TRAINING FOR WOMEN AND MEN
☐ 2 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Facilitates the learning of a package of communication skills termed assertive behavior. Assertion rests on a foundation of respect for self, respect for others, and respect from others.

0.695 HUMAN POTENTIAL AND SELF MOTIVATION
☐ 3 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
A semi-structured small group experience which stresses the development of self-motivation, self-confidence, empathetic regard for others, values clarification and self-determination through human potential skill-building and related experiences. Instructor permission required.

0.685 LIFE PLANNING FOR ADULT WOMEN
☐ 2 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
For women seeking new directions in life. Exploration of values, interests, and abilities; support of women in like situations; and professional guidance and testing. Realistic alternatives explored in terms of careers, education, volunteerism, and personal creativity.

0.685 CAREER DECISION MAKING
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Helps define a career, develop personal awareness, practice decision-making process, and learn job-search skills. Student's involvement in class activities based on his or her own life situation. Combination of lectures and small-group discussions.

PY 111 PERSONAL DEVELOPMENT
☐ 4 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Experience in interpersonal communication and group dynamics, with emphasis on the communication of feelings.

0.248 INTRODUCTION TO RELAXATION
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
This is a very practical 'how to' class in learning to relax both physically and mentally. Students learn about the 'Fight or Flight' theory and how long term stress affects the body. Develops an increased understanding of how nutrition and exercise contribute to relaxation.

ED 209 LEADERSHIP PRACTICUM
☐ 2-6 class hrs/wk ☐ 1-3 cr. ☐ F/W/Sp
A field based program to provide students involved in leadership activities, both on and off-campus, with skills in communication, time management, motivation, etc.

Staff:
Peter Boyse, Coordinator of Student Development

Student Organization and Activities

Through the combined efforts of students, faculty, and administration, student development activities at LBCC provide a balanced campus and community-wide program of events and associations which offer opportunities for the personal, social and cultural development of the individual and the enjoyment of leisure activities.

The College encourages those student development activities which will complement the academic program by providing opportunities for constructive leadership, cooperative planning, and development of social and cultural interests. The participative nature of the programs provide students with invaluable experiential learning opportunities.

All student activities, organizations, and sports are open to all students without regard to sex or minority status. Students are encouraged to participate in those activities which are compatible with their interests. Among the activities planned in the coming year are speakers, films, dances, performing artists, symposiums, special seminars, recreational activities, etc.

STUDENT LEADERSHIP

Linn-Benton provides opportunities for students to serve on college committees and to earn credit for participating in leadership development activities to enhance student life.

STUDENT RIGHTS, FREEDOMS, RESPONSIBILITIES AND DUE PROCESS

The LBCC Board of Directors on December 9, 1971 approved as policy the document, Student Rights, Freedoms, Responsibilities and Due Process.

As the title implies, policy is set forth regarding students' rights, conduct and procedural fairness. This document was developed by a committee of students, staff and Board members.

Students enrolling in classes at Linn-Benton Community College are subject to rules, limits and conditions set forth in the college catalog, class schedule and other official publications of the institution.

CLUBS AND ORGANIZATIONS

A number of clubs and organizations have been established at the college and opportunities for affiliation range from a professional business club to the Ski Club. Students desiring information concerning present clubs and organizations or the establishment of new clubs should contact the Student Organizations Office (CC213).

RECREATIONAL SPORTS

A comprehensive recreational sports program is available to LBCC students during the academic school year. The recreational sports program provides the student with opportunities for the development of leisure activity. Sports programs presently established are skiing, flag football, basketball, volleyball, slow-pitch softball, billiards and handball. Interested students should contact the Coordinator of Recreational Programs through the Office in the Activities Center.

INTER-COLLEGIATE ATHLETICS

Linn-Benton Community College has developed a comprehensive program of inter-collegiate athletics with an affiliation with the Oregon Community College Athletics Association. Programs projected for the 1978-79 school year include the following: men's and women's cross country, women's volleyball, men's and women's basketball, men's and women's track, men's and women's tennis, co-educational golf and men's baseball. Students interested in participation should contact the Director of Athletics in the Activities Center office.

MUSIC

The college offers several opportunities in the vocal and instrumental musical performing arts, such as the Swing Chior and Jazz Ensemble. Individuals interested in participation should contact the Performing Arts Department located in the Humanities Building.

DRAMA

In years past, LBCC has provided opportunity for students to participate in drama productions for the student body and community. Individuals who are interested in theater or acting should contact the Performing Arts Department in the Humanities Building.

PUBLICATIONS

A number of publications are produced by the students of LBCC. The college newspaper, the Commuter, has received acclaim throughout the state. Students interested in participation should contact the Journalism Department through the Humanities and Social Services Division Office in the Humanities Building.

Director:
Robert A. Miller

Campus and Community Services

Campus and Community Services at LBCC provides a broad offering of services and programs to both the campus and community. Among the services presently provided include: restaurant, snack bar, food and drink dispensaries, lost and found, ticket sales and distribution, recreational and game equipment, meeting rooms, catering, bulletin boards, public telephones, housing listings, lockers for the handicapped, lounge areas, facility scheduling, tours, campus and community events calendaring and information, and senior services. In addition to the services, the department also offers and coordinates a wide variety of cultural and educational events throughout the year.

COLLEGE CENTER

The second level of the College Center serves as the gathering place for all members of the college community -- students, faculty, administrators, alumni and guests. The Center provides for the services, conveniences and amenities that the members of the College community desire for getting to know and understand one another through informal association outside the classroom.

THEATER

The new 500-seat theater to be completed in 1979 will replace the Forum as the major facility for campus and community programs and events. Among such major events are the LBCC drama productions, LBCC and Creative Arts Guild cultural performing arts series, major speakers and performers, and state-wide conferences, workshops and conventions.

FOOD SERVICES

Located on the second level of the College Center the food service provides a variety of menu offerings for students, staff, and the community. In addition to its normal operation the food service also periodically caters within the facilities for special activities sponsored by College or community organizations. The normal hours of operation are from 7:30 AM until 9:00 PM Monday through Thursday and 7:30 AM until 3:00 PM on Friday, with the hours being extended for special occasions. The College Center food services is operated on a self-sustaining basis. Food services include a cafeteria and the Santiam Room, which provides table service for breakfast and lunch.

HOUSING

Though the college does not provide institutional housing for its students living away from home, it does provide a current list of available housing in private homes and commercial dwellings. The listing of available housing (available in the College Center Office) is updated each quarter to facilitate locating accommodations with minimum delay.

BOOKSTORE

The Bookstore provides all the required textbooks and miscellaneous supplies and materials needed by students attending LBCC. Profits from the Bookstore help support the extra-curricular activities and programs at the college. Located in the College Center Building it is open from 8 a.m. to 5 p.m. Monday through Thursday; 8 a.m. to 5:30 p.m. Friday; 6:30-8:30 p.m. on Tuesday and Wednesday, unless otherwise posted, and 8:30 to 11:30 a.m. on Saturday. There are extended hours during the first two weeks of each term. Information about refunds is available at the Bookstore. Buy back of used books is scheduled from 1 to 4 Fridays, and from 8:30 to 4:00 Monday thru Friday of finals week.

HEALTH SERVICES

The Health Center is staffed by a registered nurse and is located in the College Center. Emphasis is on education and personal responsibility in staying well. Health counseling first aid and assistance in referral are available. Office hours are 8 a.m. to 5 p.m. weekdays.

HEALTH INSURANCE

LBCC makes available to students a comprehensive sickness, hospitalization and accident insurance program at reasonable rates. If students are not covered by their parent's insurance, they should certainly consider this health insurance. Coverage is also available for dependents of married students.

PARKING

Linn-Benton Community College provides free parking for students and staff on a first-come, first-serve basis. Certain areas are designated for specific uses.

Handicapped parking permits are available through the Campus Security Office, as are parking and traffic rules. Cars improperly parked are ticketed and subject to fines.

CAMPUS SECURITY

The Security Coordinator, with a staff of student aides, is responsible for maintaining safety and security on the campus, and for patrolling buildings and parking areas. Emergencies and safety hazards should be reported to the Security Office in the College Center Building.

GRAPHIC SERVICES

Graphic Services provides hands-on learning experiences for students enrolled in the Graphic Communications program. With permission from their instructor, Graphics will also assist students in the making of overhead transparencies for presentations. Graphics may reproduce materials for student clubs and activities with permission from the Coordinator of Student Activities.

Director:
Jerome A. Johnson
Faculty:
Marian Cope
Russell Gregory
Charles Mann

Developmental Center

The Developmental Center provides a cluster of services designed for students, staff, and community served by LBCC 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 the learning skills of all students,
2. identifying the difficulties students face in learning, and
3. providing solutions to those difficulties.

The Developmental Center maintains an Open Door Policy. All students are welcome to take advantage of Center offerings, with or without earning credit. Many courses are individualized so that a student may begin or end his/her studies at any time during the quarter. Other services such as the skills labs can be used on a drop-in basis without signing up for a course.

Some students decide for themselves to improve their skills in the Developmental Center while others are referred by their instructors or counselors. Such recommendations by counselors are often based on the results of entrance exams or previous school experiences.

TUTORIAL SERVICES (INDIVIDUALIZED, NO CREDIT)

Free, one-to-one extra help is provided for students by tutors. Students may receive assistance on either a drop-in or long-term basis. Tutoring is available in most subject areas.

WRITING LAB (INDIVIDUALIZED, NO CREDIT)

Individual help is available in all areas of writing. Specific difficulties in writing, from punctuation to research papers, may be studied. Students may just drop in or may study on a regular schedule.

TESTING

The Developmental Center offers a variety of tests for currently enrolled students, prospective students, and members of the community. It administers:

A. the General Education Development test (GED) for the certificate of (high school) equivalency
B. the Comparative Guidance and Placement exam (CGP) for all new, full time students
C. the College Level Exam Program (CLEP) tests for credit by exam
D. special admission tests for various programs on campus, such as the National League for Nursing (NLN) in Pre-Nursing and Guidance Exam used by the LBCC Nursing Program
E. skills tests, such as reading and writing
F. vision and hearing screening
G. individualized testing for other on-campus courses

COURSE OFFERINGS

Classes in the Developmental Center offer the student learning experiences in different situations. Students may choose either a lecture and discussion classroom approach or an individualized program in which they can learn the material at their own pace. These individualized courses provide flexibility of scheduling and allow for variable credits. In a variable credit course, the student can earn one, two or three credits, depending upon the student's own effort and learning rate.

1.125 STUDY SKILLS (CLASSROOM SETTING AND/OR LAB SETTING)

☐ 2-6 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp
Instruction includes study techniques, budgeting time, studying for tests, test-taking tips (essay, multiple choice, etc.), note-taking, outlining, effective listening, and using the library. The course applies the skills learned to textbooks.

1.126 LANGUAGE ARTS SKILLS (INDIVIDUALIZED AND VARIABLE CREDITS IN LAB)

☐ 2-6 class hrs/wk ☐ 0-3 cr. ☐
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. Each student progresses through the program at his own pace, showing knowledge of one skill before beginning the next.

1.130 BASIC GRAMMAR (CLASSROOM SETTING)

☐ 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 (CLASSROOM SETTING)
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Spelling skill is developed through word structure, word attack skills and pronunciation. Proofreading and dictionary usage are emphasized for application to the student's writing.

1.132 SPELLING SKILLS (INDIVIDUALIZED AND VARIABLE CREDIT IN LAB)
☐ 2-6 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp
Improvement of spelling through studying phonetic and spelling principles in a 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.

1.128 READING SKILLS (INDIVIDUALIZED AND VARIABLE CREDIT IN LAB)
☐ 2-6 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp
Individualized instruction in the reading skills of comprehension, reading rate and vocabulary. Individual diagnosis provides placement at the appropriate instructional level, and instruction stresses the improvement of those reading skills most closely related to the student's academic and career plans.

1.135 DEVELOPMENTAL READING (CLASSROOM SETTING)
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
This course is designed to improve the student's 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. The course may be taken three times, if desired, for non-transfer credit.

EN 115 EFFECTIVE READING (CLASSROOM SETTING)
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Intended for the average and above average reader who wishes to improve study skills and increase the 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. Counselor or instructor approval needed.

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

1.156 ENGLISH AS A SECOND LANGUAGE
☐ 3 class hrs/wk 3 lab hr/wk ☐ 3 cr. ☐ F/W/Sp
This course in English is intended for students whose first language is not English. Comprehension, speaking and writing are studied according to the student's individual needs.

1.134 STUDY SKILLS--VOCATIONAL
☐ 20-60 lab hrs/term ☐ 0-3 cr. ☐ F/W/Sp
Individualized instruction to develop specific skills in various vocational programs. The instruction will be supplemental to the regular course offerings and will not substitute for that instruction. Diagnosis of deficiencies and interests of students determines level of instruction. Prerequisite: Currently enrolled in a specific vocational program.

MATH LAB

The Math Lab is available to anyone enrolled at LBCC who wants help with mathematics. They can be individual problems or difficulties involved with enrollment in a course. Special tests have been created to help pinpoint learning problems in mathematics, and trained tutors are available during most open hours. The Math Lab is located on the second floor of the Learning Resource Center, and is staffed by college mathematics instructors.

Director:
Stan Ruckman
Faculty:
Virginia Bowler, Librarian
Yvonne Lee, Librarian
Paul Snyder, Media Specialist

Learning Resource Center

The Learning Resource Center serves the educational needs of the college community by providing materials and services as resources for learning.

The Learning Resource Center provides a wide range of print and non-print materials for educational purposes. The materials available cover many levels of student ability. Enrichment materials are provided to meet the leisure-time and general information needs of the college and local community. Consultation is provided to staff and students on improving the utilization of existing resources or development of new resources.

The LRC is responsible for the acquisiton and processing of educational materials which support the college programs. Staff and facilities are provided for the production of many locally developed materials.

Library

The library maintains a balanced collection of approximately 30,000 volumes and subscribes to approximately 500 periodicals and newspapers. The library provides a basic reference collection, general index materials, and current books in the liberal arts, technical, and vocational fields. Resources in areas of general interest or current topics of local or national concern are also well represented. Library materials not available through Linn-Benton may often be obtained through interlibrary loans within the state of Oregon. The materials and services available help to make the library a total information center serving the college and the community. Students may receive instruction in library skills from the college librarians or in conjunction with several writing classes.

The library includes a good selection of non-print instructional and informational materials such as audio-tapes, video-tapes, filmstrips and slide sets. The equipment for using these materials is located in the library and staff is available to provide assistance in learning to operate the equipment. Some equipment is available for short-term checkout.

Many of the instructional programs at Linn-Benton Community College are offered on an individualized instruction basis. Materials and equipment which are used in these programs are located in classrooms and resource rooms throughout the campus.

Media Services

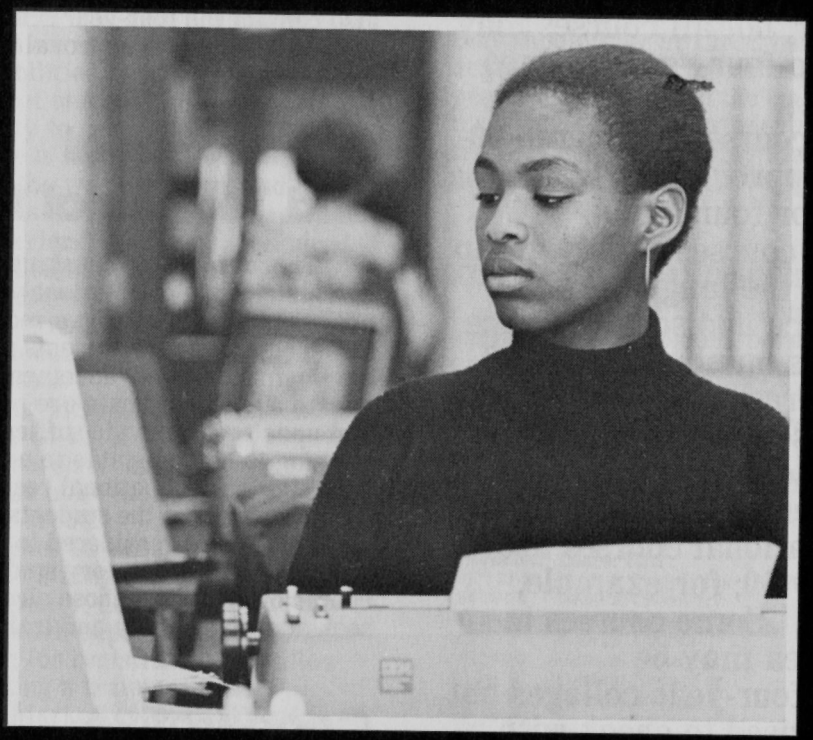
The Media Services Department supports the instructional program through the search, acquisition, design, production and implementation of audio-visual and television materials and related equipment. Mediated instruction occurs as an essential part of the courses taught at Linn-Benton. Programs of general interest are available to all students and staff through the library where they are cataloged and circulated.

When acceptable instructional materials are not available within the college collection or from commercial sources, they may be produced locally by media services. These materials provide the school with a balanced collection which meets the instructional needs of the student. The facilities of the department are also available for the production of faculty- and student-developed classroom materials.

Degrees and Certificates

	Course Cert	1 Yr Cert	2 Yr Cert	AS	AA	AGS
Basic Lower Division Transfer					•	
General Studies						•
Accounting Technology				•		
Administrative Secretary				•		
Agriculture - Crop and Turf Management				•		
Animal Technology				•		
Associate Degree Nursing				•		
Auto Body Repair		•		•		
Automotive Technology		•		•		
Banking and Finance				•		
Construction Technology		•		•		
Crafts and Trades (Apprent & Journeyman)				•		
Criminal Justice - Corrections				•	•	
Criminal Justice - Law Enforcement				•	•	
Culinary Arts		•	•	•		
Data Processing			•	•		
Dental Assistant		•				
Drafting Technology				•		
Educational Secretary				•		
Electricity/Electronics		•		•		
Emergency Medical Tech	•					
Engineering Technology - Civil/Mechanical				•		
Graphic Communications - Commercial Art				•		
Graphic Communications - Production Tech				•		
Heavy Equipment Mechanics - Diesel		•		•		
Human Services		•		•		
Legal Secretary				•		
Machine Tool Technology		•		•		
Management				•		
Marketing				•		
Medical Receptionist				•		
Medical Transcriptionist		•				
Metallurgical Technology	•	•		•		
Nurse Refresher	•					
Nursing Assistant		•				
Real Estate				•		
Refrigeration, Air Cond, Heating		•		•		
Science Lab Technician				•		
Secretarial Services		•				
Small Engine Recreation Vehicle Repair		•		•		
Supervisory Training	•	•		•		
Wastewater and Water/Wastewater Tech		•		•		
Welding		•		•		
Competency Based Adult High School Diploma	•					
General Education Development (GED)	•					

Programs of Study



Programs of Study

All offerings of the college, either academic transfer or occupational, are taught as college classes; however, not all courses may be transferred to four-year colleges and universities.

Generally, courses numbered 50-299 have been approved for transfer and are survey or foundation courses. These courses satisfy group requirements in the language and literature, science and social science groups. Courses numbered 100-199 are considered freshman level courses and those numbered 200-200 are considered sophomore courses.

Non-transfer vocational-technical occupational courses are numbered below 50; for example, 1.253, 6.024, etc. Some courses in the technical area may be transferable to four-year colleges but students are advised to check with a counselor for the transferability of courses and other information regarding their programs.

Transfer Programs and Curricula

Many students are interested in building a broad base of knowledge and working toward a baccalaureate degree. For these students, Linn-Benton Community College offers a wide choice of general studies and liberal arts courses with credits transferable to four-year institutions.

A manual titled Transfer Curricula, published by the Oregon State System of Higher Education, lists all transfer program requirements. This manual is available through every LBCC counselor, in the LBCC library, and in the office of high school counselors.

Students are responsible for familiarizing themselves with the requirements of the program in the institution to which they plan to transfer. Transfer plans should be discussed with a counselor to make sure students take the required coursework program at LBCC. Students should also contact the four-year school to which they plan to transfer for approval of their plans.

Occupational and Technical Programs

The various and constantly expanding curricula of the occupational and technical programs represent organized experiences designed to prepare students for effective employment and advancement in their chosen vocation. All curricula are periodically reviewed and updated to provide sufficient skills and training to be applicable to a number of positions with similar occupational requirements.

The needs of the students, industry and the community are considered in providing not only for full-time preparatory study, but evening course offerings for those already employed who seek additional study and training in their fields.

Cooperative Work Experience

Cooperative Work Experience is an instructional program designed to provide opportunity for students enrolled in programs at LBCC to earn up to 16 hours of degree credit for what they learn on the job.

1.200/WE 201 Supervised Field Experience is a course which allows the student to work at a job that closely parallels his or her field of study while enrolled in school.

The student has the opportunity to apply knowledge in a practical work situation which helps bridge the gap between the theoretical and the actual, and keep the student's perceptions realistic.

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 obtains direction and orientation in preparation for the ever changing needs in industry, government, and service agencies, making the transition from school to work gradually under the guidance of a coordinator, with time to comprehend the significance of the learning situation and the world of work.

While cooperative work experience is essentially an instructional program, the student nevertheless begins earning and understanding what it takes to manage time and money productively. He or she can gain a sense of community, and an awareness of personal and community responsibilities. Through cooperative work experience, most students improve their motivation and ability to get along with others. Of major importance is the fact that the student is better oriented to the world of work and has established solid contacts for later job placement.

1.201 Field Experience Seminar is required for all students enrolled in Supervised Field Experience and is designed to provide opportunity to share work related experiences with the work experience coordinator and fellow field placement students.

Content presented includes career planning and preparation, how to write performance objectives, and job-search techniques. The seminar meets for one hour each week and the student can earn one credit.

A student interested in building Supervised Field Experience into a program at LBCC should discuss it with a counselor, major area instructors, and the work experience coordinator to plan the best term for registration and allow ample time for locating a training station.

WE 203/1.202 - Marketing Your Skills for Pay--Career Planning and Job Search

Analysis of past experience for skills to be used for future employment. Identifying personal preferences in terms of people, geographical, and work environments. Learning a systematic job-search method adaptable to any location. Required participation in a practice field survey.

Reserve Officer Training Corps

Linn-Benton Community College students, in cooperation with Oregon State University, may enroll in the Army Reserve Officers Training Corps. Students who wish to enroll in this program may apply and attend classes at Linn-Benton Community College or at OSU depending on class size. Instruction in the Military Science Department is designed to produce junior officers for the United States Army in both the regular and reserve components. Registration is processed through LBCC and the student is registered in the Army R.O.T.C. program as a Special Student.

For further information please contact Director of Admissions.

Transfer Curricula

The curricula outlined below are intended to help students determine which transfer courses they should take at LBCC based on the four-year degree program being considered and the four-year college to which the courses will be transferred. Before students enroll for any transfer courses to apply towards a bachelor's degree they should talk with a counselor.

AGRICULTURE AND SCIENCE(OSU)

The two-year curriculum listed below, if successfully completed, permits a student to transfer to Oregon State University into most major curricula offered by the School of Agriculture at the junior level. A student may complete the baccalaureate degree program in an additional two years of study at that institution.

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121-3	English Composition	3	(3)	(3)
CH 104-6	General Chemistry	5	5	5
MT 95	Intermediate Algebra		4	
MT 101	College Algebra			4
BO 201-3 or BI 101-3	General Botany or General Biology or			
Z 201-3	General Zoology I	3-4	3-4	3-4
PE 180/190	Physical Education	1	1	1
HE 250	Personal Health		3	
	Electives	3	0-3	3
		15-16	16-20	16-17

Sophomore Year

Course No.	Course Title	F	W	Sp
	Physical Science electives	3-4	3-4	3-4
EC 201-3	Principles of Economics	3	3	3
SP 111-3	Fundamentals of Speech	3	3	3
MT 102	Trigonometry	4		
MT 110	Analytic Geometry		4	
MT 200	Calculus (MT 201, 202, 203 available)			4
	Electives	3	3	6
		16-17	16-17	16-17

Maximum acceptable credit: 108 hours

BUSINESS ADMINISTRATION (UO, OSU, PSU, SOSC) AND BUSINESS AND ECONOMICS (EOSC)

The program outlined below, if successfully completed, permits transfer into any of the major programs in business administration offered by institutions of the Oregon State System of Higher Education, or the program in business and economics at EOSC, at the junior level. Students may complete requirements for the baccalaureate degree with two additional years of work at the four-year institutions.

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121 ...	or			
WR121-3 ..	English Composition	3	(3)	(3)
BA 101 ...	Introduction to Business	4		
SP 111	Fundamentals of Speech		3	
	Mathematics*	4	4	4
	Science Sequence (OSU)* or Humanities Sequence (UO, PSU, SOSC, EOSC)*	3-4	3-4	3-4
PE 180/				
190	Physical Education	1	1	
HE 250 ...	Personal Health			3
	Electives*	3-4	3-6	3-6
		15-18	14-18	13-17

Sophomore Year

Course No.	Course Title	F	W	Sp
EC 201-3 ..	Principles of Economics	3	3	3
BA 211-3 ..	Principles of Accounting	3	3	3
BA 226 ...	Business Law			3
BA 232 ...	Intro. to Business Statistics		3	
MT 233 ...	Intro. to Num. Computation*	4		
	Social Science*	3	3	3
PE 180/				
190	Physical Education*	1	1	1
	Electives*	2-3	3	3
		16-17	16	16

Maximum Acceptable Credit: 108 hours
*Prior to taking any of these courses, contact Counseling.

BUSINESS EDUCATION (OSU, PSU, SOSC, EOSC) DISTRIBUTIVE EDUCATION (OSU)

The program outlined below is recommended for students who plan to transfer to a major program in business education at Oregon State University, Portland State University, Southern Oregon State College, and Eastern Oregon State College or to a program in distributive education at Oregon State University.

Freshman Year

Course No.	Course Title	F	W	Sp
BA 101 ...	Intro. to Business (OSU, SOSC)	4		
WR 121 ...	(OSU) or			
WR 121-2 .	(PSU, SOSC) or			
WR 121-3 .	English Composition (EOSC)	3	(3)	(3)
	Speech			
	Mathematics*	4	4	4
	Physical Education*	1	1	1
SS 111-3 ..	Stenography	3	3	3
SS 121-3 ..	Typewriting	2	2	2
	Data Processing (if available) (OSU, SOSC)*			3
	Electives*		3-7	0-4
		17	16-17	16-17

Sophomore Year

Course No.	Course Title	F	W	Sp
EC 201-3 ..	Principles of Economics	3	3	3
BA 211-3 ..	Principles of Accounting	3	3	3
SS 211-3 ..	Applied Stenography	3	3	3
PY 201-2 ..	General Psychology	3	3	
HE 250 ...	Personal Health (except SOSC and EOSC)			2-3
BA 214 ...	Business Communications (SOSC, PSU)			
	Data Processing (if available) (SOSC)			3
BA 226 ...	Business Law (OSU, PSU)			
BA 219 ...	Office Machines (if available) (SOSC)			
BA 232 ...	Intro. to Business Statistics (OSU, PSU)	3	3	(3)
HS 201-3 ..	History of the United States or			
PS 201-3 ..	American Government (EOSC)			
	Electives			0-4
		15	15	15-17

Maximum Acceptable Credit: 108 hours.

CRIMINAL JUSTICE

By special agreement between LBCC and Oregon College of Education, law enforcement and corrections students may transfer as elective, lower-division credit up to twenty-one hours of the occupational courses (5. numbers) listed in the curriculum following toward graduation requirements at OCE in the fields of social science, corrections, and law enforcement.

Freshman Year

Course No.	Course Title	F	W	Sp
CJ 111-3 ..	Intro. to Criminal Justice	3	3	3
WR 121-2 .	English Composition	3	3	
SO 204-6 ..	General Sociology	3	3	3
HE 252 ...	First Aid or			
HE 250 ...	Personal Health	3		
SP 111	Oral Communication		3	
	Literature sequence	3	3	3
PE 180/				
190	PE Activity	1	1	1
	Electives			6
		16	16	16

Sophomore Year

Course No.	Course Title	F	W	SP
CJ 211	Criminal Law I		3	
CJ 212	Criminal Law II			3
CJ 213	Legal Aspects of Evidence	3		
CJ 214	Criminal Investigation		3	
CJ 219	Community Relations	3		
PY 201-3 ..	General Psychology	3	3	3
	Mathematics or Science sequence	4	4	4
	Electives	3	3	6
		16	16	16

DENTAL HYGIENE

The curriculum listed below has been approved by the University of Oregon Health Science Center Dental School as suitable for Oregon Community College students interested in seeking admission to a professional program in dental hygiene.

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121-2	English Composition	3	3	3
BI 101-3	General Biology or			
Z 201-3	General Zoology	4	4	4
CH 104-6	General Chemistry	5	5	5
SO 204-6	General Sociology	3	3	3
PE 190	Physical Education	1	1	1
	Electives	0-3	0-3	0-3
		16-19	16-19	16-19

DENTISTRY

Students interested in enrolling in a dentistry program should be informed that admission to a professional school of dentistry is highly competitive. It is recommended that a student contact the four-year institution's dental school where they wish to enroll early in their first two years at a community college.

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121	English Composition	3		
CH 104-6	General Chemistry	5	5	5
MT 101	College Algebra	4		
MT 102	Trigonometry		4	
MT 110	Analytic Geometry			4
Z 201-3	Zoology	3	3	3
PE 190	Physical Education	1	1	1
	Electives			3
		16	13-16	16

EDUCATION

Accomplishment of the following curriculum guide will satisfy all LBCC requirements for an Associate of Arts degree. Moreover, it will transfer fully and conveniently into four-year college of education programs throughout the state.

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121-3	English Composition	3	3	3
SP 111	Fundamentals of Speech	3		
HS 101-3	or			
HS 201-3	History Sequence	3	3	3
En 104-6	or			
EN 101-3	or			
EN 107-9	or			
EN 201-3	or			
EN 253-5	English Sequence	3	3	3
GE 105	and			
GE 106/				
107	Geography		3	3
	PE Activity**	1	1	1
BI 101-3	General Biology	4	4	4
		17	17	17

Sophomore Year

Course No.	Course Title	F	W	Sp
HE 250	Personal Health			3
GS 104-5	General Science	4	4	
SO 204-5	General Sociology	3	3	3
PY 201-3	General Psychology***	3	3	3
PE 180/				
190	PE Activity**	(1)	(1)	(1)
MT 121-3	Math Sequence	3	3	3
AR 201-3	or			
AR 204-6	Art Sequence	3	3	3
		16-17	16-17	15-16

*OCE prefers HS 101, 102, 103
OSU prefers HS 201, 202, 203
**OCE requires special activity groupings. Refer to OCE catalog.
OSU requires only 3 hours of PE activity.
U of O requires only 5 hours of PE activity.
***PY 203 will transfer as elective credit only at OCE.

SECONDARY EDUCATION

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121-3	English Composition	3	3	3
SP 111	Fundamentals of Speech	3		
HE 250	Personal Health		3	
BI 101-3	General Biology	4	4	4
EN 104-6	or			
EN 101-3	or			
EN 107-9	or			
EN 201-3	or			
EN 253-5	English Sequence	3	3	3
	Electives from major/minor area***	3	3	6
		16	16	16

Sophomore Year

Course No.	Course Title	F	W	Sp
SO 204-6	Sociology Sequence	3	3	3
HS 101-3	or			
HS 201-3	History Sequence**	3	3	3
	P.E. Activity*	(1)	(1)	(1)
PY 201-3	General Psychology	3	3	3
	Electives from major/minor area***	6	6	6
		15-16	15-16	15-16

*OCE requires special activities groupings. Refer to OCE catalog.
OSU requires only 3 hours of P.E. activity.
U of O requires only 5 hours of P.E. activity.
**OCE prefers HS 101, 102, 103.
OSU prefers HS 201, 202, 203.
***Prior to taking these courses, contact Counseling.

ENGINEERING OR ENGINEERING TECHNOLOGY (OSU)

Students may complete a one-year program in Pre-Engineering Tech at LBCC. The remaining three years to complete a degree would be completed at Oregon State University.

Freshman Year

Course No.	Course Title	F	W	Sp
MT 101-2	College Algebra, Trigonometry	4	4	
MT 110	Analytic Geometry			4
CH 201-3	General Chemistry	4	4	4
WR 121	English Composition	3		
PE 190	Physical Education	1	1	1
	Electives			
	Social Sciences & Humanities	1-3	4-7	4-7
		13-16	13-18	13-18

FINE ARTS

Accomplishment of the following curriculum guide satisfies all LBCC requirements for an Associate of Arts degree. Moreover, it transfers fully and conveniently into four-year liberal arts colleges throughout the state.

Freshman Year

Course No.	Course Title	F	W	Sp
PE 180/ 190	P.E. Activity	1	1	1
HE 250	Personal Health	3		
WR 121	English Composition	3		
BI 101-3	or			
CH 104-6	or			
GS 104-6	Science Sequence	4	4	4
AR 195			3	
AR 291				3
AR 281-2			3	3
		12-17	12-17	12-17

Sophomore Year

Course No.	Course Title	F	W	Sp
SO 204-6	Sociology Sequence or			
PY 201-3	Psychology Sequence	3	3	3
HS 101-3	or			
HS 201-3	History Sequence	3	3	3
WR 122	or			
WR 123	English Composition	3		
	Electives*	6	9	9
		15	15	15

*Painting, Water Color, Design, Sculpture, Ceramics-Pottery, Jewelry-Making.

FORESTRY

The one-year preforestry program outlined below, if successfully completed, prepares students to enter professional curricula in forestry or the program in resource recreation management offered by the School of Forestry at Oregon State University at the sophomore level. Students planning to enter a professional program of forestry at OSU, or some other institution, should transfer immediately upon completion of the one-year preforestry program.

Freshman Year

Course No.	Course Title	F	W	Sp
BO 201-2	General Botany or			
BI 101-3	General Biology	4	4	(4)
CH 104-6	General Chemistry	5	5	5
MT 101-2	College Albegra, Trigonometry	4	4	
MT 110	Analytic Geometry			4
WR 121-3	English Composition	3	3	3
PE 190	Physical Education	1	1	1
HE 250	Personal Health			3
		17	17	16-19

HUMANITIES MAJOR

Accomplishment of the following curriculum guide satisfies all LBCC requirements for an Associate of Arts degree. Moreover, it transfers fully and conveniently into four-year liberal arts colleges throughout the state.

Freshman Year

Course No.	Course Title	F	W	Sp
PE 180/ 190	P.E. Activity	1	1	1
WR 121-3	English Composition	3	3	3
HE 250	Personal Health		3	
BI 101-3	or			
CH 104-6	or			
GS 104-6	Science Sequence	4	4	4
	Electives*	9	6	9
		17	17	17

Sophomore Year

Course No.	Course Title	F	W	Sp
SO 204-6	Sociology or			
PY 201-3	Psychology Sequence	3	3	3
HS 101-3	or			
HS 201-3	History Sequence	3	3	3
	Electives*	9	9	9
		15	15	15

*Prior to taking these courses, contact Counseling.

MUSIC MAJOR

Accomplishment of the following curriculum guide satisfies all LBCC requirements for an Associate of Arts degree. Moreover, it will transfer fully and conveniently into four-year liberal arts colleges throughout the state.

Freshman Year

Course No.	Course Title	F	W	Sp
PE 180/ 190	P.E. Activity	1	1	1
WR 121	or			
WR 122/ 123	English Composition	3	3	
EN 104-6	or			
EN 101-3	or			
EN 107-9	or			
EN 201-3	or			
EN 253-5	English Sequence	3	3	3
MU 201-3	Music Sequence	3	3	3
MU 111-3	Music Sequence	4	4	4
HE 250	Personal Health			3
	Choir or Band	1	1	1
	Performance Studies	1	1	1
		16	16	16

Sophomore Year

Course No.	Course Title	F	W	Sp
BI 101-3 ..	or			
CH 104-6 ..	or			
GS 104-6 ..	Science Sequence	4	4	4
SO 204-6 ..	Sociology or			
PY 201-3 ..	Psychology	3	3	3
HS 101-3 ..	or			
HS 201-3 ..	History Sequence	3	3	3
MU 211-3 .	Music Sequence	3	3	3
MU 214-6 .	Music Sequence	1	1	1
	Choir or Band	1	1	1
	Performance Studies	1	1	1
		16	16	16

PHARMACY

Students enrolling in pharmacy should check with their counselors for details on admission to the four-year institutions to which they plan to transfer.

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121 ...	English Composition		3	
CH 104-6 ..	General Chemistry	5	5	5
EC 201-3 ..	Principles of Economics	3	3	3
SO 204-6 ..	General Sociology	3	3	3
MT 101-2..	College Algebra, Trigonometry	4	4	
MT 110 ...	Analytic Geometry			4
PE 190 ...	Physical Education	1	1	1
HE 250 ...	Personal Health			3
		16	19	19

Sophomore Year

Course No.	Course Title	F	W	Sp
CH 226-8 ..	Organic Chemistry	3	3	3
CH 229 ...	Organic Chemistry Lab			2
PH 201-3 ..	General Physics	4	4	4
PY 201-3 ..	General Psychology	3	3	3
MT 200-2..	Calculus	4	4	4
	Electives	3	3	(3)
		17	17	16-19

Maximum acceptable credit: 108 hours.

PHYSICAL EDUCATION

Students who wish to become physical education instructors must begin course work in professional activities (PE 194 and 195 Professional Activities) during the freshman year if they are to complete baccalaureate degree programs in four years. Service course work in physical education (PE 180 and 190 Physical Education cannot be substituted for the professional activity courses.

The program outlined below permits transfer into professional physical education and/or teacher preparation programs offered by state system institutions, without loss of time, provided, of course, that course work is reasonably comparable to that offered on the four-year campuses. If the community college does not offer professional activities courses the student may enroll in a one-year preprofessional program recognizing that it may require more than an additional three years after transfer to complete the professional work required.

Freshman Year

Course No.	Course Title	F	W	Sp
WR 121 ...	or			
WR 121-3 .	English Composition and Electives	3	(3)	(3)
BI 101-3 ..	Biology or			
Z 201-3 ...	Zoology	3-4	3-4	3-4
PE 194/ 195	Professional Activities	2	2	2
PE 131 ...	Introduction to Health, PE and Recreation (PSU, UO, EOSC)	3		
SP 111	Introduction to Speech		3	
HE 252 ...	First Aid			3
	Humanities	3	3	3
	Electives	0-3	0-3	0-3
		15-17	15-17	15-17

Sophomore Year

Course No.	Course Title	F	W	Sp
CH 101-3 ..	or			
CH 104-6 ..	or			
CH 201-3 ..	Chemistry Sequence: (UO, SOSC, PSU)	3-5	3-5	3-5
PE 294/ 295	Professional Activities	2	2	2
	Social Science Sequence	3	3	3
HE 250 ...	Personal Health	3		
FN 225 ...	Nutrition (UO, OSU, SOSC)			4
	Electives	0-6	3-7	0-10
		15-19	15-16	15-17

Maximum acceptable credits: 108 hours.

SOCIAL SCIENCE

Accomplishment of the following curriculum guide will satisfy all LBCC requirements for an Associate of Arts degree. Moreover, it will transfer fully and conveniently into four-year liberal arts colleges throughout the state.

Freshman Year

Course No.	Course Title	F	W	Sp
PE 180/ 190	PE Activity	1	1	1
HE 250 ...	Personal Health			3
WR 121 ...	or			
WR 122 ...	or			
WR 123 ...	English Composition	3	3	
BI 101-3 ..	General Biology or			
CH 104-6 ..	General Chemistry or			
GS 104-6 ..	Physical Sciences	4	4	4
EN 104-6 ..	or			
En 101-3 ..	or			
EN 107-9 ..	or			
EN 201-3 ..	or			
EN 253-5 ..	Literature Sequence	3	3	3
	Electives	6	6	6
		17	17	17

Sophomore Year

Course No.	Course Title	F	W	Sp
SO 204-6 ..	General Sociology	3	3	3
MT 161-3..	Mathematics	4	4	4
	Electives*	9	9	9
		16	16	16

*Prior to taking these courses, contact Counseling.

Business Division

Director: Phillip V. Clark

Business education at Linn-Benton Community College is designed both to prepare students vocationally and to help them develop the social and economic attitudes essential for future success.

The Business Division provides opportunities for students to learn or increase their skills, and develop an understanding of business and business methods in a changing society.

Courses are designed both for students preparing to enter business and for those already employed. Evening and weekend courses and short seminars are provided for students with special needs and interests.

Linn-Benton Community College encourages students to make career choices based on interests, needs and abilities, without regard to the traditional roles of men, women or minorities.

Faculty:
Maynard Chambers, Chairperson
Gerry Conner
Michael Kauffman
Ward Ledbetter
J.T. Peterson
Lynda Woodworth

Business

The Business area offers the following types of courses and programs to meet a variety of student needs:

Two-Year Programs

1. A two-year program of Business Administration leading to an Associate of Arts degree;
2. A two-year program in Secretarial Science-Business Education leading to an Associate of Arts degree;
3. A two-year program in Business Management leading to an Associate of Science degree;
4. A two-year program in Data Processing leading to an Associate of Science degree;
5. A two-year program in Accounting Technology leading to an Associate of Science degree;
6. A two-year program in Banking and Finance leading to an Associate of Science degree;
7. A two-year program in Marketing leading to an Associate of Science degree;
8. A two-year program in Supervisory Training leading to an Associate of Science degree;
9. A two-year program for an Administrative Secretary leading to an Associate of Science degree;
10. A two-year program for Educational Secretaries leading to an Associate of Science degree;
11. A two-year program for Legal Secretaries leading to an Associate of Science degree;
12. A two-year program for Medical Receptionists leading to an Associate of Science degree;
13. A two-year program in Restaurant Management leading to an Associate of Science degree or a two-year certificate;
14. A two-year program in Chef Training leading to an Associate of Science degree or a two-year certificate;
15. A two-year program in Advanced Professional Cooking leading to an Associate of Science degree or a two-year certificate;

One-Year Programs

16. A one-year program in General Business leading to a Certificate of Completion;
17. A one-year program in Secretarial Services leading to a Certificate of Completion;
18. A one-year program for Medical Transcriptionists leading to a Certificate of Completion;
19. A one-year program in Supervisory Training leading to a Certificate of Completion;
20. A one-year Certificate of Completion in Data Processing;
21. A one-year program in Professional Cooking leading to a Certificate of Completion;
22. A one-year Certificate of Completion in Dining Room Supervision.

Special Programs

23. A short program in Supervisory Training leading to a Supervisory Certificate;
24. Courses offered through the joint effort of the College and the American Institute of Banking designed as a program specifically for bank employees;
25. Courses to fit the personal or vocational needs of part-time students in the day or evening programs;
26. Varied general business courses for students majoring in other fields who desire some background and specific knowledge in business;
27. Special certificates in selected areas of Culinary Arts and Dining Room Service will be awarded to students who satisfactorily complete individualized programs of study. NOTE: Students wishing to take longer than the proposed number of quarters to complete their program may do so.

Supervised Field Experience

Students may, upon the recommendation of the program coordinator, receive transfer or non-transfer college credit by participating in Supervised Field Experience (SFE). Further information may be found in The Cooperative Work Experience section of this catalog.

1.200/WE 201 SUPERVISED FIELD EXPERIENCE (SFE)

☐ 3-48 class hrs/wk ☐ 1-16 cr. ☐ F/W/Sp/Sm

Supervised Field Experience is designed to give the student actual work experience which closely parallels his field of study. Further information is available in the Cooperative Work Experience section of this catalog.

1.201/WE 202 FIELD EXPERIENCE SEMINAR

☐ 1 class hr/wk ☐ 1 cr. ☐ F/W/Sp/Sm

Refer to the Cooperative Work Experience section of this catalog.

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.

The following outline indicates the general course requirements for those seeking the Associate of Science Degree in Accounting Technology. Students wishing to take individual courses to qualify for special employment opportunities may do so with the consent of the Chairman of the Business Management Department.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
1.110	Elements of Algebra or			
4.202	Math II			
2.515	Business Math **Listed below			
			3	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm			3
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses		4	
	General Education Electives		3	3
			7	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
BA101	Intro to Business	4		
SS121	Typing I	3		
2.515	Business Math w/Calculators	3	2	
2.530-2	Practical Accounting I, II, III	3	3	3
BA210	Principles of Management		3	
2.130	Business Quantative Methods		3	
EC115	Outline of Economics			4
BA223	Principles of Marketing			3
2.516	Business Statistics			3
	Electives	4		
		17	11	13

Sophomore Year

Course No.	Course Title	F	W	Sp
2.595-7	Inter Accounting I, II, III	3	3	3
2.518	Business Law or			
BA226	Business Law	3		
2.509	Intro to Computers	3		
9.743	Income Tax Preparation	3		
2.534	Cost Accounting		3	
2.415	Human Relations in Business		3	
2.222	Financial Management			3
EC216	Intro to Labor Economics			3
2.535	Payroll Accounting			3
		12	9	12

Banking and Finance

This two-year program is designed for students seeking careers with financial institutions and for those already working for financial institutions who seek additional knowledge. Career opportunities are found in banks, savings and loan firms, consumer finance companies and similar financial companies.

This program was planned in cooperation with the Linn-Benton Chapter of the American Institute of Banking.

The following outline indicates the general course requirements for those seeking the Associate of Science degree in Banking and Finance. Students wishing to take individual courses to qualify for special employment opportunities may do so with the consent of the Chairman of the Business Management Department.

The specialized banking courses will be offered only during the evenings during the 1978-79 school year.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
			3	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives	3	3	
		3	6	4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
BA101	Introduction to Business	4		
SS121	Typing I	3		
2.515	Business Math w/Calculators	3	2	
2.530-2	Practical Accounting I, II, III	3	3	3
BA210	Principles of Management		3	
2.130	Business Quantitative Methods		3	
EC115	Outline of Economics			4
BA223	Principles of Marketing			3
2.516	Business Statistics			3
	General Education Electives	3	3	3
		16	14	16

Sophomore Year

Course No.	Course Title	F	W	Sp
9.768	Principles of Bank Operations	3		
2.518	Business Law or			
BA226	Business Law	3		
2.509	Intro to Computers	3		
2.415	Human Relations in Business		3	
9.773	Money and Banking		3	
2.222	Financial Mngt			3
EC216	Intro to Labor Economics			3
9.770	Bank Management			3
	Banking and Finance Electives	3	3	3
		12	9	12

Business Management

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

The following outline indicates the general course requirements for those seeking the Associate of Science in Management. Students wishing to take individual courses to qualify for specific employment opportunities may do so with the consent of the Chairperson of the Business Management Department. Specific variations in the curriculum are available for students interested in small business management.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp			3
	Electives		3	
			3	3

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	4		
	General Education Electives	3		
		7	3	

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
BA101	Intro to Business	4		
2.515	Business Math w/Calculators	3	2	
SS121	Typing I	3		
2.530-2	Practical Accounting I,II, III	3	3	3
BA210	Principles of Management		3	
2.130	Business Quantitative Methods		3	
EC115	Outline of Economics			4
BA223	Principles of Marketing			3
2.516	Business Statistics			3
	Elective	3		
		16	11	13

Sophomore Year

Course No.	Course Title	F	W	Sp
2.518	Business Law or			
BA226	Business Law	3		
2.113	Personnel Management	3		
2.509	Intro to Computers	3		
9.520	Wage Administration		3	
2.415	Human Relations in Business		3	
2.222	Financial Management			3
EC216	Intro to Labor Economics			3
	Business Electives		6	9
		9	12	15

Marketing

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

The following outline indicates the general course requirements for those seeking the Associate of Science degree in Marketing. Students wishing to take individual courses to qualify for specific employment opportunities may do so with the consent of the Chairperson of the Business Management Department.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
	General Education Elective		3	
		3	3	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm			3
HE250	Health and/or			
HE252	First Aid and/or			
9.317	P.E. Activity Courses		4	
	General Education Electives	3		
		3	4	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
BA101	Intro to Business	4		
2.515	Business Math w/Calculators	3	2	
SS121	Typing I	3		
2.530-2	Practical Accounting I, II, III	3	3	3
BA210	Principles of Management		3	
2.130	Business Quantitative Methods		3	
EC115	Outline of Economics			4
BA223	Principles of Marketing			3
2.516	Business Statistics			3
		13	11	13

Sophomore Year

Course No.	Course Title	F	W	Sp
2.110	Salesmanship	3		
2.518	Business Law or			
BA226	Business Law	3		
2.509	Intro to Computers	3		
2.134	Retail Merchandising		3	
2.139	Market Research		3	
2.415	Human Relations in Business		3	
2.308	Advertising			3
2.222	Financial Management			3
EC216	Intro to Labor Economics			3
	Business Electives		4	6
		9	13	15

Supervisory Training

This program is designed as a series of courses of supervisory methods and techniques. The courses are available to any individual who is currently in a supervisory position or is preparing for such a position.

There are four options available to the student: 1) an 18 credit Certificate of Completion in Supervision; 2) an 18 credit Certificate of Completion in Industrial Safety; 3) a 45 credit Certificate of Completion in Advanced Supervisor Development; and 4) an Associate of Science Degree in Supervision (90 credits). Students are encouraged to first complete the 18 credit program, then the 45 credit program and finally the Associate of Science Degree.

The following outlines indicate the general course requirements for those seeking these Certificates and/or Degrees. Students wishing to take individual courses to qualify for special employment may do so with the consent of the Business Management Department.

The programs are designed primarily for evening students and the supervisory training courses are offered only during the evening.

Certificate in Supervision (18 credits)

Course No.	Course Title	Credits
BA101	Intro to Business	4
9.500	Elements of Supervision	3
9.502	Psychology for Supervisors	3
9.506	Human Relations	3
	Business Electives *	5
		18

* Also includes On-The-Job Training and/or Credit for approved prior work experience

CERTIFICATE IN INDUSTRIAL SAFETY (18 CREDITS)

Course No.	Course Title	Credits
9.555	Industrial Safety I	3
9.500	Elements of Supervision	3
9.556	Industrial Safety II	3
9.502	Psychology for Supervisors	3
9.557	Industrial Safety III	3
9.506	Human Relations	3
		18

Certificate in Advanced Supervisor Development (45 credits)

Course No.	Course Title	Credits
BA101	Intro to Business	4
9.500	Elements of Supervision	3
9.502	Psychology for Supervisors	3
9.506	Human Relations	3
9.508	Labor-Management Relations	3
9.555	Industrial Safety I	3
WR120	Basic Writing Skills	3
1.102	Occupational Writing	3
1.103	Occupational Speech	3
	Business Electives *	17
		45

* Also includes On-The-Job Training and/or Credit for approved prior work experience up to a maximum of 12 credits.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
	General Education Electives			3
		3	4	3

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives		3	
		3	3	4

PROGRAM REQUIREMENTS

Course No.	Course Title	Credits
BA101	Introduction to Business	4
9.500	Elements of Supervision	3
9.502	Psychology for Supervisors	3
9.506	Human Relations	3
9.508	Labor-Management Relations	3
9.555	Industrial Safety I	3
9.509	Applied Economics	3
2.518	Business Law	3
2.530	Practical Accounting I	3
9.514	Cost Accounting/Supervisors	3
	Business Electives	9
	Non-Business Electives	6
	On-The-Job Training, or credit for approved prior work experience	24
		70

Business Organization Classes

All business students are encouraged to participate in one of the following courses as an elective:

2.539 LEADERSHIP--F.S.A.

☐ 2 class hrs/wk ☐ 1 cr. ☐ On Demand

Members of the F.S.A. organization will be permitted to earn one credit--based on their participation in the club's activities.

2.540 MARKETING-MANAGEMENT ORGANIZATION

☐ 2 class hrs/wk ☐ 2 cr. ☐ F/W/Sp

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

Business Transfer

Numerous courses in the business field are offered for students interested in lower division college transfer classes which will provide a foundation for additional bachelors degree study at a four-year college or university. Students interested in this course of study should consult the business transfer curricula guides located on page of this catalog. Prior to beginning the business transfer curriculum, students should obtain permission from the applicable department Chairperson.

BA 101 INTRODUCTION TO BUSINESS
☐ 4 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
A survey course in business with emphasis on 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 199 BUSINESS HONORS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Students will be exposed to advanced concepts of business structures and the individuals who may be expected to be found running them. They will experience additional human relations situations as preparatory to the jobs they will soon have. Individual and team studies of local business as well as larger national corporations will be made in order to prepare students for success in their chosen field. Prerequisite: Recommendation by the applicable Department Chairperson. Five of each from Business Skills and Business Management Departments and two each from Data Processing will be allowed. Department quotas may be exchanged. Department Chairperson will make the decision based on student performance, experience and attitude. Instructor input will be solicited.

BA 210 PRINCIPLES OF MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
This course is designed for the student who will major in Management at a four year institution. It will provide the foundation for later courses in Administration, Management Philosophies and Management Science.

BA 211 PRINCIPLES OF ACCOUNTING I
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W
Techniques of account construction and preparation of financial statements. Emphasis is on application of problems of recording, measuring income, purchasing, sales, inventories, special journals, and internal control of cash.

BA 212 PRINCIPLES OF ACCOUNTING II
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
Accounting systems and management control, concepts and principles of depreciation, merchandise inventory, evaluation, partnership and corporate accounting, capital stock, investments, dividends. Prerequisite: BA 211 or consent of instructor.

BA 213 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: BA 212 or consent of instructor.

BA 217 BASIC ACCOUNTING AND FINANCIAL ANALYSIS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A one-term terminal course for students not majoring in business. Introduction to the recording, summarization, presentation, and interpretation of accounting data. Emphasis on basic accounting principles and terminology, the accounting cycle, and analysis of financial reports.

BA 226 BUSINESS LAW
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
The framework of the law as it affects the businessman, how the law operates, how it is enforced, and how to use the law in business. The origins of law, the relations of business to society and the law, evolution of business within the framework of the law, the historical development and present-day applications of the law of contracts.

BA 131 INTRODUCTION TO BUSINESS DATA PROCESSING
☐ 6 class hrs/wk ☐ 4 cr. ☐ F/Sp
Provides opportunity to write computer programs using a procedure or problem oriented language. It serves two main purposes: 1) introduces the student to the tasks that a computer programmer must perform; and 2) provides the student with the means to program a modern computing system. The computer language currently in use is FORTRAN. The topics covered are: input/output, arithmetic statements, transfer and control statements, arrays, and subprograms.

BA 235 INTRODUCTION TO BUSINESS STATISTICS
☐ 4 class hrs/wk ☐ 4 cr. ☐ W/Sp
A statistical analysis of business and economic data used in controlling an operation and in making sound business decisions. Special attention is given to assembling statistical inference, and linear regression and correlation. Prerequisite: MT 95.

BA 238 INTRODUCTION TO MANAGEMENT SCIENCE
☐ 4 class hrs/wk ☐ 4 cr. ☐ Sp
Techniques of business mathematical models including simulation models, decision models, inventory control models, production models, capital budgeting models, queuing models, and net working models. Prerequisite: BA 235.

2.110 PRINCIPLES OF SALESMANSHIP
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Introductory course on business from the viewpoint of the sales-oriented firm. Characteristics of the customer, buying motives and approach, presentation, demonstration and overcoming objections in closing sales. Emphasis on advertising, pre-selling techniques, as well as the various media, copy, illustration and layout.

2.111 LABOR-MANAGEMENT RELATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Explores the nature of the collective bargaining system in the United States and the parties who have a vital interest in the operation of the system.

2.113 PERSONNEL MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Deals primarily with the first line supervisor. Particular emphasis on the supervisor's relations with subordinates, colleagues, boss, and the union in a wide variety of situations. Prerequisite: BA 101, 2.119.

2.119 INTRODUCTION TO MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Allows the student an opportunity to study management essentials of both merchandising and industrial organization. Emphasis on the complex marketing problems of policies, purchasing procedures, financial requirements, budgeting, human relations, physical facilities, and government regulations.

2.121 APPLIED ECONOMICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Underlying principles by which business and industry are influenced. Production, income, management, prices, values, markets, money wastes, interests and profits are examples of subjects studied with illustration of how they affect current business situations.

2.122 START A SMALL BUSINESS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Introduces students to fundamental considerations before embarking on businesses of their own. Outlines steps in planning and starting a small business, and explains how each step can best be accomplished.

2.130 BUSINESS QUANTITATIVE METHODS
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Introduces students to number and symbol vocabulary, manipulating symbols and numbers, algebraic equations and their solution, equalities and inequalities, break-even analysis, inventory and production models, linear programming, queuing theory and network models.

2.131 ELEMENTS OF MARKETING
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
General survey of the nature, significance, aXd scope of marketing. Emphasis upon the channels of distribution; marketing of consumer shopping, specialty and other goods; service marketing; middlemen, wholesaling, shipping, and warehousing; standardization, grading and pricing, government regulations of completion.

2.134 RETAIL MERCHANDISING
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Principles of efficient retail organization and management, including location and layout, types of store organization, personnel management, credit and collection, store protection and other operating activities.

2.135 VISUAL MERCHANDISING
☐ 3 class/2 lab hrs/wk ☐ 4 cr. ☐ W/Sp
Application of line and display principles to interior and window display. Emphasis on practical problems of arrangement, improvisation, color, lighting, signing, safety, and seasonal displays. Students are given practice in creating displays in campus display areas and in various stores in the community.

2.138 PURCHASING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Special application of fundamental principles of economics and management. Principles and methods of purchasing as they apply to the business environment. Quantitative techniques as applied to purchasing will be presented when applicable to certain buying decisions. Prerequisite: Business Statistics, 2.516.

2.139 MARKETING RESEARCH
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Introduction to marketing research. Examines why business uses marketing research, how business uses research, and its limitations. Prerequisite: Business Statistics, 2.516.

2.140 PROMOTIONAL STRATEGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Designed around the case problems as related to marketing promotion. Comsumer psychology, advertising, reseller stimulation, and other communication tools as a part of the overall promotion mix. Prerequisite: Marketing Research, 2.139.

2.220 PERSONAL FINANCE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Study of home financing, installment buying, insurance, investments, wills, and other phases of managing family finances.

2.222 FINANCIAL MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Topics covered deal with financing a business with emphasis on the tax environment, analysis of financial statements, working capital management, slow and long-term financial planning, budgeting and control. Prerequisites: Practical Accounting II or Principles of Accounting II.

2.308 PRINCIPLES OF ADVERTISING
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Introduction to the role of advertising in the distributive process. Emphasis on various media; copy, illustration and layout; retail advertising and promotion; advertising budget; and an advertising program.

2.415 HUMAN RELATIONS IN BUSINESS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Assists the supervisor in understanding the people with whom he or she works, with emphasis on the psychological aspects, perceptions, learning processes, emotions, attitudes and personalities.

2.420 HUMAN RELATIONS: YOUR ATTITUDE IS SHOWING I
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Use of text 'Your Attitude is Showing' to give greater confidence for dealing with human relations problems. Philosophy, principles and guidelines to follow in dealing with human problems. Emphasis on positive attitudes and their contribution to career success.

2.421 HUMAN RELATIONS: YOUR ATTITUDE IS SHOWING II
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
Continued reading, studying and discussing 'attitudes' to further develop confidence in dealing with human relations problems. Demonstrates how attitudes affect personal happiness, productivity and performance on and off the job. Prerequisite: Your Attitude is Showing I or permission of the instructor.

2.499 BUSINESS HONORS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Students will be exposed to advanced concepts of business structures and the individuals who may be expected to be found running them. They will experience additional human relations situations preparatory to the jobs they will soon have. Individual and team studies of local business as well as larger national corporations will be made in order to prepare students for success in their chosen field. Prerequisite: Recommendation by the applicable Department Chairperson. Five each from Business Skills and Business Management Departments and two each from Data Processing will be allowed. Department Chairperson will make the decision based on student performance, experience and attitude. Instructor input will be solicited.

2.516 INTRODUCTION TO BUSINESS STATISTICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Emphasis on understanding methods and terminology used in statistical reports generated in business and industry. Topics covered: descriptive statistics; probability; binomial, normal, 't', and chi-square distributions; linear regression and correlation; and hypothesis testing. Prerequisite: Business Quantitative Methods or consent of the instructor.

2.518 BUSINESS LAW
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
The legal environment of business and principles of contract law. Introduction to the study of law and business, legal reasoning and the evolutionary process of law. Emphasis on the study of business agreements - their information, operation, performance and discharge.

2.530 PRACTICAL ACCOUNTING I
☐ 5 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Fundamental principles of double-entry accounting, general journals and ledgers, business forms, simple financial statements, and the completion of the accounting cycle. Specific emphasis on case receipts and payments, payroll accounting, purchases, sales, promissory notes, and inventories.

2.531 PRACTICAL ACCOUNTING II
☐ 5 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
A continuation of Accounting I with an expansion of the accounting cycle to include special journals, ledgers and business forms. Special emphasis on accounting for a partnership. Prerequisite: Practical Accounting I-2.530.

2.532 PRACTICAL ACCOUNTING III
☐ 5 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
A course in accounting including entries requiring analysis and interpretation; unearned and accrued items; depreciation of assets; the voucher system; payroll records; property sales, and taxes. Special emphasis on accounting for a corporation. Prerequisite: Practical Accounting II-2.531.

2.534 COST ACCOUNTING
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Relates theory with practical problems in the analysis and control of material, labor and overhead costs in manufacturing. Special emphasis to the job cost system. Prerequisite: Practical Accounting II or Principles of Accounting II.

2.585 MANAGEMENT DECISION SIMULATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Uses a sophisticated management simulation program which enables the student to gain practical experience with the decision making process. Market, production, and financial environments are simulated by computer to enable the student to move rapidly through what would normally take many years of time. Sophomore students with no business background must have the consent of the instructor to enroll for this course.

2.595 INTERMEDIATE ACCOUNTING I
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Advanced study of accounting theory and practice for measurement of income and valuation of assets in financial statement presentation. Review of accounting concepts and alternative approaches to various problems. Prerequisite: Practical Accounting III, Principles of Accounting III, or consent of instructor.

2.596 INTERMEDIATE ACCOUNTING II
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Continuation of Intermediate Accounting I. Advanced concepts and procedures of valuation for various types of assets and liabilities. Special problems related to investments; plant, property, and equipment; consolidations, and corporate accounting. Prerequisite: Intermediate Accounting I.

2.597 INTERMEDIATE ACCOUNTING III
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Continuation of Intermediate Accounting II. Special emphasis on fund flow analysis, financial errors, preparing statements from incomplete data, correcting errors in prior year statements, and price-level changes. Prerequisite: Intermediate Accounting II.

2.710-2 ON-THE-JOB TRAINING (BUSINESS MANAGEMENT)
☐ 12 hrs/wk ☐ 4 cr. ☐ F/W/Sp
Supervised studies in positions related to the student's field of academic endeavor. Intended to provide practical experience for students preparing for careers in accounting, marketing, management, and banking and finance. Must be employed, preferably in degreed area, for a minimum of 12 hours per week. Employment may be non-renumerative. Weekly seminar may also be required. Department approval required.

2.756 READING AND CONFERENCE—BUSINESS MANAGEMENT
☐ 3 class hrs/wk ☐ 1-3 cr. ☐ On Demand
A course of supervised individual study related to knowledge and skills acquired in previous courses within the Business Division curriculum. Emphasis on practical application of previously-learned knowledge and skills. Subjects, projects, class hours, and credits must be approved by the Business Department Chairperson.

Small Business Management

9.250 SMALL BUSINESS MANAGEMENT I
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Primarily designed for those already engaged in a small business who desire to increase their knowledge of modern small business operation. Overview of major fundamental areas of business such as finance, legal requirements, government requirements, insurance, marketing, advertising, and personnel management.

9.251 SMALL BUSINESS MANAGEMENT II
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Primarily for those already engaged in a small business who desire to increase their knowledge of modern small business operation. A continuation of Small Business Management I, with emphasis on law and contracts, marketing and personnel management.

9.252 SMALL BUSINESS MANAGEMENT III
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Primarily for those already engaged in a small business who desire to increase their knowledge of modern small business operation. Continuation of Small Business Management II, with emphasis on credit, advertising, and financial management.

9.500 ELEMENTS OF SUPERVISION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Introduction to total responsibilities of a supervisor in industry, such as organization, duties and responsibilities, human relations, grievance, training, rating, promotion, quality-quantity control, and management-employee relations.

9.502 PSYCHOLOGY FOR SUPERVISORS
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Assists in understanding the people with whom the supervisor works, with emphasis on the psychological aspects, perceptions, learning processes, emotions, attitudes and personalities.

9.504 EMPLOYEE TRAINING
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
The supervisor's responsibility for developing employees through training, orientation and induction. Vestibule and on-the-job techniques. Job instruction principles. Apprenticeship training, technical training. supervisory training and management development, use of outside agencies, advisory committees.

9.506 HUMAN RELATIONS (DEVELOPING SUPERVISORY LEADERSHIP)
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Practical application of basic psychology in building better employer-employee relationships by studying human relations techniques. Prerequisite: Basic Psychology for Supervisors.

9.508 LABOR-MANAGEMENT RELATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
The history and development of the labor movement. Development of the National Labor Relations Act, the Taft-Hartley Act; the supervisor's responsibility for good labor relations; the union contract and grievance procedure.

9.509 APPLIED ECONOMICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Significant economic facts. Development of a critical attitude toward industrial economics. Institutions and practices that determine the social environment. Management supervisory-employee relationships to economics and local industry.

9.512 METHODS IMPROVEMENT FOR SUPERVISORS (WORK SIMPLIFICATIONS)
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
The supervisor's responsibility for job methods improvement. Basic principles of work simplification. Administration and the problems involved. Motion study fundamentals for supervisors.

9.514 COST CONTROL FOR SUPERVISORS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
How costs are determined in industry. Cost control and its functions. The supervisor's responsibility for costs. Factors in cost control: costs, materials, waste, salvage, quality control, control of time.

9.516 PERSONNEL MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Personnel techniques for which the supervisor is partially responsible. Selection, placement, testing, orientation, training, counseling, merit rating, promotion, transfer and training for responsibility.

9.518 ORGANIZATION AND MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
The supervisor's responsibility for planning, organizing, directing, controlling, and coordinating. Acquaints the supervisor with these basic functions of an organization and responsibility for carrying them out in accordance with the organization's plan. Establishing lines of authority, function of departments or units, duties and responsibilities, policies and procedures, rules and regulations.

9.520 WAGE ADMINISTRATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
History of wages, inequalities in rates of pay. Management and union movement toward a 'fair wage' plan. The supervisor and job descriptions, job specifications, job evaluations and job classification. The wage laid down by the Department of Labor. The Federal Employment Service. Wage administration and the line organization.

9.524 MANAGEMENT CONTROLS AND THE SUPERVISOR
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Basic principles of controls. Delegation of responsibility through the use of quality control, quantity control, production control, control over materials, control over personnel, organization.

9.555 INDUSTRIAL SAFETY I
☐ 3 class hr/wk ☐ 3 cr. ☐ F
Stresses the supervisor's role in safe employment of people. Included are basic principles, safety training, employee safety participation, enforcement, human factors in safety, and protective equipment.

9.556 INDUSTRIAL SAFETY II
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Specific areas of industrial safety, including plant inspection, accident investigation, maintenance, material handling, hand tools, electrical hazards, machine guarding, falls, fire prevention, and personal protective equipment.

9.557 INDUSTRIAL SAFETY III
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Covers Oregon Safe Employment Act for the development, administration, and enforcement of safety and health laws and standards. The Occupational Safety and Health Act of 1970 is also reviewed. Employer and employee responsibilities, inspections, complaints, citations and penalties.

9.700 CIVIL SERVICE
☐ 1 class hr/wk ☐ 1 cr. ☐ Sp
Intensive study for the Civil Service tests given for secretarial employment, covering alphabetizing, spelling, arithmetic, number series, English usage, and reasoning.

9.743 INCOME TAX PREPARATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Explains the Federal Income Tax laws emphasizing the importance of adequate and suitable financial records; helping the taxpayer compute required reports and taxes due. Special interests (farm, manufacturing, etc.) may be discussed at the option of the class.

9.764 OREGON SCHOOL LAW (FOR EDUCATIONAL SECRETARIES)
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Legal framework for education, creation and administration of school districts, pupil control, contractual relations and conduct of schools in general.

9.768 PRINCIPLES OF BANK OPERATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Fundamentals of bank functions to help the beginning banker acquire a broad operational perspective. A descriptive orientation.

9.769 ANALYZING FINANCIAL STATEMENTS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Two main sections: Characteristics of Financial Statements and Financial Statement Analysis. Reviews basic accounting principles for those students who have studied accounting and provides accounting background for study of financial statement analysis by those with no accounting background.

9.770 BANK MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
New trends in the philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management.

9.771 LAW AND BANKING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
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. Emphasis on the Uniform Commercial Code.

9.773 MONEY & BANKING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student. Historical treatment is kept to a minimum. Emphasis on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios.

9.774 AGRICULTURAL FINANCE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Reflecting the rapid growth of the off-farm agri-business sectors this course emphasizes general principles associated with evaluation of management and use of capital, rather than land and labor resources, which are more closely aligned with agriculture production.

9.776 HOME MORTGAGE LENDING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Subject from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. Mortgage market, acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan officer in overall portfolio management.

9.777 INTERNATIONAL BANKING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Introduction for those working in international departments, as well as for those involved in the domestic activities of their banks. Basic framework and fundamentals of international banking: how money is transferred from one country to another, how trade is financed, what the international agencies are and how they supplement the work of commercial banks, and how money is changed from one currency to another.

9.778 MARKETING FOR BANKERS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Directed toward those bank personnel who know little about marketing as it pertains to banking. Includes fundamental concepts and philosophy of marketing; marketing information and research; product distribution, promotion, and pricing strategies; and marketing planning.

9.780 TRUST FUNCTIONS AND SERVICES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
This course presents a complete picture of the services rendered by institutions engaged in trust business. Providing an introduction to the services and duties involved in trust operations, the course is intended for all bankers, not only those who are engaged in trust business. It endeavors to keep clear the distinction between business and legal aspects of trust functions.

9.781 BANKING INVESTMENTS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
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 followed by a study of yield changes as they affect a bank's long-term holdings.

9.782 INSTALLMENT CREDIT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Techniques of installment lending. Emphasis on establishing credit, obtaining and checking information, servicing loans, and collecting amounts due. Bank's installment credit operation scrutinized, along with inventory development and advertising, and public relations.

9.783 SAVINGS AND TIME DEPOSIT BANKING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Reviews the economics of the savings process to clarify important differences between financial savings by individuals or organizations and real savings that appear as capital formation. Different types of financial savings are reviewed to describe the system of financial flows of income to capital investment.

9.784 BANK LETTERS AND REPORTS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
For bank officers, supervisors, and employees who dictate or review correspondence. Mechanical forms of bank letters and the psychological principles that help the letter writer achieve best results. Reviews letter forms, emphasizes principles underlying modern correspondence, and examines different kinds of bank letters.

9.785 LOAN AND DISCOUNTS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Essential facts about promissory notes, including calculating interest and discounting commercial paper; guaranties; general collateral agreements; examining and processing documents accompanying notes secured by stocks, bonds, and savings account passbooks; and concepts of attachment, perfection, priority, default, and foreclosure.

9.787 FEDERAL RESERVE SYSTEM
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Examines the operations and policies of the Federal Reserve System during critical periods over the past 60 years. Topical rather than chronological, enabling students to compare and contrast Federal Reserve policies dealing with similar problems at different periods in time. Attention given to international monetary affairs and economic developments affecting the American fiscal system.

9.788 SAFE DEPOSIT SEMINAR
☐ 3 hrs/wk for 5 wks ☐ 1 cr. ☐ On Demand
For both new and experienced bank employees who are interested in safe deposit operations and want to become more effective on the job. Safe deposit security, legal concerns, customer relations, recordkeeping and procedures for safekeeping.

9.789 LOAN OFFICER DEVELOPMENT SEMINAR
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Practical lending skills for newly-appointed lending officers. Six major subject areas: Initial loan interview; administrative decisions and techniques; documentation for the credit file; problem loans; conveying unpleasant information; and managing loan portfolios. Seminar developed jointly with the Robert Morris Associates.

9.790 FEDERAL REGULATION OF BANKING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Comprehensive treatment of the 'why' and 'what' of Federal banking regulation. Recommended for both beginning and advanced students, and for new and experienced bankers. Includes agencies regulating banks, bank charters, bank reports and examinations. Federal limitations on banking operations, and the regulation of bank expansion.

9.791 LOSS PREVENTION SEMINAR
☐ 3 hrs/wk for 5 wks ☐ 1 cr. ☐ On Demand
Focuses on check cashing, check swindling, bank hold-ups, and security procedures.

9.792 SELLING BANK SERVICES

☐ 3 hrs/wk for 5 wks ☐ 1 cr. ☐ On Demand
Teaches tellers and new-account personnel how to recognize and meet bank customer needs: checking accounts, savings services, loans to individuals, safe deposit boxes, travelers checks, and cross-selling.

9.793 SECURITIES: STOCKS AND BONDS

☐ 3 hrs/wk for 5 wks ☐ 1 cr. ☐ On Demand
Provides bank personnel, especially trust operations personnel, with knowledge about securities; stocks and bonds, and how they function; how to transfer ownership; classes and kinds of stocks, bonds, and government securities; and the newly developed CUSIP Securities Identification System.

9.794 BANK CARDS

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
This course presents an overview of the bank card industry with the dual objectives of helping the student understand the role of the bank card in the economy as well as the basic operational problems involved in successful management of a bank card plan.

Faculty:
Stephen Martin
Marty McMurray

Data Processing

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

Students finishing the first year of the curriculum should be able to enter the job market as programmer-trainees with at least two languages at their disposal. Students completing the full two-year curriculum will be granted a Certificate of Completion in Data Processing and will be in a strong position to enter a rapidly-growing job market. Students desiring the Associate of Science Degree should receive advising from the Data Processing Department.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg. or Inter. Oral Comm.	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses		4	
	General Education Electives	3		3
		6	4	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
2.511	Data Processing Math	4		
2.571-3	Data Processing I, II, III	6	10	10
2.415	Human Relations in Business or			
2.130	Business Quantitative Methods	3		
2.516	Intro to Business Statistics		3	
BA238	Intro to Management Science			4
		13	13	14

Sophomore Year

Course No.	Course Title	F	W	Sp
2.581	Data Processing IV, V, VI	10	10	10
2.530-2	Practical Accounting I, II, III or			
BA211-3	Principles of Accounting I, II, III	3	3	3
		13	13	13

2.508 INTRODUCTION TO KEYPUNCH OPERATION

☐ 5 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
Individualized instruction on operation of the IBM 029 keypunch machine. Includes familiarization with IBM Card and interpretation of punched hole instruction on the names and functions of all operating parts, keys, and switches; manual duplication procedures and error corrections procedures; operation of the program control unit and coding of the program card.

2.509 INTRODUCTION TO COMPUTERS

☐ 5 class hrs/wk ☐ 3 cr. ☐ F/W/Sp

Emphasis is placed on how computers work and their place within the modern business society. The history of data processing, punched card equipment, job flow, computer architecture, and memory design, systems design, and third-generation operating systems concepts are covered. Consideration of data processing systems and the correlation of systems design to the application.

2.556 ADVANCED KEYPUNCH OPERATION

☐ 7 ½ class hrs/wk ☐ 3 cr. ☐ F/W/Sp

Practice on building of keypunch speed and accuracy to employment level. 8000 strokes with 90% accuracy = A; 7000 strokes with 80% accuracy = B; and 6000 strokes with 70% accuracy = C. Also extensive practice in producing typical jobs a keypuncher will encounter in the working world. Course also includes an acquaintanceship with the 129 Card Recorder.

2.558 INTRODUCTION TO PROGRAMMING

☐ 6 class hrs/wk ☐ 4 cr. ☐ F/W

Provides the student with the opportunity to write computer programs using a procedure or problem oriented language. It serves two main purposes: 1) introduces the student to the tasks that a computer programmer must perform; and 2) provides the student with the means to program a modern computing system. The computer language generally used is FORTRAN. The topics covered are: input/output, arithmetic statements, transfer and control statements, arrays, and subprograms. COBOL may be substituted for FORTRAN on Demand.

2.571 DATA PROCESSING I

☐ 12 class hrs/wk ☐ 6 cr. ☐ F

Introduction to computers, programming languages, and data processing mathematics. Emphasis on how computers work and their place in modern business society. History of data processing, punched card equipment, job-flow, computer architecture and memory design, systems design, and third-generation operating systems concepts are covered. Computer programs will be developed by the student using a procedure or problem oriented language. This serves two main purposes: 1) introduces the students to the tasks that a computer programmer must perform; 2) provides the student with the means to program a modern computing system. The computer language currently in use is FORTRAN. Topics covered are: input/output, arithmetic statements, transfers and control statements, arrays, and subprograms. Must be taken concurrently with Data Processing Math (2.511).

2.511 DATA PROCESSING MATHEMATICS

☐ 8 lab hrs/wk ☐ 4 cr. ☐ F

Emphasis is placed on a study of computer related mathematics and how these mathematical methods may be utilized by the computer programmer. Topics include: set theory, number systems, data flow and stored number concepts, boolean logic, computational accuracy and algorithms. Must be taken concurrently with Data Processing I (2.571).

2.572 DATA PROCESSING II

☐ 20 class hrs/wk ☐ 10 cr. ☐ W

Additional work in problem-oriented language and an introduction to an assembler language. Additional topics from data processing mathematics are introduced as needed. The second phase stresses the need for accurate and complete documentation within the data processing function. Program flowcharting used to solve and then document several involved, logical processes.

2.573 DATA PROCESSING III

☐ 20 class hrs/wk ☐ 10 cr. ☐ Sp

Study of an assembler language continues, viewing of the data processing function within a modern environment and its use to further the goals of the firm. The effect of the computer is studied from the systems approach using a case study.

2.581 DATA PROCESSING IV

☐ 20 class hrs/wk ☐ 10 cr. ☐ F

Introduces the student to a business oriented computer language--COBOL. Topics include I/O decision statements, PERFORM statements, and up through three level tables. Third generation operating systems are examined with special emphasis on the IBM 1130 Monitor System, IBM DOS/TOS and OS/360. Operating systems of manufacturers other than IBM are also considered.

2.582 DATA PROCESSING V

☐ 20 class hrs/wk ☐ 10 cr. ☐ W

The first phase of this block is designed to prepare the student for entry into an operation programming environment. Topics are: reading programs, programming teams/groups, problem solving, and studying programming. The student is assigned several programming projects on an individual basis and also as a member of a programming team. Each student is expected to choose and study a new programming language. The second phase involves additional, advanced COBOL topics with emphasis on the use of mass storage files with random and sequential access.

2.583 DATA PROCESSING VI
☐ 20 class hrs/wk ☐ 10 cr. ☐ Sp
A block of instruction and practice of skills and techniques acquired in previous courses within the Business Data Processing curriculum. Individual selected projects from business industrial organizations with the community assigned by the instructor. The student is required to plan the project and to carry out all phases of system design, machine programming, design of forms, testing of representative data, and writing of operational procedures. Class time will be utilized to guide students toward completion of the project and to look to actual data processing solutions to other types of business problems.

2.589 DATA PROCESSING READINGS & CONFERENCES
☐ 1-20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp
Topics covered are at the discretion of 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. Number of credits can vary from 1 to 10. Prerequisite: Consent of instructor.

9.603 COMPUTER CENTER OPERATIONS I
☐ 7 class hrs/wk ☐ 5 cr. ☐ F
An in-depth analysis of the jobs performed by the following computer operations personnel: computer operator, operations supervisor, tape librarian, tab operator, I/O receptionist, scheduler, and control clerk.

9.604 COMPUTER CENTER OPERATIONS II
☐ 7 class hrs/wk ☐ 5 cr. ☐ W
An introduction to the operation of computer center equipment, computer operator demands, computer recovery procedures, computer center standards and procedures, and scheduling considerations. Prerequisite: 9.603.

9.605 COMPUTER CENTER OPERATIONS III
☐ 7 class hrs/wk ☐ 5 cr. ☐ Sp
A course in the operation of a computer center. Emphasis is placed on back-up and restore procedures, maintenance of system libraries,teleprocessing, multiprogramming, time-sharing, machine maintenance, and learning the basic programming language. Prerequisite: 9.604.

CS 101 THE NATURE OF DIGITAL COMPUTERS
☐ 6 class hrs/wk ☐ 4 cr. ☐ F/Sp
Introduces the layman to the world of data processing and its influence on everyday life. Topics include: the history of data processing, the punched card, card-oriented processing systems, analysis of computer generated reports, third generation processing systems, and number systems. (A symbolic, machine oriented language will be used to explain data flow, and several problems will be solved utilizing a procedure-oriented language.)

CS 213 INTRODUCTION TO SYMBOLIC LANGUAGE PROGRAMMING
☐ 6 class hrs/wk ☐ 4 cr. ☐ F/W
Provides the student with the opportunity to write computer programs using a procedure or problem oriented language. It serves two main purposes: 1)introduces the student to the tasks that a computer programmer must perform; and 2) provides the student with the means to program a modern computing system. The computer language generally used is FORTRAN. The topics covered are: input/output, arithmetic statements, transfer and control statements, arrays, and subprograms. COBOL may be substituted for FORTRAN on demand.

Faculty:
Illa Atwood
Jay Brooks
Patsy Chester, Chairperson
Dorothy Hazel
Dorothy Lawrence
Joyce Moreira

Secretarial Sciences

This one year curriculum is designed to provide students with the training necessary for general office secretarial positions. These courses prepare students for civil service examinations. Students may complete the requirements listed for Option A or Option B.

A Certificate of Completion is awarded after satisfactory completion of this program.

1 Year Certificate (Option A)

Course No.	Course Title	F	W	Sp
1.101	Basic English or			
WR120	Basic Writing Skills	3		
1.131	Spelling		3	
2.500	Business Orientation	1		
2.652	Filing	1		
2.515	Business Math with Calculators	3	2	
SS121-3	Typing I, II, III	3	3	3
SS111-3	Stenography I, II, III or			
2.537-8	Alph. Shorthand & App Alph Short	3	3	3
2.530	Practical Accounting I		3	
2.526	Duplicating Equipment		1	
2.551	Business Correspondence			3
2.527	Transcribing Machines I			3
2.610	Clerical Office Procedures			3
		14	15	15

1 Year Certificate (Option B)

Course No.	Course Title	F	W	Sp
1.101	Basic English or			
WR120	Basic Writing Skills	3		
1.131	Spelling	3		
2.500	Business Orientation	1		
2.652	Filing	1		
2.515	Business Math with Calculators	3	2	
SS122-3	Typing II, III	3	3	
2.530	Practical Accounting I		3	
2.551	Business Correspondence		3	
2.526	Duplicating Equipment		1	
2.527-8	Transcribing Machines I, II		3	3
1.102	Occupational Writing or			
WR121	English Composition			3
2.610	Clerical Office Procedures			3
2.653	Word Processing			3
2.535	Payroll Accounting			3
		14	15	15

Administrative Secretary

This two-year curriculum is designed to prepare students for responsible secretarial positions. Serious students with ambition and aptitude will find themselves well qualified for preferred positions in the ever-expanding secretarial field, including those positions found in the field of civil service. Students may complete the requirements listed for Option A or Option B.

Successful completion of this program results in the award of an Associate of Science Degree.

OPTION A
GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg. or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives		3	3
		3	3	7

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
SS121-3	Typing I, II, III	3	3	3
SS111-3	Stenography I, II, III	3	3	3
2.500	Business Orientation	1		
2.652	Filing	1		
2.530	Practical Accounting I		3	
2.526	Duplicating Equipment		1	
2.551	Business Correspondence			3
2.527	Transcribing Machines I			3
2.610	Clerical Office Procedures			3
		8	10	15

Sophomore Year

Course No.	Course Title	F	W	Sp
SS211-2	Applied Stenography I, II	3	3	
2.645	Business Conference Techniques		3	
2.613-4	On-The-Job Training		4	4
2.415	Human Relations in Business	3		
2.510	Intro to Data Processing			4
2.653	Word Processing		3	
2.528	Transcribing Machines II	3		
2.647	Administrative Mangement	3		
2.611	Office Simulations	3		
2.535	Payroll Accounting			3
		15	13	11

OPTION B
GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
		3		

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives	3	3	
		3	6	4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
SS121-3	Typing I, II, III	3	3	3
2.515	Business Math w/Calculators	3	2	
2.530	Practical Accounting I	3		
2.537	Alphabetic Shorthand	3		
2.538	Applied Alphabetic Shorthand		3	
2.500	Business Orientation	1		
2.652	Filing		1	
2.551	Business Correspondence		3	
2.526	Duplicating Equipment		1	
2.527	Transcribing Machines I			3
2.610	Clerical Office Procedures			3
1.131	Spelling		3	
2.535	Payroll Accounting			3
		13	16	12

Sophomore Year

Course No.	Course Title	F	W	Sp
9.500	Elements of Supervision		3	
2.415	Human Relations in Business	3		
2.528	Transcribing Machines II	3		
2.647	Administrative Management	3		
2.653	Word Processing		3	
2.645	Business Conference Techniques		3	
2.613-4	On-The-Job Training		4	4
2.518	Business Law			3
2.510	Intro to Data Processing			4
2.611	Office Simulations	3		
		12	13	11

Suggested Electives: Advanced Office Machines; Typing IV; Typing V; Practical Accounting II; Practical Accounting III; Key Punch; Personal Finance; Leadership-F.S.A.; Executive Typewriter.

Educational Secretary

This two-year degree prepares students for employment in educational organizations. The coursework also offers currently-employed educational secretaries an opportunity to update their skills.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
		3		

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives	3	3	
		3	6	4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
SS121-3	Typing I, II, III	3	3	3
SS111-13	Stenography I, II, III or			
2.530-2	Practical Accounting I, II, III	3	3	3
2.551	Business Correspondence		3	
2.415	Human Relations in Business			3
2.610	Clerical Office Procedures			3
2.650	Records Management for Educ. Sec.		3	
2.500	Business Orientation	1		
2.515	Business Math w/Calculators	3	2	
2.526	Duplicating Equipment		1	
		10	15	12

Sophomore Year

Course No.	Course Title	F	W	Sp
2.509	Intro to Data Processing	4		
PY201-3	General Psychology	3	3	3
9.764	Oregon school Law	3		
2.220	Personal Finance			3
9.500	Elements of Supervision			3
2.613-4	On-The-Job Training		5	4
2.611	Office Simulations	3		
2.535	Payroll Accounting			3
		13	8	16

Legal Secretary

This two-year degree should prepare students to enter the profession as a beginning legal secretary in a general practitioner's office. Through this degree, the student will have developed the ability to type and take shorthand as well as having a background in legal terminology and procedures.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
		3		

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First aid and/or			
	P.E. Activity Courses			4
	General Education Electives	3	3	
		3	6	4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
SS121-2	Typing I, II	3	3	
SS111-3	Stenography I, II, III	3	3	3
2.515	Business Math w/Calculators	3	2	
2.500	Business Orientation	1		
2.518	Business Law	3		
2.660	Legal Terminology		3	
2.652	Filing		1	
2.551	Business Correspondence			3
2.530	Practical Accounting I			3
2.661	Legal Typing			3
2.663	Legal Procedures & Ethics			3
		13	12	15

Sophomore Year

Course No.	Course Title	F	W	Sp
SS211-2	Applied Stenography	3	3	
2.527	Transcribing Machines I	3		
2.415	Human Relations in Business	3		
2.647	Adminstrative Management	3		
2.662	Legal Transcribing		3	
2.645	Business Conference Techniques		3	
2.613-4	On-The-Job Training*		4	4
2.611	Office Simulations	3		
2.653	Word Processing			3
2.535	Payroll Accounting			3
		15	13	10

*This requires part-time employment in a legally-related office.

Medical Receptionist

The two-year medical receptionist program trains students to work in physicians' offices, clinics, hospitals and medical departments of government agencies or large companies. The receptionist performs the majority of secretarial duties including initial contact with patients. An Associate of Science degree is awarded upon completion of the program.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	Engish Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math	4		
		7		

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses		4	
	General Education Electives		3	3
		3	7	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
2.500	Business Orientation	1		
SS121-2	Typing I, II	3	3	
2.506	Medical Typing			3
5.630	Medical Terminology I	3		
5.633-4	Medical Terminology II, III		3	3
5.625	Clinical Office Procedures I		4	
2.671	Medical Law & Ethics		2	
2.670	Medical Office Procedures			3
2.527	Transcribing Machines I			3
2.537	Alphabetic Shorthand		3	
2.652	Filing	1		
2.415	Human Relations in Business			3
		8	15	15

Sophomore Year

Course No.	Course Title	F	W	Sp
2.524-5	Medical Transciption I, II	3	3	
2.530	Practical Accounting I	3		
2.645	Business Conf Techniques		3	
2.611	Office Simulations	3		
2.613-4	On-The-Job Training*		4	4
2.510	Intro to Data Processing			4
5.631	Pharmaceutical Terminology			2
2.551	Business Correspondence		3	
		9	13	10

*This requires part-time employment in a medical-related office.

Medical Transcriptionist

This one-year program qualifies the student for a position as a medical transcriptionist in a clinic, hospital, or physician's office. Medical transcriptionists are trained in secretarial and medical terminology skills necessary to transcribe patient health reports and records. Most full-time employment opportunities exist in hospitals or clinics with part-time jobs available in doctors' offices. A Certificate of Completion is awarded upon graduation from the program.

1 Year Certificate

Course No.	Course Title	F	W	Sp
2.501-2	Typing I, II	3	3	
2.506	Medical Typing			3
2.500	Business Orientation	1		
5.633-4	Medical Terminology I, III		3	3
1.101	Basic English or			
WR120	Basic Writing Skills	3		
1.102	Occupational Writing		3	
2.529	Applied Medical Transcription			5
2.527	Transcribing Machines		3	
2.415	Human Relations in Business	3		
2.551	Business Correspondence			3
5.630	Medical Terminology I	3		
5.631	Pharmaceutical Terminology			2
2.671	Medical Law & Ethics		2	
	Electives	2		
		15	14	16

SS 111 STENOGRAPHY I

☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/F/W/Sp

Introduction to theory of Gregg shorthand, including the alphabet, brief forms, phrasing and abbreviating principles. Students are given the opportunity to advance at their own rate.

SS 112 STENOGRAPHY II

☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/F/W/Sp

Completion of shorthand theory and review of all principles. Development of ability to construct new outlines rapidly from dictation and to lay a solid foundation for further development of dictation and transcription skill. Students are given the opportunity to advance at their own rate. Prerequisite: SS 111 or equivalent.

SS 113 STENOGRAPHY III

☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/F/W/Sp

Emphasis on further development of speed and accuracy in dictation and transcription. Intensive practice in refining shorthand skillls and producing mailable letters. Students are given the opportunity to advance at their own rate. Prerequisite: SS 112 or equivalent.

SS 211 APPLIED STENOGRAPHY I

☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W

A thorough and extensive review of Gregg shorthand, advanced principles, phrases and short cuts, dictation covering vocabularies representative of various types of business. Basic skills of office work are stressed. Prerequisite: SS 113 or equivalent with a minimum of 80 wpm.

SS 212 APPLIED STENOGRAPHY II

☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W

A continuation of SS 211 with emphasis on speed, accuracy and secretarial standards. Included are medical and technical dictation and transcription. Prerequisite: SS 211 or equivalent.

SS 121 TYPEWRITING I

☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/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, speed and accuracy, manuscript writing, tabulation, correspondence, and centering. Individualized instruction. Students may advance at their own rate.

*A four-year school might accept only 2 credits.

SS 122 TYPEWRITING II
☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/F/W/Sp
Continued units on correspondence, tabulation, business forms, manuscripts, secretarial projects, speed and accuracy, and number proficiency. Individualized instruction. Students advance at their own rate. Prerequisite: SS 121 or equivalent.
*A four-year school might accept only 2 credits.

SS 123 TYPEWRITING III
☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/F/W/Sp
Continued units on correspondence, tabulation, business forms, manuscripts, secretarial projects, speed and accuracy, and number proficiency. Individualized instruction. Students may advance at their own rate. Prerequisite: SS 122 or equivalent.
*A four-year school might accept only 2 credits.

SS 124 TYPING SKILL BUILDING
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sm/F/W/Sp
Special emphasis on speed and accuracy. Special drills to work on numbers and remedial techniques. Prerequisite: SS 121 or equivalent.
*A four-year school might accept only 2 credits.

2.500 BUSINESS ORIENTATION & CAREER AWARENESS
☐ 2 class hrs/wk ☐ 1 cr. ☐ F
Introduction to various career opportunities in the business field through films, speakers, and field trips.

2.504 TYPEWRITING IV
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sm/F/W/Sp
Additional units on correspondence, business forms, manuscripts, with special job-oriented projects and composition at the typewriter. Emphasis on speed and accuracy improvement. Individualized instruction. Students may advance at their own rate. Prerequisite: SS123 or equivalent.

2.506 MEDICAL TYPING
☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/F/W/Sp
Preparation of medical forms and projects, as well as continued drills for speed and accuracy. Prerequisite: SS122 or equivalent.

2.515 BUSINESS MATHEMATICS
☐ 5 class hrs/wk ☐ 1-5 cr. ☐ Sm/F/W/Sp
Students may advance at their own rate. Will provide the opportunity to learn to operate the electronic calculator. This knowledge will be applied to business mathematics in such areas as: payroll, banking, invoices, simple interest, compound interest, etc. Prerequisite: l.109 or equivalent.

2.522 ADVANCED OFFICE MACHINES
☐ 5 class hrs/wk ☐ 1-2 cr. ☐ Sm/F/W/Sp
A continuation of the initial course in Office Machines. Includes emphasis on building speed as well as practical business applications. Prerequisite: 2.521 or equivalent.

2.524 MEDICAL TRANSCRIPTION I
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sm/F/W/Sp
Transcription of medical terminology in word lists and paragraphs, as well as basic medical forms. Prerequisites: SS121, 5.630, and 2.527.

2.525 MEDICAL TRANSCRIPTION II
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sm/F/W/Sp
Further development of skill in preparation of medical forms and records from dictated material. Prerequisites: SS122, 5.633, and 2.524.

2.526 DUPLICATING EQUIPMENT
☐ 2 class hrs/wk ☐ 1 cr. ☐ Sm/F/W/Sp
General background and specific instruction in a variety of duplicating processes. Prerequisite: SS121 or equivalent.

2.527 TRANSCRIBING MACHINES I
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sm/F/W/Sp
Opportunity to develop a job-entry level skill on the transcribing machine. Students are responsible for scheduling their time to develop the necessary skill. Prerequisite: SS122 or equivalent and 1.101.

2.528 TRANSCRIBING MACHINES II
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sm/F/W/Sp
Further develops the student's skill on the transcribing machine. Includes projects from a variety of business situations. Prerequisite: 2.527.

2.529 APPLIED MEDICAL TRANSCRIPTION
☐ 10 class hrs/wk ☐ 5 cr. ☐ Sm/F/W/Sp
Introduction to transcription of medical terminology in word lists and paragraphs, followed by preparation of medical forms and records from dictated material. Prerequisite: SS122, 2.527 and 5.633.

2.535 PAYROLL ACCOUNTING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
This course provides practice in all payroll operations including the recording of accounting entries involving payroll, preparation of tax returns, a review of State and Federal laws affecting payrolls.

2.537 ALPHABETIC SHORTHAND
☐ 5 class hrs/wk ☐ 1-3 cr. ☐ W/Sp
Designed for people needing a short and rapid method of writing both notes and verbatim dictation. Theory of ABC Stenoscript, including the dominant sound rule, hi-frequency words, hi-frequency letter groups, prefix and suffix rules, and phrasing and abbreviating principles. Emphasis on development of speed and accuracy in dictation and transcription.

2.538 APPLIED ALPHABETIC SHORTHAND
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sp
Extensive review of ABC Stenoscript including theory, brief forms, phrases and short cuts. Dictation covers vocabularies representative of various types of business. Emphasis on development of transcription skills and greater speed and accuracy. Production of mailable copy is stressed. Prerequisite: 2.537 and SS121 with a minimum of 60 wpm.

2.539 LEADERSHIP--F.S.A.
☐ 2 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
This course is designed to offer a student opportunities to develop leadership ability through active participation in a student organization.

2.551 BUSINESS CORRESPONDENCE
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
Composition of the principal types of present-day business letters. Includes practice in analyzing and revising words, sentences, paragraphs and letters. Emphasis on methods to humanize, clarify, and simplify written business communications. Prerequisite: 1.101,SS121 or equivalent.

2.590 READING & CONFERENCES FOR SECRETARIAL SKILLS
☐ 2-10 lab hrs/wk ☐ 1-5 cr. ☐ On Demand
Subject areas of particular interest to the student or areas where additional work is needed. Number of credits to be determined by amount of time spent.

2.609 OFFICE OCCUPATIONS
☐ 5-20 lab hrs/wk ☐ 0-18 cr. ☐ F/W/Sp
The Office Occupations Lab offers students an opportunity to gain proficiency in a wide range of clerical skills. The materials will be presented in an individualized self-paced format. The student may explore a variety of topics or concentrate on a given area. The following skill areas will be offered: Typing, office machines, business math, filing, and transcribing machines. From the above in a secretarial/clerical degree.

2.610 CLERICAL OFFICE PROCEDURES
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
Includes instruction in telephone techniques, job interviewing, communications and office procedures. Students will be doing projects integrating all office skills and techniques. Prerequisite: SS122, 1.101.

2.611 OFFICE SIMULATIONS
☐ 6 lab hrs/wk ☐ 3 cr. ☐ On Demand
This course will introduce relistic tasks that the student will perform as though they were firsthand experiences. All facets of secretarial work are included, from the routine to the most complex.

2.613-5 ON-THE-JOB TRAINING (SECRETARIAL)
☐ 3-36 class hrs/wk ☐ 1-12 cr. ☐ Sm/F/W/Sp
Supervised employment in a secretarial field primarily for sophomore students, to provide practical experience, related to the student's major field of interest. Prerequisite: Consent of Business Division before registration.

2.645 BUSINESS CONFERENCE TECHNIQUES
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W
Prepares students to effectively handle oral communications in business situations such as interviews, committees, briefings and presentations. Emphasis on effective oral communication of business ideas, statistics and research to business superiors and colleagues.

2.647 ADMINISTRATIVE MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Includes office managerial topics such as office layout and equipment, records management, selection of office personnel, and automation.

2.650 RECORDS MGT. FOR EDUCATIONAL SECRETARIES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Is designed to assist educational secretaries in the creation, storage and disposal of business and school records, through the use of alphabetic, numeric and subject systems. A variety of storage and retrieval methods are explored.

2.652 FILING
☐ 2 class hrs/wk ☐ 1 cr. ☐ Sm/F/W/Sp
Basic principles and information for efficient performance in managing and using records in the office.

2.653 WORD PROCESSING
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sp
Operation of CPT Automatic Typewriter and IBM Memory Typewriter. Includes concepts of work processing, equipment available, field trips, and guest speakers. Prerequisite: SS123.

2.654 CPT OPERATION
☐ 2 class hrs/wk ☐ 1 cr. ☐ Sm/F/W/Sp
Operation of the CPT Automatic Typewriter. Includes recording and reading information, using search and switch codes, skipping, adjusting, duplicating, and making single- and dual-tape revisions. Prerequisite: SS123

2.655 IBM MEMORY TYPEWRITER OPERATION
☐ 2 class hrs/wk ☐ 1 cr. ☐ Sm/F/W/Sp
Operation of the IBM Memory Typewriter. Course includes procedures for recording, reading, duplicating, skipping and revising information. Prerequisite: SS123

2.660 LEGAL TERMINOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Individualized course offering basic knowledge or legal terminology in the following areas: general legal, real property, pleadings, medical, corporate, probate, and Latin expressions. Prerequisite: SS121 or equivalent.

2.661 LEGAL TYPING
☐ 5 class hrs/wk ☐ 1-3 cr. ☐ Sm/F/W/Sp
Emphasis on typing legal documents. Continued drills on speed and accuracy. Prerequisite: SS122 or equivalent.

2.662 LEGAL TRANSCRIPTION
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sm/F/W/Sp
Stresses the ability of students to take instructions via the dictaphone as well as to type legal documents verbatim. Prerequisites: 2.660, 2.661, and 2.527.

2.663 LEGAL PROCEDURES & ETHICS
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
Specifics of working in a legal office stressing confidentiality, methods of handling clients, interaction with the courthouse, the law library, etc. Prerequisites: 2.660, 2.661, 2.662, 1.101.

2.670 MEDICAL OFFICE PROCEDURES
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
Specifics of working in a medical office stressed, including insurance, medical records, administrative office procedures, receptionist techniques and communications. Prerequisites: SS122, 2.652

2.671 MEDICAL LAW AND ETHICS
☐ 2 class hrs/wk ☐ 2 cr. ☐ W
Includes licensing, confidentiality, legal relationship of physician and patient, legal and ethical responsibilities of medical personnel.

Faculty:
Charles Dallmann, Chairperson
Rolfe Stearns

Culinary Arts and Restaurant Management

The Culinary Arts and Restaurant Management curriculum offers courses in all phases of the restaurant industry: food preparation, catering, dining room service and management. All students develop a strong foundation of theory and skill in food preparation, dining room service, and basic management from which they may advance to more specialized training in cooking or management.

The curriculum is designed for students who plan to enter the food service industry for the first time and for those workers already employed in the industry who intend to upgrade their knowledge and skills. Many of the first year courses are individualized to enable full-time employees to complete the courses at their own rate and convenience.

All first-year students will follow the same basic curriculum. Emphasis in the first year is on basic skills in sanitation, safety, short-order cooking and table service. Freshman students take part in the setup, preparation and service of foods cooked-to-order for customers in a small dining room. By learning to wait on customers as well as learning to prepare the foods, students gain first-hand understanding of how a restaurant actually operates. Students who complete satisfactorily only the first year of the program are eligible to receive a one-year certificate in Culinary Arts.

Culinary Arts or Restaurant Management one-year certificate holders are well qualified to enter the industry as cook's helpers, fry cooks, waiter/ waitresses or even management trainees, depending upon the graduates' interests and competency levels. Students who complete the comprehensive two-year certificate or degree programs are in greater demand and enter the industry with a chance for advancement to sous chef, dining room manager or assistant manager.

Two-Year Programs

Advanced Professional Cooking

Students whose major interest is to become a professional cook may advance their understanding and performance in the preparation of soups, sauces, vegetables, entrees and baked goods during the second year of study. Culinary Arts students who complete successfully this two-year course of study will receive a Certificate of Advanced Professional Cooking. Students who complete the additional prescribed requirements in courses outside the department may receive an Associate of Science Degree in Advanced Professional Cooking.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Alg or			
4.202	Math II or			
2.515	Business Math		4	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
PE180-90 ...	P.E. Activity			4
		3	4	4

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
	General Education Electives		6	
		3	6	

PROGRAM REQUIREMENTS

Freshman Year (1 year certificate)

8.310-12	Intro to Prof Fd. Service, I, II, III	4	6	6
8.324-6	Prac. Menu Planning A, B, C	1	1	1
8.336	Sanitation & Safety	1		
8.337	Orientation, Tools & Stations	2		
8.338	International Fd. & Bev. Vocab.	2		
8.339	M&P: Gardemanger-Salads		2	
8.340	M&P: Vegs & Entrees			2
8.344	Tech. of Table Service	1		
8.345	Dining Room Management	1		
8.349-51	Banquet, Buffet, & Cat. Pro. A,B,C	1	1	1
8.363	Office Management	1		
8.357	Job Analysis & Work Simpli.	1		
8.358	Hiring & Trng Employees		1	
8.359	Supervising Rest Personnel		1	
8.347	Wine Service		1	
8.360	Food Purchasing I		1	
8.361	Food Purchasing II			1
8.362	Equip. & Supplies Purchasing			1
		15	14	12

Sophomore Year

Course No.	Course Title	F	W	Sp
8.313-5	Adv. Prof. Cooking I, II, III	6	6	6
8.327-9	Adv. Prac. Menu Planning A,B,C	1	1	1
8.341	M&P: Stocks, Soups & Scs	2		
8.342	M&P: The Butcher Shop		2	
8.343	M&P: The Bake Shop			2
8.353-5	Banquet, Buffet & Catrng Mgm A,B,C	1	1	1
8.365	Planning The Restaurant	1		
8.368	Princ. of Menu Planning	1		
8.369	Pricing & Eval. the Menu		1	
8.371	Purch. Controls		1	
8.375	Facilities Sanitation and Main.			1
		12	12	11

Chef Training

Students who complete the first year of study with sufficiently high grades and skills may be accepted into the Chef Training program. Applicants must be approved by the Department Chairperson. This course of study combines advanced cooking techniques with practical and theory courses in menu planning, food cost controls, and kitchen management. Chef trainees should have good skills in reading, writing, speaking and computing decimals and percentages. Those who complete satisfactorily the second year Chef-Training curriculum are eligible to receive a Certificate in Chef Training. Students desiring an Associate of Science Degree in Chef Training should plan on devoting considerable time to fulfill general education requirements.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Alg or			
4.202	Math II or			
2.515	Business Math		4	
PE180/90	P.E. Activity/or etc			4
		3	4	4

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm	3		
	Gen Electives			6
		3		6

PROGRAM REQUIREMENTS

Freshman Year (1 year certificate)

Course No.	Course Title	F	W	Sp
8.310-12	Intro to Prof Fd Service, I, II, III	4	6	6
8.324-6	Prac Menu Planning A, B, C	1	1	1
8.336	Sanitation & Safety	1		
8.337	Orientation, Tools & Stations	2		
8.338	International Fd & Bev Vocab	2		
8.339	M & P: Gardemanger-Salads		2	
8.340	M & P: Vegs & Entrees			2
8.344	Tech of Table Service	1		
8.345	Dining Room Management	1		
8.349-51	Banquet, Buffet, & Cat Pro A, B, C	1	1	1
8.363	Office Management	1		
8.357	Job Analysis & Work Simpli	1		
8.358	Hiring & Trng Employees		1	
8.359	Supervising Rest Personnel		1	
8.347	Wine Service		1	
8.360	Food Purchasing I		1	
8.361	Food Purch II			1
8.362	Equip & Supplies Purchasing			1
		15	14	12

Sophomore Year

Course No.	Course Title	F	W	Sp
8.316	Intro to Comm Kitchen Prod & Mgm	6		
8.317	Interm Comm Kitchen Prod & Mgm		6	
8.318	Adv Comm Kitchen Prod & Mgm			6
8.327-9	Adv Pract Menu Planning A,B,C	1	1	1
8.341	M&P: Stoks, Soups, Sauces	2		
8.342	M&P: The Butcher Station		2	
8.343	M&P: The Bake Shop			2
8.353-5	Banquet, Buffet & Catrng Mngt A,B,C	1	1	1
8.376	Planning the Restaurant	1		
8.368	Princ of Menu Planning	1		
8.378	Merchandising the Menu	1		
8.364	Data Processing	1		
8.369	Pricing & Eval the Menu	1		
8.371	Purchasing Controls		1	
8.373	Food Cost Controls		1	
8.374	Equip Layout		1	
8.370	Forecasting & Sched Prod		1	
8.375	Facilities Sanitation & Maint			1
8.372	Labor Cost Controls			1
		15	14	12

Restaurant Management

The Restaurant Management program emphasizes line management of restaurants, catering firms, resorts and clubs. During their second year, management students refine their dining room skills, manage the cafeteria, table service restaurant and banquet and catering service, and increase their skills in natural foods and haute cuisine cooking. Students who are accepted by the Department Chairperson into the second year Restaurant Management program will need a strong background in communications and computational skills. Upon successful completion of the second year curriculum, students receive a Certificate in Restaurant Management. Those wishing to earn the Associate of Science Degree in Restaurant Management should be prepared to carry a maximum load each term in order to fulfill the general education requirements of the college.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Alg or			
4.202	Math II or			
2.515	Business Math		4	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
PE180-90	P.E. Activity			4
		3	4	4

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm	3		
	General Education Electives		6	
		3	6	

PROGRAM REQUIREMENTS

Freshman Year (1 year certificate)

Course No.	Course Title	F	W	Sp
8.310-12	Intro to Prof Fd. Service, I,II, III	4	6	6
8.324-6	Prac. Menu Planning A, B, C	1	1	1
8.336	Sanitation & Safety	1		
8.337	Orientation, Tools & Stations	2		
8.338	International Fd. & Bev. Vocab.	2		
8.339	M&P: Gardemanger-Salads		2	
8.340	M&P Vegs & Entrees			2
8.344	Tech. of Table Service	1		
8.345	Dining Room Management	1		
8.349-51	Banquet, Buffet, & Cat. Pro. A,B,C	1	1	1
8.363	Office Management	1		
8.357	Job Analysis & Work Simpli.	1		
8.358	Hiring & Trng Employees		1	
8.359	Supervising Rest Personnel		1	
8.347	Wine Service		1	
8.360	Food Purchasing I.		1	
8.361	Food Purchasing II			1
8.362	Equip. & Supplies Purchasing			1
		15	14	12

Sophomore Year

Course No.	Course Title	F	W	Sp
8.321-3	Adv. Cooking for Managers I, II, III	3	3	3
8.327-9	Adv. Prac Menu Plan A,B,C	1	1	1
8.332-4	Management Lab A,B,C	3	3	3
8.341	M&P: Stocks, Soups, & Sauces	2		
8.342	M&P: The Butcher Station		2	
8.343	M&P: The Bake Shop			2
8.353-5	Banquet, Buffet, & Catering Mgm A,B,C	1	1	1
8.376	Planning the Rest.	1		
8.368	Princ of Menu Planning	1		
8.378	Merchandising the Menu	1		
8.364	Data Processing	1		
8.366	Opening the Restaurant	1		
8.369	Pricing & Evaluating the Menu		1	
8.371	Purchasing Controls		1	
8.373	Food Cost Controls		1	
8.374	Equipment Layout		1	
8.370	Forecasting & Scheduling Prod			1
8.375	Facilities Sanitation & Maint.			1
8.372	Labor cost Controls			1
8.348	Beverage Mgm			1
8.377	Restaurant Promotion			1
2.530	Prac. Acct. I	3		
		18	14	15

Operations

Theory courses are complemented by realistic hands-on experience. Culinary Arts and Restaurant Management students plan, prepare and serve around four hundred meals a day in The Santiam Room (a formal a la carte dining room) and the cafeteria which features institutional, hotel, and natural foods cooking. In conjunction with the college Food Service, the department also operates: a fast food outlet, a banquet and catering service and a bakeshop.

Instructional Facilities

The Food Production Lab contains virtually all types of equipment found in restaurant, hotel, or cafeteria kitchens. This lab consists of the following kitchen areas: self-contained dinner house kitchen; natural foods kitchen; bakeshop; fast foods kitchen; and the cafeteria and banquet kitchen with butcher, pantry, vegetable, entree and stock, soup and sauce stations.

The Dining Room Lab provides facilities for learning arm and tray skills; American, French and Russian service; cashiering; and maitre d'hotel skills.

The Management Lab includes: 1) Management stations for the Santiam Room, the Cafeteria, and the Culinary Arts Club (these stations include the recipes, forms, records, procedure sheets and policy manuals necessary for the Chef and Management students to run these operations); 2) Conference facility for seminars and daily management sessions; 3) Access to data processing for sales history, menu planning, purchasing and inventory control, food and labor cost controls and management simulations; 4) Graphics station with equipment for preparing menu mock-ups, advertising layouts, restaurant designs and equipment layouts; and 5) A resource area which contains the department library of food service periodicals, handouts, and audio/visual aids, as well as audio/visual equipment, including a video tape recorder and a monitor connected to TV cameras in the Food Production Lab. Students use the tapes they make of their lab performance to increase their speed and efficiency.

The Culinary Arts Club

There is also a student-run Culinary Arts Club. Students plan and execute banquets, buffets, concessions, and catered affairs for college and community groups. Typical activities include: Annual French Dinner, Culinary Skills Contest, exchange banquets with neighboring community college, concessions at local crafts fairs, Spring Awards Banquet, and a three day catering job for another club. The students use the income from these events and from the sale of ice carvings for field trips and dinners at finer restaurants. During the school year the club also holds cook-offs, potlucks and picnics.

Entering the Program

Admission to all programs is conditional upon the student's presenting evidence of a recent negative TB Test. Suitable work shoes are required and personal accident or school insurance coverage is strongly suggested.

In addition to fulfilling the general admissions requirements of the college, there are certain skills and aptitudes demanded in each curriculum. Strong interest and motivation, however, are key ingredients for success. At each successive level of training, students must be able to develop more skills and handle a more complex variety of tasks. The student who does not read at tenth to twelfth grade level is encouraged to develop his or her reading skills in the College's Developmental Center.

The variety of tasks in the program requires that students be able to work under pressure and be able to follow instructions from others as well as initiate them. Cleanliness and neatness are required of all students in this program.

Management candidates should enjoy frequent contact with the public and have good oral communication skills, physical stamina, organizational and leadership abilities, and a knowledge of business mathematics. Candidates for this curriculum must complete successfully the first year program or show five years verifiable experience in commercial food preparation.

The Professional Cooking program requires manual dexterity, physical stamina, a good memory, and the ability to concentrate, handle pressure and work cooperatively with others.

Chef Trainees need a combination of cooking and management aptitudes and skills. Candidates for this curriculum must complete successfully the first year program or show five years verifiable experience in commercial food preparation.

Incidental Fees

The department recommends that students purchase school or other accident insurance because they face the possibility of paying their own medical bills for any injury sustained during class time. The Guidance Center handles insurance arrangements and can provide additional information on cost and coverage.

During the first two weeks of class the student will be required to purchase a French knife and at least one chef coat. Students must launder their own jackets, but fresh aprons, towels, and hats will be supplied weekly. Besides making a substantial cash outlay for books and supplies the first term, students can expect to purchase some books and/or supplies each succeeding term.

Career Opportunities

Potential employers of Culinary Arts and Restaurant Management graduates include: restaurants, hotels, catering firms, cafeterias, clubs and resorts. School and college food services, convalescent and retirement homes, and hospitals and airlines provide other employment opportunities. Additional opportunities exist in food service equipment design and sales and in the sale of food and restaurant supplies.

Vocational Courses Open to Non-Majors

8.300 RESTAURANT A LA CARTE
☐ 3 lab hrs/wk ☐ 1-8 cr. ☐ F/W/Sp
Basic food preparation with emphasis on foods cooked to order. Opportunity to work the broiler, fry, griddle, and saute stations as well as to prep foods in the pantry and back kitchen areas. Depending upon the hour, students prepare a variety of short order dishes, from omelets and grilled sandwiches to broiled steaks and sauteed vegetables. Opportunity to learn breakfast, lunch, and dinner cooking. Variable credit and hours for the working student. May be repeated for credit.

8.301 BANQUETS, BUFFETS AND CATERING FOR NON-MAJORS
☐ 3 lab hrs/wk ☐ 1 cr. ☐ F/W/Sp
Menu planning, purchasing, pricing, production scheduling, preparation and service of banquets, buffets, and catered dinners.

8.302 PRACTICAL COOKING FOR NON-MAJORS
☐ 6 lab hrs/wk ☐ 2 cr. ☐ F/W/Sp
Practical food preparation procedures for students not pursuing a career in the foods industry. Students will have the opportunity to prepare salads, dressings, stocks, soups, sauces and vegetables for cooking and service. International foods are stressed. May be repeated for credit. Registered students must present proof of a recent TB test.

8.303 SALADS AND GARDEMANGER FOR NON-MAJORS
☐ 2 class hrs/wk ☐ 2 cr. ☐ W
A course in salads, dressings, and techniques for adding eye appeal to foods. Non-majors attend the same lectures and demonstrations as majors but have different assignments and projects, which have been developed for home instead of restaurant use.

8.304 VEGETABLES AND ENTREES FOR NON-MAJORS
☐ 2 class hrs/wk ☐ 2 cr. ☐ Sp
Essentially the same course as for majors, but reading assignments put emphasis on home cooking quantities and techniques.

8.305 STOCKS, SOUPS AND SAUCES FOR NON-MAJORS
☐ 2 class hrs/wk ☐ 2 cr. ☐ F
The basics of stock, soup, and sauce preparation. Emphasis in readings and homework on home preparation and small quantities.

8.306 MEAT CUTTING LAB FOR NON-MAJORS
☐ 3-15 lab hrs/wk ☐ 1-5 cr. ☐ F/W/Sp
Provides opportunity to practice meat cutting skills covered in Materials and Processes: The Butcher Station. Students may schedule from 3-15 hours per week in the morning to cut meat to be cooked and served for the school cafeteria and restaurant. Materials and Processes: The Butcher Station is a prerequisite which may be taken concurrently. Open to non-majors.

8.307 BAKING FOR NON-MAJORS
☐ 2 class hrs/wk ☐ 2 cr. ☐ Sp
A basic course in the techniques of preparing and evaluating baked goods. Reading assignments, class lecture and discussion will provide the background for practical baking in the college kitchen. This discussion class will provide knowledge of leavening action, the uses of fats and sugars, pastry, sweet dough and cake baking. Readings, lectures and practice on bread and dessert products. Basic techniques with the pastry bag.

Professional Cooking and Food Service

8.310 INTRODUCTION TO PROFESSIONAL FOOD SERVICE I
☐ 18 lab hrs/wk ☐ 4 cr. ☐ F/W/Sp
A laboratory and work-experience class in which the beginning student will spend time as an assistant on the following stations: entree, salad, vegetable, soup & stock, bakery, storeroom, warewashing and dining room. Instructor demonstrates safe use of machines and hand tools, sanitation and hygiene procedures, basic cooking processes, and proper station set-up and clean-up. Basic table service skills are emphasized. Students take part in actual preparation, set-up and service of a small dining room to learn how a restaurant really works. Class begins fourth week of term.

8.311 INTRODUCTION TO PROFESSIONAL FOOD SERVICE II
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
A laboratory course in food preparation, with emphasis on mastery of the basic salads and dressings. Students will continue to rotate stations on a two-week basis but will begin to take on more responsibility in producing a salable product for the cafeteria and restaurant customers. Students continue practice their table service skills in the department's sit-down restaurant.

8.312 INTRODUCTION TO PROFESSIONAL COOKING III
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
This laboratory section focuses on vegetable and entree preparation. Students will cook vegetables, starches and main dishes for service in the college cafeteria. Student cooks will prepare entrees according to the various styles of service: restaurant, hotel and institutional. The student will begin in this quarter to assume responsibility for directing a station as he or she rotates duties every two weeks. Students continue to practice their table service in the department restaurant.

8.313 ADVANCED PROFESSIONAL COOKING I
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
An advanced course in the kitchen under service conditions. For the first time students will take charge of a station and be responsible to the student chef and instructor for its efficient operation. Students may begin to specialize on a station and rotate at monthly or quarterly intervals.

8.314 ADVANCED PROFESSIONAL COOKING II
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
The advanced cooking student will begin to make a menu for his or her station and coordinate the activities of the station with that of the chef and the rest of the kitchen, and will order and receive merchandise for the station.

8.315 ADVANCED PROFESSIONAL COOKING III
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
In this final quarter of lab experience the student has more responsibility for developing menus and recipes for service. The student may continue to specialize for entry level or may wish to broaden knowledge at instructor's discretion.

Chef Training

8.316 INTRODUCTION TO COMMERCIAL KITCHEN PRODUCTION AND MANAGEMENT
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
More responsible kitchen stations: entrees, sauces and second cooks, sous chef, and student chef. Students are entirely responsible for the efficient running of the kitchen. Chef trainees familiarize themselves with job descriptions for every station of kitchen in order to delegate authority properly.

8.317 INTERMEDIATE COMMERCIAL KITCHEN PRODUCTION AND MANAGEMENT
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
Chef-trainee works as chef or sous chef to coordinate kitchen activities from planning and ordering to receiving, storing, cooking and serving.

8.318 ADVANCED COMMERCIAL KITCHEN PRODUCTION AND MANAGEMENT
☐ 18 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
Students in their last quarter assume title, responsibility and authority of student chef. Under instructor's guidance the student prepares a two-week menu and order sheet and oversees the ordering, receiving, preparation, and service of food for the college cafeteria.

Cooking for Restaurant Managers

8.321 ADVANCED COOKING FOR RESTAURANT MANAGERS I
☐ 9 lab hrs/wk ☐ 3 cr. ☐ F/W/Sp
A lab course with emphasis on stock, soup, and sauce preparation. Beginning familiarity with international cuisines as well as new cuisine. Student managers will plan, cost and price menus. Practice of formal dining room skills. Supervision of student cooks and service personnel is stressed.

8.322 ADVANCED COOKING FOR RESTAURANT MANAGER II
☐ 9 lab hrs/wk ☐ 3 cr. ☐ F/W/Sp
A lab course with emphasis on meat grades, cuts and preparation. International dishes are stressed. New cuisine is explored in greater depth. Kitchen and dining room service and management techniques are continued. Students deliver routine demonstrations to the class.

8.323 ADVANCED COOKING FOR RESTAURANT MANAGER II
☐ 9 lab hrs/wk ☐ 3 cr. ☐ F/W/Sp
Cooking/Managing lab. Vegetables, entrees, and baked goods are stressed in production and theory. Production forecasting and portion controls are implemented by student managers. Refinements in dinner house cooking, including tableside preparation techniques and practice. Students assume responsibility for total dining room operation.

Practical Menu Planning

8.324-6 PRACTICAL MENU PLANNING A, B, C
☐ 3 lab hrs/wk ☐ 1 cr. ☐ F/W/Sp
Complements the first-year cooking labs and is to be taken concurrently. Students assist in planning and preparing menu items on a daily basis. Students make daily presentations to the class regarding the day's menu. Students are responsible for knowing the names and ingredients of all menu items for the term. Daily critique of previous day's menu.

Advanced Practical Menu Planning

8.327-9 ADVANCED PRACTICAL MENU PLANNING A, B, C
☐ 3 lab hrs/wk ☐ 1 cr. ☐ F/W/Sp
Second-year students write menus, purchase orders, and line set-up sheets. Students in charge of a station direct that station and coordinate activities with the student chef as well as with other station heads. Daily oral presentations on the current menu items, their preparation and coordination. Students are responsible for knowing the names and ingredients of all menu items for the term. Each term covers a menu series and differing menu items.

Dining Room Labs

8.330 DINING ROOM LAB I
☐ 6 lab hrs/wk ☐ 2 cr. ☐ F/W/Sp
Provides waiter/waitress experience in coffee shop and tray service settings.

8.331 DINING ROOM LAB II
☐ 6 lab hrs/wk ☐ 2 cr. ☐ F/W/Sp
Provides experience in advanced table service technique and cashier procedures. Cashier procedures, dining room and banquet supervision.

Management Labs

8.332 MANAGEMENT LAB A
☐ 9 lab hrs/wk ☐ 3 cr. ☐ F/W/Sp
Practice interviewing job applicants, training student employees, handling grievances, writing job descriptions and making performance evaluations. Students revise station set-up and clean-up procedures, employee and clean-up schedules. Students are assigned to one of three lab restaurants.

8.333 MANAGEMENT LAB B
☐ 9 lab hrs/wk ☐ 3 cr. ☐ F/W/Sp
Student managers will be assigned to one of three lab areas. Administration of prices, orders, receiving, issuing and inventory for foods, utensils and supplies is emphasized. Management trainees prepare food cost analysis and design menu for assigned restaurant.

8.334 MANAGEMENT LAB C
☐ 9 lab hrs/wk ☐ 3 cr. ☐ F/W/Sp
Prepare and analyze budgets, P & L statements and balance sheets for assigned restaurant. Develop promotional campaign. Labor cost analysis, payroll procedures, and employee regulations are stressed.

Food Service Fundamentals

8.335 PROJECTS AND CONFERENCES
☐ 3-15 lab hrs/wk ☐ 1-5 cr. ☐ F/W/Sp
Subject areas of particular need or interest to the student can be given additional attention in this independent study course. Projects are to be planned in detail and approved by the instructor prior to the second week of class. Instructor's permission required. Hours and credits by arrangement.

8.336 SANITATION AND SAFETY IN FOOD SERVICE
☐ 2 lab hrs/wk ☐ 1 cr. ☐ F/W/Sp
Safety, accident and fire prevention, safe food handling, foodborne diseases, personal hygiene, kitchen and dining room sanitation, warewashing, receiving, and sanitary storage.

8.337 FOOD SERVICE ORIENTATION, STATIONS AND TOOLS
☐ 4 lab hrs/wk ☐ 2 cr. ☐ F/W/Sp
Safe and sanitary use of stations, tools, and equipment. How to set-up and clean-up various kitchen and dining room stations. The basic principles of cooking and service. The basics of weights and measures. Important culinary terms.

8.338 INTERNATIONAL FOOD AND BEVERAGE VOCABULARY AND HISTORY
☐ 2 lab hrs/wk ☐ 2 cr. ☐ F
Culinary vocabulary from all over the world as seen on menus and employed in commercial kitchens in the U.S. The French system of order for classical service forms the basis for study of foods, wines, tools and techniques associated with French cuisine. Study of historical development of western cuisines reveals the reason for the international flavor of kitchen argot. Open to non-majors.

Materials and Processes

8.339 MATERIALS AND PROCESSES: GARDEMANGER--SALADS
☐ 2 class hrs/wk ☐ 2 cr. ☐ W
Lectures, demonstration, and discussions of proper techniques for the preparation of appetizers, hors d'oeuvres, salads and dressings, sandwiches, coffee and eggs. Basics of the buffet, chaud-froid pieces, ice carving, and cold soups. Complements and supplements kitchen laboratory practice in winter term.

8.340 MATERIALS AND PROCESSES: VEGETABLES AND ENTREES
☐ 2 class hrs/wk ☐ 2 cr. ☐ Sp
Basic knowledge and techniques through lecture-demonstrations and discussions on the preparation of green, red, yellow, and white vegetables. The various market forms of vegetables from raw to frozen pre-cooked. Rice, pastas, legumes and dried vegetables. Instructions and procedures for preparing entrees from beef, veal, lamb, pork, poultry, fish, variety meats, pastas, vegetables, and dairy products.

8.341 MATERIALS AND PROCESSES: STOCKS, SOUPS AND SAUCES
☐ 2 class hrs/wk ☐ 2 cr. ☐ F
Students will receive theory and training in preparation of basic and specialty stocks, classic and innovative soups, and the leading mother and secondary warm sauces.

8.342 MATERIALS AND PROCESSES: THE BUTCHER STATION
☐ 2 class hrs/wk ☐ 2 cr. ☐ W
Cutting of beef hindquarter, arm chuck and portion steaks. Student butchers break a leg of veal and a lamb or pork carcass. How to split a chicken, skin and filet a fish, peel prawns and shuck clams and oysters for service. Safety stressed, along with proper sanitation, grades and cuts of beef.

8.343 MATERIALS AND PROCESSES: THE BAKE SHOP
☐ 2 class hrs/wk ☐ 2 cr. ☐ Sp
A lecture-discussion class which provides knowledge of leavening action, the uses of fats and sugars, pastry, sweet dough and cake baking. Readings, lectures, and practice on bread and dessert products. Basic techniques with the pastry bag.

Dining Room

8.345 TECHNIQUES OF TABLE SERVICE
☐ 7.5 lab hrs/wk ☐ 1 cr. ☐ F/W/Sp
Personal qualifications, hand and tray skills, taking orders, table settings, opening sidework, closing sidework, problem guests, suggestive selling, greeting guests, and cashiering.

8.346 DINING ROOM MANAGEMENT
☐ 2 lab hrs/wk ☐ 1 cr. ☐ F
Styles of service and staffing in the dining room. The dining room manager's responsibilities: training, scheduling, supervising, building the check average, controlling guest checks, cash and linen. Maintaining the sales history.

Beverages Service and Management

8.347 WINE SERVICE
☐ 2 lab hrs/wk ☐ 1 cr. ☐ W
Techniques of serving and selling wine. Wine evaluation terms. Food/wine combinations. Classification of wines. Geography of major wine regions. How to evaluate wine for color, bouquet, taste, and finish characteristics. Theory course, does not include wine tasting.

8.348 BEVERAGE MANAGEMENT
☐ 2 lab hrs/wk ☐ 1 cr. ☐ Sp
Types of spirits and their methods of distillation, types of mixed drinks, bar service, bar layout, liquor storeroom, liquor controls, liquor regulations. Theory course, does not include wine tasting.

8.349 COMPOSING THE WINE LIST
☐ 2 lab hrs/wk ☐ 1 cr. ☐ F
An individual project course. Coordinating the wine list with the restaurant menu, style of service, customer's preference, storage facilities, financial resources and promotional strategy. Selecting aperitifs, sparkling and still wines, and dessert wines and port. Pricing the list. Laying out and printing the list.

First Year Culinary Arts and Restaurant Management

Banquets, Buffets and Catering

8.350 BANQUET, BUFFET & CATERING PROCEDURES A
☐ 3 lab hrs/wk ☐ 1 cr. ☐ F
A course in kitchen and dining room banquet procedures. Students will plan and put on banquets during the fall term, with special emphasis on the annual French or International Banquet. Setting the banquet room, serving the guests, and portioning the meals are stressed. The exact content of the course depends to some extent on the number and type of functions booked each year.

8.351 BANQUET, BUFFET & CATERING PROCEDURES B
☐ 3 lab hrs/wk ☐ 1 cr. ☐ W
Students will work together to put on buffets and banquets during the winter term. Students plan, prepare and serve food to large groups of people. Special attention will be given to buffets, although all types of banquets may be served. Setting the buffet, including chaud-friod and ice sculpture centerpieces, will be stressed. Students evaluate foods for appearance, taste and portion consistency..

8.352 BANQUET, BUFFET & CATERING PROCEDURES C
☐ 3 lab hrs/wk ☐ 1 cr. ☐ Sp
The emphasis in this course is on catering, although students will also participate in planning and serving sit-down banquets as well as buffets. Topics covered will include food preparation, loading, and transport, as well as catering set-up, service, clean-up and reloading. A large scale banquet is usually scheduled for the spring term and students will have the opportunity to work large and small scale catered parties.

8.353 BANQUET, BUFFET & CATERING MANAGEMENT A

☐ **3 lab hrs/wk** ☐ **1 cr.** ☐ **F**

Advanced students will plan, supervise, and work on banquets and/or buffets and caterings during the fall term. Second-year students will assist in training new students in the basics of banquet procedures. Additional emphasis is placed on planning, promoting, costing and billing of banquets. Students will apply their knowledge under actual service conditions.

8.354 BANQUET, BUFFET & CATERING MANAGEMENT B

☐ **3 lab hrs/wk** ☐ **1 cr.** ☐ **W**

Advanced students will plan, serve and supervise large and small banquets, buffets and caterings as scheduled winter term. Advance planning, preparation and training for large scale events. Evaluation and judging foods for eye appeal, taste, color and arrangement. Buffet planning, setup and cleanup are emphasized but actual service depends somewhat on scheduling and demand.

8.355 BANQUET, BUFFET & CATERING MANAGEMENT C

☐ **3 lab hrs/wk** ☐ **1 cr.** ☐ **Sp**

This course emphasizes catering management and procedures. Students will also participate in planning and serving large banquets and/or buffets during the spring term. Students will actually plan and work on banquets and caterings. Special equipment and problems of catering are stressed.

8.356 TRAIL COOKING PROCEDURES & MANAGEMENT

☐ **3-15 lab hrs/wk** ☐ **1-5 cr.** ☐ **On Demand**

An individualized course for the advanced student with a special interest in catering and catering management. The student will plan, cost, price, transport, prepare and clean-up meals catered for groups on the trail. Students earn one credit for every thirty-three hours spent in planning and actually preparing the meals.

Personnel Supervision

8.357 JOB ANALYSIS & WORK SIMPLIFICATION

☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **F**

Job analysis, job description, employee specifications, job pricing, flow chart work, simplifying tasks.

8.358 HIRING AND TRAINING EMPLOYEES

☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **W**

Recruitment, interviewing techniques, testing and selecting, writing job instructions, training methods, supervised on-the-job training experience.

8.359 SUPERVISING RESTAURANT PERSONNEL

☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **W**

Communication techniques, styles of management, supervisory techniques, evaluating and promoting employees, handling grievances, employee safety and fringe benefits.

Purchasing

8.360 FOOD PURCHASING I

☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **Sp**

Fresh and processed fruits and vegetables, herbs, spices and condiments; staples, grains and cereals; non-alcoholic beverages and convenience foods.

8.361 FOOD PURCHASING II

☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **Sp**

Quality standards for dairy products, poultry, fish, beef, veal, lamb, pork and variety meats.

8.362 EQUIPMENT AND SUPPLIES PURCHASING

☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **Sp**

Refrigeration, warewashing, preparation and cooking equipment. Utensils, flatware and tableware, furnishings and carpeting, detergents and supplies, linen and service contracts.

Restaurant Management Fundamentals

8.363 OFFICE MANAGEMENT
☐ 2 lab hrs/wk ☐ 1 cr. ☐ F
Time management, telephone techniques, conducting meetings, records management, office layout, and work flow.

8.364 CULINARY ARTS DATA PROCESSING
☐ 2 class hrs/wk ☐ ☆. ☐ F
This course is directed to the non-DP major who will likely be a user of a computer-data processing system. Course includes explanations of computer terminology and functional operations. Procedures for systems analysis will be described and future implications of the societal impact by computers will be discussed.

8.365 PLANNING AND ORGANIZING THE RESTAURANT
☐ 2 lab hrs/wk ☐ 1 cr. ☐ F
Types of ownership and management, management function areas, the budget, break even analysis, feasibility study, market, site, and financial.

8.366 OPENING THE RESTAURANT
☐ 2 lab hrs/wk ☐ 1 cr.
Leasing and buying, tax and legal aspects, credit instruments, financing, insurance, project scheduling.

8.367 RESTAURANT FINANCE
☐ 2 lab hrs/wk ☐ 1 cr. ☐ On Demand
Budgets, budget controls, analyzing balance sheets and profit and loss statements, managing working capital, purchasing new equipment, expansion and long term financing. Offered on demand with consent of instructor.

Menu Planning

8.368 PRINCIPLES OF MENU PLANNING
☐ 2 lab hrs/wk ☐ 1 cr. ☐ F
Types of commercial food service establishments and their menus. The fundamental role of the menu in food service. Setting the parameters of the menu. Daily and monthly meal planning process.

8.369 PRICING AND EVALUATING THE MENU
☐ 2 lab hrs/wk ☐ 1 cr. ☐ W
Yield tests, standardized recipes, precosting food and labor costs, pricing on prime cost and market, measuring relative popularity of menu items, profitable sales mix.

8.370 FORECASTING SALES AND SCHEDULING PRODUCTION
☐ 2 lab hrs/wk ☐ 1 cr. ☐ Sp
Sales history, forecasting techniques, production sheet, scheduling production labor, scheduling utilities, using convenience foods, portioning and presentation.

Cost Controls

8.371 PURCHASING AND INVENTORY CONTROLS
☐ 2 lab hrs/wk ☐ 1 cr. ☐ W
Purchasing, receiving and issuing procedures and controls, dry and cold storage facilities, security, kitchen tests, physical and perpetual inventory procedures.

8.372 LABOR COST CONTROLS
☐ 2 lab hrs/wk ☐ 1 cr. ☐ Sp
Analyzing labor costs, bar charts and scheduling, daily payroll reports, payroll procedures, government regulations, employee benefits.

8.373 FOOD COST CONTROLS
☐ 2 lab hrs/wk ☐ 1 cr. ☐ W
Analysis of sales mix, determining food costs by sales area, various cost control systems, food cost worksheets and reports.

Facilities

8.374 EQUIPMENT LAYOUT
☐ 2 lab hrs/wk ☐ 1 cr. ☐ W
Analyzing menu, production and service requirements; layout analysis, space and equipment requirements for receiving and storage, warewashing, cooking service and dining room areas.

8.375 FACILITIES SANITATION & MAINTENANCE
☐ 2 lab hrs/wk ☐ 1 cr. ☐ Sp
Safety, fire and sanitation codes and regulations. Sanitation, safety and maintenance schedule for warewashing, storage, general cleaning, general maintenance, structural maintenance and repair and replacement of equipment.

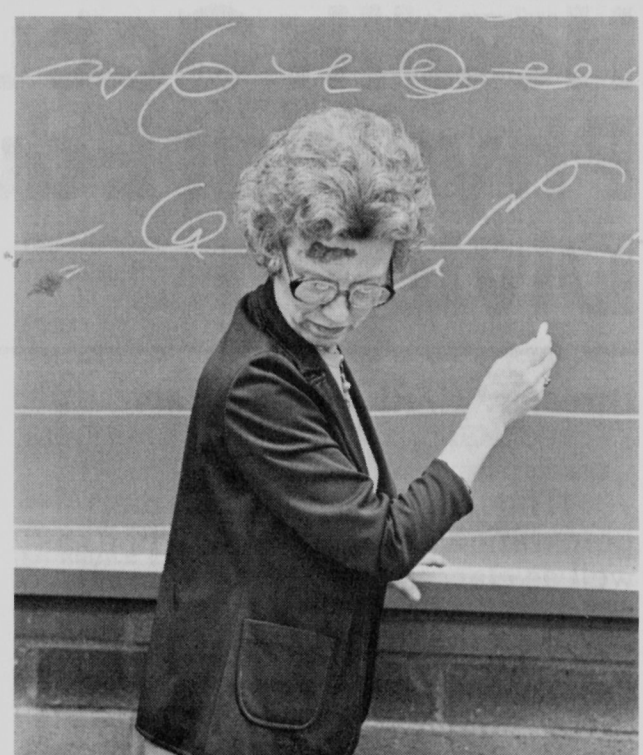
8.376 RESTAURANT DESIGN
☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **On Demand**
Preparing rough plans, building and health codes, the design theme, lighting, furnishings, appointments.

Sales

8.377 RESTAURANT PROMOTION
☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **Sp**
The sales function, restaurant marketing strategy, advertising budget, public relations, selling conventions.

8.378 MERCHANDISING THE MENU
☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **F**
Menu layout, illustration, and copy, costing artwork and printing, internal selling technique, coordinating the menu with the dining room atmosphere.

8.379 ADVERTISING MEDIA
☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **On Demand**
Copy, layout, and illustration: using newspaper, direct mail, radio and television media for restaurant advertising.



Health Occupations and Physical Education Division

Director: H. Richard McClain

The 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 and related health areas.

Preparation includes both classroom and clinical experience. Students completing these programs are qualified to pursue various occupations in the health services field in hospitals, nursing homes, clinics, doctors' or public health offices.

Activity classes are offered for students who must take physical education to meet graduation requirements and for those who wish to participate in individual or team activities.

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

Linn-Benton Community College encourages students to make career choices based on interests, needs and abilities, without regard to the traditional roles of men, women or minorities.

Faculty:
Judith Benoff
Margaret Black
Lyndall Johnson
Jacqueline Paulson
Bobbie Lamberton
Sharon Vaughn
Adella Wood

Associate Degree Nursing

This two year program is open to both men and women of all ages and is designed to prepare students to be highly skilled bedside nurses (R.N.) oriented to patient care. Students who complete the course receive an Associate of Science Degree in Nursing and are eligible to take the Oregon State Test Pool Examination for Registered Nurse Licensure. Clinical facilities utilized are the hospitals, nursing homes and community health agencies in Linn and Benton Counties, as well as the State Hospital in Salem.

See Admission Procedure for special admissions for Associate Degree Nursing Program.

ACCREDITATION

The program is accredited by the Oregon Board of Education, Oregon State Board of Nursing, and is fully accredited by the National League for Nursing.

STANDARDS OF PERFORMANCE

Following acceptance into the Nursing Program, the student is expected to achieve a minimum of a 'C' grade in each required course in the Nursing Program. Nursing courses are to be taken in sequence in the order listed below. A student is graded in all aspects of the program including clinical practice. The student is expected to participate on a daily basis; absence is made up through an agreement made with the instructor.

A student who is unable to meet the level of competency required in the Nursing Program may be advised of other alternatives to meet his/her goal. Permission to continue in the Nursing Program with an 'Incomplete' in any required courses will be determined on an individual basis.

Should the student petition to complete the Nursing Program at a later time, the Program Coordinator and Health Occupations Director will endeavor to help the student achieve this goal.

All nursing courses are to be completed at Linn-Benton Community College, unless special permission for transfer credit is arranged. Related courses may be taken before enrolling in the Nursing Program or concurrent with the Nursing Program.

Students who are admitted to the Nursing Program may be required to hold student nurse liability insurance in addition to the coverage by LBCC. Evening clinicals are required.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.101	Elements of Algebra			

*Required as prerequisite to program

Sophomore Year

Course No.	Course Title	F	W	Sp
WR121	Eng Comp	3		
SP111	Speech		3	
PE180-90	Physical Education	1	1	1
9.318	Multi Media First Aid	1		
		5	4	1

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
5.711-3	Nursing I, II, III	6	7	10
5.726	Nursing C.S.		1	
BI221-3	Hum Biology	3	3	4
FN225	Nutrition	4		
5.732	Pharmacology I	2		
PS201-2	Psychology		3	3
4.215	Microbiology		2	
		15	16	17

Sophomore Year

Course No.	Course Title	F	W	Sp
5.721-3	Nursing IV, V, VI	10	10	10
5.717	Nursing C.S.		1	
	Humanites Elective	3		
SO204	Sociology			3
		13	11	13

5.711 NURSING I
☐ 9 class hrs lab/wk ☐ 6 cr. ☐ F

5.712 NURSING II
☐ 12 class hrs lab wk ☐ 7 cr. ☐ W

5.713 NURSING III
☐ 20 class hrs lab/wk ☐ 10 cr. ☐ Sp
Introduction to the role of the nurse in meeting the needs common to patients of all ages. Basic 'fundamentals' plus normal prenatal care, growth and development, developmental tasks for all ages and beginning communication. Beginning physical and mental illness for all ages including labor and delivery and post-partum care, with emphasis on practice in problem solving. Independent learning tasks, demonstrations, audio-visual aids, discussion and lecture are used in the classroom. Supervised campus lab may be required. Supervised practice in the clinical area is provided with pre- and post-conferences to evaluate planned patient care. Individually scheduled tutorial sessions are offered in addition to published schedules. Must be taken in sequence.

5.721 NURSING IV
☐ 19 class hrs lab/wk ☐ 10 cr. ☐ F

5.722 NURSING V
☐ 20 class hrs lab/wk ☐ 10 cr. ☐ W

5.723 NURSING VI
☐ 20 class hrs lab/wk ☐ 10 cr. ☐ Sp
Continued study of major areas of illness from pediatrics to geriatrics, including complications of pregnancy. Consideration to scope, prevention, diagnosis, treatment and psycho-social aspects of illness with an emphasis on decision making. Deviations from normal growth and development which predispose to illness. Rehabilitative aspects of nursing care with consideration of available community agencies. Study of basic concepts of personality and behavior with attention given to psychological processes ranging from 'normal' to extreme deviation in mental health. Additional topics include legal aspects and trends in nursing, community health, leadership skills and an overview of specialty nursing areas. Prerequisite: Full sophomore standing in Nursing. Must be taken in sequence.

5.726-7 NURSING IN CONTEMPORARY SOCIETY
☐ 1 class hr/wk ☐ 1 cr. ☐ On Demand
The nursing role defined, based on the history of the profession, current theories pertaining to the nature of health and disease and selected responsibilities of the role of the nurse in society and as practitioner. The reciprocal influences between society and nursing are identified as they relate to biological, sociological, psychological and therapeutic setting. Must be taken in sequence. Prerequisite: Permission of instructor.

9.424 INDEPENDENT NURSING STUDIES
☐ 1-5 hrs/wk ☐ 1-5 cr. ☐ On Demand
Provides supervised individual study for matriculating and non-matriculating pre-R.N. or post-R.N. nursing students. Content geared to the needs of the individual student. One-to-one conferences with instructors, field trips, research assignments, and audio-visuals are utilized for learning.

9.425 RE-ENTRY INTO NURSING
☐ 20 class hrs/wk ☐ 10-12 cr. ☐ On Demand
For registered nurses who have not been active in the practice of nursing for the past five years. If not currently licensed in the State of Oregon, the student is required to make application for licensure prior to course enrollment. This course meets the State Board of Nursing requirements of a re-entry into nursing; also those Registered Nurses who would like to take the course to meet their own needs for increased knowledge. The variable credit option allows the student to increase the number of clinical practice hours, as well as participate in specific fields of interest in nursing practice.

9.426 CORONARY CARE NURSING
☐ 10 class hrs/wk ☐ 10 cr. ☐ On Demand
Information needed for the registered nurse in the coronary care unit. Emphasis on recognition and treatment of cardiac arrhythmias and emergency procedures such as cardio-pulmonary resuscitation and electrical resuscitation. Review of normal and abnormal anatomy and physiology of the heart, diagnostic methods, and treatment of cardio-vascular disease will be covered. Principles of cardiac monitoring and electrocardiography will be applied. Individual liability insurance is required.

9.427-9 CONTINUING EDUCATION FOR NURSES I, II, III
☐ 10 class/term ☐ Variable cr. ☐ On Demand
Continuing education programs open to persons who administer nursing care in institutions or in the community. Formal learning experiences to assist registered nurses and licensed practical nurses update and increase their knowledge and skills in patient care.

9.410 MEDICATIONS AND NURSING IMPLICATIONS
☐ 3 class hr/wk ☐ 3 cr. ☐ On Demand
This course is designed for R.N.'s and L.P.N.'s and includes an overview of pharmacology with emphasis on commonly administered drugs and some aspects of drug abuse and methods of intervention. Prerequisite: R.N.-L.P.N. or nursing student. It will be assumed that the student is already familiar with basic anatomy and physiology.

ALLIED HEALTH RELATED COURSES

The folloiwng courses are provided by the Health Occupations Division as specialized courses to supplement programs in other divisions.

5.625 CLINICAL OFFICE PROCEDURES I
☐ 4 class hrs/wk ☐ 4 cr. ☐ On Demand
A survey of the requirements and qualities for success as a medical assistant. Medical assisting techniques, methods, and procedures including assisting the physican with examination, medical and surgical aseptic procedures, obtaining vital signs, care of equipment and supplies as well as drugs and solutions. Prerequisite: Medical Terminology I.

5.626 CLINICAL OFFICE PROCEDURES II
☐ 4 class hrs/wk ☐ 4 cr. ☐ On Demand
Theory and practice of basic diagnostic and treatment procedures; collection, preparation, and preservation of specimens for diagnostic studies. Prerequisite: Clinical Office Procedures I.

5.627 CLINICAL OFFICE PROCEDURES III
☐ 4 class hrs/wk ☐ 4 cr. ☐ On Demand
Continuation of Clinical Office Procedures II, with further development of skills necessary to assist the physician. Prerequisite: Clinical Office Procedures II.

5.629 INTRODUCTION TO MEDICAL TERMINOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
This is a one-term course introduction to basic root words, prefixes and suffixes which are fundamental to the understanding of medical terminology.

5.630 MEDICAL TERMINOLOGY I
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Introduction to basic root words, prefixes and suffixes. Includes the terminology of anatomy and physiology fundamental to the understanding of the physician's diagnosis and treatment.

5.631 PHARMACEUTICAL TERMINOLOGY
☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand
Terminology of pharmaceutical (drugs) supplies as it relates to the physician's office, clinic, or hospital.

5.633 MEDICAL TERMINOLOGY II
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Continuation of Medical Terminology I with special emphasis on terminology as it relates to body systems. Prerequisite: Medical Terminology I.

5.634 MEDICAL TERMINOLOGY III
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Continuation of Medical Terminology II with special emphasis on specific pathology and medical practice areas. Prerequisite: Medical Terminology II.

9.405 MEDICAL ASSISTANT I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Helps doctor's office personnel understand the health problems of the patient, the physician's diagnosis and treatment, patient needs as they relate to the doctor's office.

9.406 MEDICAL ASSISTANT II
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Oral and written communications, bookkeeping, insurance, credit, collection, medical records, and administrative and secretarial procedures for doctor's office personnel.

9.407 MEDICAL ASSISTANT III
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Includes preparation of patient and specimen for laboratory tests, basic knowledge of the most frequent laboratory tests, procedures such as blood pressure, temperature, pulse rate, sterilization of equipment and knowledge of the care and use of electrical, optical and examining equipment.

9.416 FOOD SERVICE SUPERVISORS CLASS
☐ 90 hrs ☐ 6 cr. ☐ On Demand
This class is an approved and accredited class by the American Dietary Association for Food Service Supervisors and Dietary Technicians. This will be a ninety hour course designed to give Food Service Supervisory personnel in health care facilities information at their level, about nutrition, therapeutic diets, menu planning (both regular and special diets), food preparation, purchasing, sanitation, safety, and supervisory techniques.

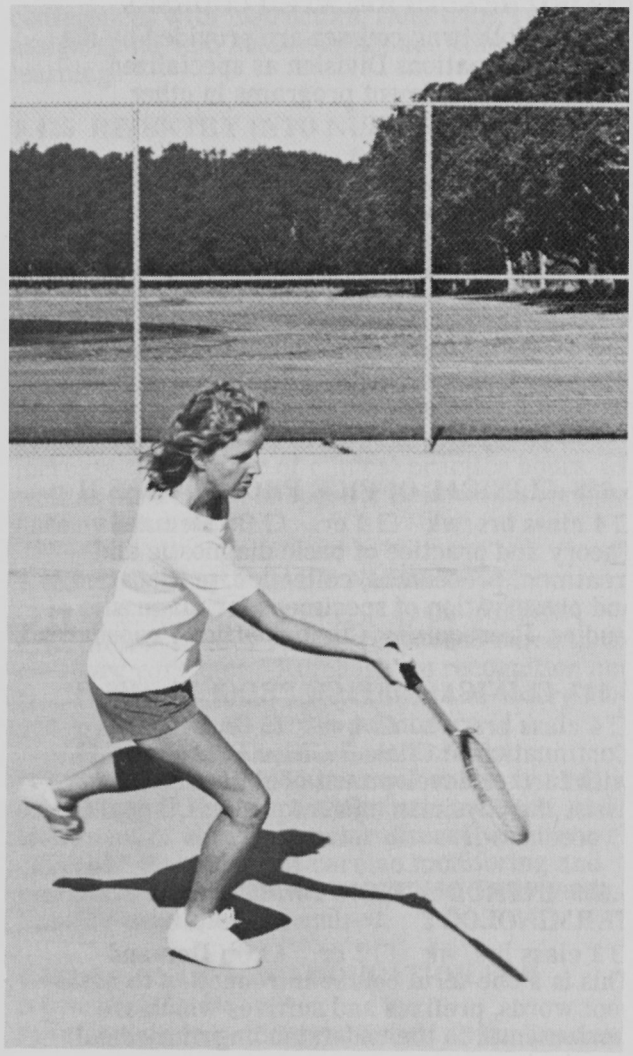
9.417 FOOD SERVICE SUPERVISORS LAB
☐ 150 hrs ☐ 5 cr. ☐ On Demand
This class is an approved and accredited class by the American Dietary Association for Food Service Supervisors and Dietary Technicians. This will be a laboratory course designed to give Food Service supervisory personnel in health care facilities information at their level, about nutrition, therapeutic diets, menu planning (both regular and special diets), food preparation, purchasing, sanitation, safety, and supervisory techniques.

5.735 INDEPENDENT STUDIES FOR HEALTH OCCUPATIONS
☐ 1-3 hrs/wk ☐ 1-3 credits ☐ On Demand
Provides supervised individual study for Health Occupations students. Content geared to the needs of the individual student. One-to-one conferences with instructors, field trips, research assignments, and audio-visuals are utilized for learning. Number of credits will be determined by instructor according to project or type of study needed by student. Instructor permission required.

9.313 - EMERGENCY MEDICAL TECHNICIAN I
☐ 81 hrs ☐ 6 cr. ☐ F/W/Sp
A basic training program includes classroom theory, practice exercises and clinical experience in problems encountered by ambulance personnel that involve: a) the overall role and responsibilities of the emergency medical technician in emergency care and operational aspects of the job; b) developing skill in life-saving techniques and all emergency treatment procedures short of those rendered by physicians or by paramedical personnel under the direct supervision of a physician; and c) developing skill in the use of and care for all equipment required to accomplish his job. Offered evenings. Agency sponsored personnel given priority for clinical experience.

9.314 - EMERGENCY MEDICAL TECHNICIAN II
☐ 20 hrs ☐ 2 cr. ☐ W
Upgrades the skills of all basically trained EMT's. Presents a standardized I.V. therapy course for the entire state. It is the second step in a career development pattern. Advanced training in certain aspects of Intravenous Therapy. Offered evenings. Prerequisite: EMT- I.

9.315 - EMERGENCY MEDICAL TECHNICIAN III
☐ 156 hrs ☐ 10 cr. ☐ Sp
Trains emergency medical technicians ambulance who have completed the basic 81 hr. EMT-I program satisfactorily. Provides additional skills required to function effectively in certain cardiac emergencies The success of this type of program depends upon close medical supervision. Offered evenings. Prerequisite: EMT-I & EMT-II.



Faculty:
Dr. Jack Arthur, Coordinator
Gerald Morgan

Dental Assistant

The Dental Assistant curriculum is designed to prepare students for receptionist-office management or chairside assistant positions and for performing inter-office laboratory procedures.

Students are trained in fundamental techniques and use of equipment and they become familiar with principles, procedures, problem solving and professional standards of the technologies. The course is accredited by the Commission on Accreditation of the Dental Association Council of Dental Education and graduating students are eligible to take the certification examination administered by the Certifying Board of the American Dental Assistants Association. The graduates are also eligible for certification in expanded duties by the Oregon State Board of Dental Examiners.

Oregon law requires dental assistants who expose dental x-rays to hold a Certificate of Radiological Proficiency. The radiology sequence prepares students for examination by the Oregon State Board of Dental Examiners.

The courses required of students in the Dental Assistant Program are outlined below. Training includes supervised clinical experience, with emphasis on high professional standards for patient treatment, work habits and continuing education.

The program accepts two classes per year, summer and winter term. Class size is limited. See special admission procedures for Dental Assistant Program.

First Quarter

Course No.	Course Title	Credits
1.101	Basic English	3
2.502	Typing *	3
4.220	Integrated Basic Science I	4
5.461	Dental Radiology I	2
5.445	Intro to Dental Assisting	3
		15

Second Quarter

Course No.	Course Title	Credits
4.221	Integrated Basic Science II	3
5.484	Dental Materials Lab I	2
1.606	Intro to Psychology	3
5.462	Dental Radiology II	2
5.494	Clinical Practice I	4
		14

Third Quarter

Course No.	Course Title	Credits
5.453	Dental Pathology	2
5.505	Dental Specialties	1
5.485	Dental Materials Lab II	2
5.491	Dental Office Records	3
5.495	Clinical Practice II	4
5.463	Dental Radiology III	1
		13

Fourth Quarter

Course No.	Course Title	Credits
5.510	Office Practicum	8
5.515	Office Practicum Seminar	3
5.454	Patient Education	2
1.200	Supervised Field Experience	3-16
9.137	First Aid	1
		17-30

5.455 INTRO. TO DENTAL ASSISTING
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
Introduction to the practice of dentistry, dental terminology and the various aspects concerned with the profession and the Dental Assistant.

5.453 DENTAL PATHOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
A study of common pathological diseases, injured and normal tissue, developmental anomalies. Prerequisite: Integrated Basic Science I, II

5.454 PATIENT EDUCATION
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Basic principles of patient education including oral hygiene, preventive dentistry and the techniques involved in communicating with patients.

5.461 DENTAL RADIOLOGY I
☐ 2 class hrs/wk ☐ 2 cr. ☐ W/Sp
Introduction to the history and principles of x-ray terminology, the hazards of radiation and safety factors. Introduction to the techniques for intra-oral periapical and bitewing film.

5.462 DENTAL RADIOLOGY II
☐ 3 class hrs/wk ☐ 2 cr. ☐ F/Sp
Techniques of radiology, positioning the patient and angulation. X-ray film, chemistry of development and fixation and complete darkroom procedures. Actual working procedures introduced. Prerequisite: Dental Radiology I.

5.463 DENTAL RADIOLOGY III
☐ 3 class hrs/wk ☐ 2 cr. ☐ W/Sp
Working procedure dealing with the difficult patient. A study of pathological conditions. Review in entirety in preparation for Radiology Certification by the Oregon State Board of Dental Examiners. Prerequisite: Dental Radiology II

5.484 DENTAL MATERIALS I
☐ **4 class hrs/wk** ☐ **3 cr.** ☐ **F/Sp**
An introduction to dental restorative material properties, uses manipulation, composition, structure, preparation equipment, advantages, disadvantages, types, and brand names. Prerequisite: Admittance to Dental Assistant Program.

5.485 DENTAL MATERIALS/LAB II
☐ **4 class hrs/wk** ☐ **3 cr.** ☐ **W/Sp**
Continuation of dental materials and dental lab proceudres and experiences. Prerequisite: Dental Materials I.

5.491 DENTAL OFFICE RECORDS
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **W/Sp**
Dental office records, patient reception, appointment scheduling, record maintenance, financial arrangements and coordination and supply control.

5.494 CLINICAL PRACTICE I
☐ **9 class hrs/wk** ☐ **5 cr.** ☐ **F/Sp**
Designed to provide opportunity for students to train in the dental office. The student also receives, through classroom lecture and lab, the information and procedures which he/she may experience and apply in the dental offices. Content presented in the classroom includes patient slating and dismissal, charting, anesthesia, instrumentation, and restorative procedures. Prerequisite: Introduction to Dental Assisting.

5.495 CLINIAL PRACTICE II
☐ **9 class hrs/wk** ☐ **5 cr.** ☐ **W/Sp**
Continuation of Clinical Practice I in general chairside assisting. Practical applications of dental procedures. Prerequisite: Clinical Practice I. Acquaints the student with various specialties.

5.510 OFFICE PRACTICUM
☐ **24 clinical hrs/wk** ☐ **8 cr.** ☐ **F/Sp**
Students are assigned to clinical practices for practical application of dental assistant procedures. Properly supervised training. Prerequisite: Attaining second, third and fourth term status during each preceding term. Requests for exceptions will be considered on an individual basis.

5.515 OFFICE PRACTICUM SEMINAR
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **F/Sp**
Discussion of office situations which arise after the student has entered externship in the dental office. A general review of the Dental Assistants Program. Expanded duties preparation.

Dental Hygiene

Linn-Benton Community College is planning to offer a two-year Associate of Science Degree program in Dental Hygiene. Successful completion of this program prepares the student for admission to the national and state board dental hygiene examinations and licensure to practice under the supervision of a dentist - in dental offices, public health and other fields of dental hygiene.

The Dental Hygiene Program will consist of basic sciences, specific dental sciences, dental health sciences and liberal arts.

Faculty:
Anne Mills, Coordinator

Nursing Assistant

The Nursing Assistant Program is a twelve week course which prepares men and women of all ages for positions as nurse aides, orderlies, or home health aides. Positions are available in hospitals, nursing homes, and home health services. Graduates of this program often use this program as a starting point toward related health careers. Classroom and on-the-job experience provides the student with the background needed to care for the moderately ill or convalescent patient under the supervision of a professional nurse.

5.406-7 NURSING ASSISTANT LAB
☐ **360 class hrs/term** ☐ **12 cr.** ☐ **F/W/Sp**
The combined lecture and lab includes instruction in the following areas: physical environment, social environment; daily living activities; therapeutic health measures; nursing care planning; and job application procedures. Clinical experience is provided concurrently in a local hospital. The last two weeks are spent in the home health agency setting.

Faculty:
David Bakley
Arlene Crosman
David Dangler
Jean Irvin
Verlund Kimpton

Physical Education and Health

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

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

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

0.582 COMPULSORY GYMNASTICS
☐ 3 class hrs/wk ☐ non-credit ☐ On Demand
Instruction of the skills and movements leading up to and including Class I and II compulsory routines of USGF competition.

PE 185 CREATIVE DANCE
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Dance as a creative art actively representing total personality growth. The course includes training and practice in movement as expression.

PE 185 BEGINNING BALLET
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Introduction to classical ballet techniques; positions of the feet, the plie various body positions, poses, and directions. Work at the barre, where proper warm-up methods are taught and emphasized.

PE 185 BEGINNING BALLROOM DANCE
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Introduction to and mastery of the basic steps and patterns of ballroom
dance, including swing, foxtrot, waltz, cha-cha, samba, rhumba and tango.

PE 185 INTERMEDIATE BALLET
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Extension of the beginning course, introduces the student to more sophisticated and difficult movements. Beginning steps are practiced and perfected at each class, new steps being added as the students progress. Attention given to music for ballet and to elementary choreography.

PE 180 TECHNIQUES IN MOVEMENT
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Dance as a creative art actively representing total personality growth. The course includes training and practice in movement as expression. The exploration of movement as a form of creative expression. Training and practice in both individual and group experiences will be included.

PE 180 GYMNASTICS
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Gymnastics: Instruction and practice in tumbling, unevens, balance beam, floor exercise, vaulting.

PE 190 GYMNASTICS
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Instruction and practice in tumbling, floor exercise, vaulting, parallel bars, side horse, high bar, and rings.

PE 180 BODY CONDITIONING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Instruction and practice in exercises that condition the body to develop a level of strength, flexibility and endurance which enables one to maintain an erect alignment, complete one's work, participate in active recreation and possess a reserve supply of energy.

PE 190 BODY CONDITIONING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Elevates the level of fitness through general exercise and weight lifting.

PE 180 TENNIS
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/Sp
Instruction and practice in rules, etiquette, grips, stances, forehand and backhand drive, service, receiving, playing position and class play.

PE 185 TENNIS
☐ 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, game strategy (singles and doubles).

PE 190 TENNIS
☐ 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, game strategy (singles and doubles).

PE 185 VOLLEYBALL
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
A coeducational course to teach basic volleyball skills to the beginner. Major emphasis on increasing player abilities within a team situation.

PE 190 VOLLEYBALL
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Basic volleyball skills for the beginner. Major emphasis on increasing player abilities within a team situation.

PE 185 BEGINNING BOWLING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
A coeducational bowling class which stresses fundamentals. Provides basic foundation from which students may progress to advanced bowling skills.

PE 185 INTERMEDIATE BOWLING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
A coeducational class to increase skills and techniques of bowling. Rules and courtesies of the game as well as social recreational value to the student stressed.

PE 185 ADVANCED BOWLING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
An advanced coeducational class for increasing skills and techniques of bowling. Rules and courtesies of the game as well as social recreational value to the student stressed.

PE 185 BEGINNING BADMINTON
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstration of singles and doubles play, plus teamwork involved.

PE 185 INTERMEDIATE BADMINTON
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
A more advanced class of instruction and practice in stances, grips, service, strokes, scoring, rules and strategy. Demonstration of singles and doubles play, plus teamwork involved.

PE 185 BEGINNING GOLF
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Introduction to the mental and physical needs involved in golf participation. This includes grip, stance, swing techniques, rules, strategy, and etiquette.

PE 185 INTERMEDIATE GOLF
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Designed to improve and correct basic swing errors. A more detailed presentation of golf techniques and strategy.

PE 185 ADVANCED GOLF
☐ 3 class hrs/wk ☐ 1 cr. ☐ Sp
Intercollegiate as well as recreational golf with the emphasis on development of skills during competitive play.

PE 185 JOGGING
☐ 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 SWIMMING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Instruction and practice in individual basic water skills and knowledge to make one safe while in, on, or about the water.

PE 185 INTERMEDIATE SWIMMING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Instruction and practice in individual water skills and knowledge to make one safe while in, on, or about the water; an opportunity to learn elements of good swimming.

PE 185 ADVANCED SWIMMING
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Instruction and practice in water skills and knowledge to increase endurance and versatility in the water by providing opportunity to coordinate the parts of the strokes into the whole stroke.

PE 291 LIFESAVING
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Basic skills of lifesaving in aquatic programs; leads to American Red Cross Certification in senior lifesaving. Open to students who pass qualifying tests in swimming.

PE 292 WATER SAFETY INSTRUCTION (WSI)
☐ 3 class hrs/wk ☐ 2 cr. ☐ W/Sp
Analysis methods of instruction, and evaluation at all age levels; leads to American Red Cross certification in water-safety instruction. Open to men and women students who pass qualifying tests in swimming and lifesaving. Includes basic life support.

PE 185 BEGINNING BASEBALL
☐ 3 class hrs/wk ☐ 1 cr. ☐ F
A course which allows a student to learn or improve basic baseball skills and knowledge.

PE 190 ADVANCED BASEBALL
☐ 3 class hrs/wk ☐ 1 cr. ☐ Sp
A course designed to prepare students for intercollegiate competition in baseball.

PE 185 BASEBALL CONDITIONING
☐ 3 class hrs/wk ☐ 1 cr. ☐ W
Physical conditioning with emphasis on developing strength and agility for better efficiency in baseball skills.

PE 185 BASEBALL SKILLS
☐ 3 class hrs/wk ☐ 1 cr. ☐ W
Offers students the opportunity to learn and improve individual baseball skills.

PE 180 SOFTBALL
☐ 3 class hrs/wk ☐ 1 cr. ☐ Sp
Provides experience and learning in fundamental skills of softball as well as providing game experience. Emphasis on slow pitch rather than fast pitch style of play.

PE 190 SOFTBALL
☐ 3 class hrs/wk ☐ 1 cr. ☐ Sp
Provides experience and learning in fundamental skills of softball as well as providing game experience. Emphasis on slow pitch rather than a fast pitch style of play.

PE 180 BEGINNING BASKETBALL
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W
Basic basketball skills and concepts for the beginner. Begins with fundamentals and works toward a full court situation.

PE 185 KARATE
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
An introduction to the practices and principles of Tae Kwan Do (Korean Karate) as practiced by the World Tae Kwan Do Association.

PE 185 JUDO
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Contact sport with great emphasis on the fundamentals of Kodokan judo skills. Concentration on defensive and offensive workouts. The objective and philosophy of Kodokan judo is the cultivation of one's mind and body to the fullest.

PE 131 INTRODUCTION TO HEALTH AND PHYSICAL EDUCATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Professional orientation; basic philosophy and objectives; professional opportunities and qualifications. Designed for students to learn about the physical education and health profession as a career.

PE 194/195/294/295 PROFESSIONAL ACTIVITIES
☐ 6 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
Two credit courses meeting six hours a week, providing technical information for the student who desires to teach various physical education activities.

PE 199 SPORTS OFFICIATING (WOMEN'S GYMNASTICS JUDGING)
☐ 3 class hrs/wk ☐ 1 cr. ☐ F/Sp
For individuals interested in women's gymnastics judging. Includes both optional and compulsory FIG rules for women's gymnastics.

HE 250 PERSONAL HEALTH
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Health attitudes, outlooks and feelings as these affect the individual, community, nation and world. Emphasis on improving the 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 oneself and others in the event of an accident or illness.

9.317 FIRST AID MULTI-MEDIA
☐ 10 class hrs. ☐ 1 cr. ☐ On Demand
The theory and practice in immediate and temporary care given in case of accident or sudden illness is taught according to American Red Cross requirements through the Red Cross Multi-Media method. Completion of the course earns the student the Standard First Aid Certificate of the American Red Cross.

9.318 STANDARD FIRST AID
☐ 1 class hr/wk ☐ 1 cr. ☐ On Demand
Theory and practice in immediate and temporary care given in case of accident or sudden illness. Complies with American Red Cross requirements.

4.108 INDUSTRIAL SAFETY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Accident prevention and first aid in industry through the development of safety practices relating to personnel, design, equipment and maintenance. The requirements for first aid certification by the American Red Cross will be met.

Humanities and Social Services Division

Director: Kenneth Cheney

The Humanities and Social Services Division embraces a wide variety of academic subjects typically classified as the liberal arts. These include both the humanities (art, English, music, drama, speech, philosophy, religion) and the social sciences (anthropology, economics, geography, history, political science, psychology, and sociology.) In addition, the division offers specific occupational preparation in criminal justice and graphic communications.

The objectives of the Humanities and Social Services Division are to offer complete lower division preparation in the liberal arts for students planning entrance to a four-year college; to provide specific occupational and vocational skills for non-transfer students; and to stimulate in all students the development of human thought and imagination, and to satisfy the desire for creative enrichment, aesthetic development, and social sensitivity.

Linn-Benton Community College encourages students to make career choices based on interests, needs, and abilities without regard to the traditional roles of men, women or minorities.

The Humanities and Social Services Division offers the following types of courses and programs to meet a variety of student needs.

TWO-YEAR PROGRAMS

A two-year program leading to an Associate of Arts Degree which is fully transferable to a four-year institution may be earned in the following areas: Fine Art, Criminal Justice, Elementary Education, English, Music, Philosophy and Religion, Secondary Education, Social Science, and Speech and Drama.

A two-year program leading to an Associate of Science Degree may be earned in the following areas: Graphic Communications and Law Enforcement.

Faculty:
W. J. Brick
Judith Rogers
Clinton Tobey
Sandra Zimmer

Art

The Art curriculum is designed to promote the students' flexibility in communicating expressive ideas through art and to increase their ability to recognize historic influences in their own and other's works. The department offers wide variety of studio courses which are fully transferable, but which also have significant value as creative, avocational activities for the non-transfer student.

1.140 STUDY SKILLS—ART
☐ 2-6 lab hrs/wk ☐ 1-3 cr. ☐ F/W/Sp
Individualized instruction to develop specific skills in art programs. The instruction will be supplemental to the regular course offerings and will not substitute for that instruction. Diagnosis of deficiencies and interests of students determines level of instruction. Prerequisite: Concurrent enrollment in specific art classes.

AR 101 WEAVING I
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to techniques of construction with fiber through weaving, macrame, stitchery on a variety of loom types. Emphasis on design considerations. $2.00 take home material charge.

AR 102 WEAVING II
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Further study of techniques of fiber construction with studio practice in weaving on multiple harness table and floor looms. Study of fibers, pattern, design considerations. Prerequisite: AR 101.

AR 195 DESIGN I
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
An introductory study, using values of black and white, of concepts relating to shape; its structure, unity and proportion.

AR 196 DESIGN II
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
An introductory study of concepts relating to color and its interaction with shape; its properties, proportions and harmonies. Prerequisite: AR 195.

AR 197 DESIGN III
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
Continuation of two-dimensional design principles into three-dimensional considerations; development of sensitivity to structure and form. Prerequisite: AR 196.

AR 199 GALLERY PROCEDURES AND EXHIBITION STANDARDS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Designed to give students working knowledge of professional exhibition procedures and standards. Class activity will center around the operation of the department's gallery and visits to other professional exhibition centers, i.e., galleries, museums, art centers, etc. Prerequisite: Instructor permission.

AR 204, 205, 206 INTRODUCTION TO ART HISTORY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Three quarter sequence of history, aesthetics, and significance of the visual arts as they reveal man's concepts of his place in time and space; includes related contemporary thought in the fields of anthropology, religion, psychology and media studies. (204) Art Origins; (205) Christian era to Industrialization; (206) Modern.

AR 233 BATIK
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to processes of textile design through batik, dye painting, block printing, and screen printing on fabric. Studio experience with design guidance. $5 take-home materials charge.

AR 235 JEWELRY AND METALSMITHING I
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
General introduction to use of tools involved in fabricating jewelry; guidance in design; demonstration of major processes involved in design and creation of jewelry and other metal fabrication. In-depth study of lost wax casting. $5.00 take home material charge.

AR 236 JEWELRY AND METALSMITHING II
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Continued work in the design and creation of jewelry and other metal fabrication. Prerequisite: AR 235. $5.00 take home material charge.

AR 255 CERAMICS I
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to clay as an expressive and utilitarian material. Composition of clay bodies and basic forming processes; slab, pinch, coil, press mold, and potter's wheel. Emphasis on form and surface treatment. Some firing and glazing included. $3.00 take home material charge.

AR 256 CERAMICS II
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Further work in clay for the somewhat-experienced student. Advanced and specialty construction; glazing and firing techniques. Prerequisite: AR 255, or consent of instructor. $3.00 take home material charge.

AR 281 FIGURE DRAWING
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
Introduction to drawing the clothed and unclothed model using a variety of materials and techniques. Prerequisite: AR 291 or consent of instructor.

AR 282 INTERMEDIATE DRAWING
☐ 6 class hrs/wk ☐ 3 cr. ☐ W
Advanced problems in drawing with greater emphasis on individual approaches in a variety of techniques and materials. Prerequisite: AR 291 or consent of instructor.

AR 290 PAINTING I
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to the conventions of visual representation of a two-dimensional surface. Space division, color, and surface treatment with acrylic and oil paints. Designed for the inexperienced painter. It is preferred that the student is taking or has taken a drawing or design class.

AR 291 DRAWING FUNDAMENTALS
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to drawing still life and landscape using a variety of materials and techniques; training in observation and selection of significant elements.

AR 292 WATER COLOR PAINTING
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/Sp
Exploration of watercolor techniques with subjects taken from life, landscape, and imagination. It is preferred that the student has taken or is taking a drawing or design class.

AR 293 ELEMENTARY SCULPTURE
☐ 6 class hrs/wk ☐ 3 cr. ☐ F
Provides an understanding of sculptural techniques and theories explored through the use of clay, plaster, wire, wood, plastics, and casting materials and their relation to forms compatible with those materials and techniques.

AR 294 THE SCULPTURAL FIGURE
☐ 6 class hrs/wk ☐ 3 cr. ☐ W
Concentrated study in clay of the surface and structural anatomy of the human figure. Aiming at a greater understanding and use of the figure in three-dimensional art.

AR 295 WELDED SCULPTURE
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
Concentrated work in the use of ferrous and non-ferrous metals in creation of sculpture. Instruction in the use of oxy-acetylene and arc welders to increase technical skills.

AR 296 PAINTING II
☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Further work in composition, surface, and color for the student who has had some painting experience. Individual vision is encouraged in a variety of expressions and techniques. Prerequisite: AR 290 or consent of instructor.

Faculty:
Richard Hankey, Department Chairperson

Criminal Justice

CRIMINAL JUSTICE ADMINISTRATION

The Criminal Justice Administration curriculum is designed to provide in-service personnel with the opportunity to increase their professional competence and their value to their employing agencies, and to make available educational experiences for students who desire careers in the criminal justice system. Two-year programs leading to either an Associate of Science or an Associate of Arts degree are available.

Supervised Field Experience

Students may, upon the recommendation of the program coordinator, receive transfer or non-transfer college credit by participating in Supervised Field Experience (SFE). Further information may be found in the Cooperative Work Experience section of this catalog.

1.200/WE 201 SUPERVISED FIELD EXPERIENCE
☐ 3-48 class hrs/wk ☐ 1-16 cr. ☐ F/W/Sp
Supervised Field Experience gives the student actual work experience which closely parallels the field of study. Further information available in the Cooperative Work Experience section of this catalog.

1.201/WE 202 FIELD EXPERIENCE SEMINAR
☐ 1 class hr/wk ☐ 1 cr. ☐ S/F/W/Sp
Refer to the Cooperative Work Experience section of this catalog.

ASSOCIATE OF SCIENCE DEGREE PROGRAM

A two-track curriculum exists for students seeking the Associate of Science degree. Students may achieve an emphasis in either Law Enforcement (including police and deputy sheriff), or Corrections (including probation, parole and correctional personnel). See requirements listed below.

By special agreement between LBCC and Oregon College of Education, Law Enforcement and Corrections students may transfer as elective, lower-division credit up to twenty-one hours of the occupational courses (5. numbers) listed in the following curriculum toward graduation requirements at OCE in the fields of social science, corrections, and law enforcement.

ASSOCIATE OF ARTS PROGRAM

Increasingly, criminal justice agencies are requiring a four-year degree at the entry level. Although many four-year colleges will allow some transfer of occupational courses, students may more conveniently transfer an Associate of Arts degree throughout the state educational system. A suggested curriculum guide for transfer students is located on page 26.

LAW ENFORCEMENT
GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses		4	
	General Education Electives			6
		3	4	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
CJ100	Survey of the Criminal Justice System	3		
CJ110	Intro to Law Enforcement	3		
CJ120	Intro to the Judicial Process		3	
CJ130	Intro to Corrections			3
CJ220	Intro to Substantive Law		3	
CJ222	Procedural Law			3
	Electives or SFE	6	4	12
		12	10	18

Sophomore Year

Course No.	Course Title	F	W	Sp
CJ200	Intro to Community Relations	3		
CJ201	Juvenile Delinquency			3
CJ210	Intro to Criminal Investigation		3	
CJ223	Rules of Evidence	3		
	Electives or SFE	3	8	7
		9	11	10

CORRECTIONS
GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses		4	
	General Education Electives			6
		3	4	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
CJ100	Survey of the Criminal Justice System	3		
CJ120	Intro to the Judicial Process		3	
CJ130	Intro to Corrections			3
CJ220	Intro to Substantive Law		3	
CJ224	Civil Law	3		
	Electives or SFE	8	6	12
		14	12	15

Sophomore Year

Course No.	Course Title	F	W	Sp
CJ101	Intro to Criminology	3		
CJ200	Intro to Community Relations	3		
CJ201	Juvenile Delinquency			3
CJ223	Rules of Evidence	3		
5.229	Intro to Interviewing		3	
5.233	Institutions and Agencies			3
	Electives or SFE	3	6	3
		12	9	9

CJ 100 SURVEY OF THE CRIMINAL JUSTICE SYSTEM.

☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Nature of crime and criminal responsibility; the criminal justice process; professionals in the criminal justice system; career orientation.

CJ 101 INTRODUCTION TO CRIMINOLOGY

☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Introduction to major types of criminal behavior, role careers of offenders, factors which contribute to the production of criminality or delinquency: methods used in dealing with violators in the justice system; the changing roles of police, courts, and after-care process of sentence, probation, prisons, and parole: changes of the law in crime control and treatment processes. Prerequisite: CJ 111 or consent of instructor.

CJ 110 INTRODUCTION TO LAW ENFORCEMENT

☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Exploration of theories, philosophies, and concepts related to the role expectations of line enforcement officers. Emphasis upon patrol, traffic, and public service responsibilities and their relationship to the administration of justice system. Prerequisite: CJ 100 or consent of instructor.

CJ 120 INTRODUCTION TO THE JUDICIAL PROCESS

☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Survey of process of justice from arrest to return of offender to society; jurisdiction of city, county, state, and federal police agencies, constitutional rights of individuals in America. Prerequisite: CJ 100 or consent of instructor.

CJ 130 INTRODUCTION TO CORRECTIONS

☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Examination of the total correctional process from law enforcement through administration of justice, probation, prisons and correctional institutions, and parole. History and philosophy, career oriented.

CJ 200 INTRODUCTION TO COMMUNITY RELATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
An in-depth exploration of the roles of administration of justice practitioners and their agencies. Inter-relationships and role expectations among the various agencies and the public. Principle emphasis upon the professional image of the system of justice administration and the development of positive relationships between members of the system and the public. Prerequisite: CJ 100 or consent of instructor.

CJ 201 JUVENILE DELINQUENCY
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Definition, development and patterns of delinquent behavior; institutional controls and treatment; legal methods of dealing with delinquency. Prerequisite: CJ 100 or consent of instructor.

CJ 210 INTRODUCTION TO CRIMINAL INVESTIGATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Fundamentals of criminal investigation, theory and history; crime scene to courtroom with emphasis on techniques appropriate to specific crimes. Prerequisite: CJ 100 or consent of instructor.

CJ 220 INTRODUCTION TO SUBSTANTIVE LAW
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Historical development, philosophy of law and constitutional provision; definitions, classifications of crimes, and their application to the system of administration of justice; legal research, study of case law, methodology, and concepts of law as a social force. Prerequisite: CJ 100 or consent of instructor.

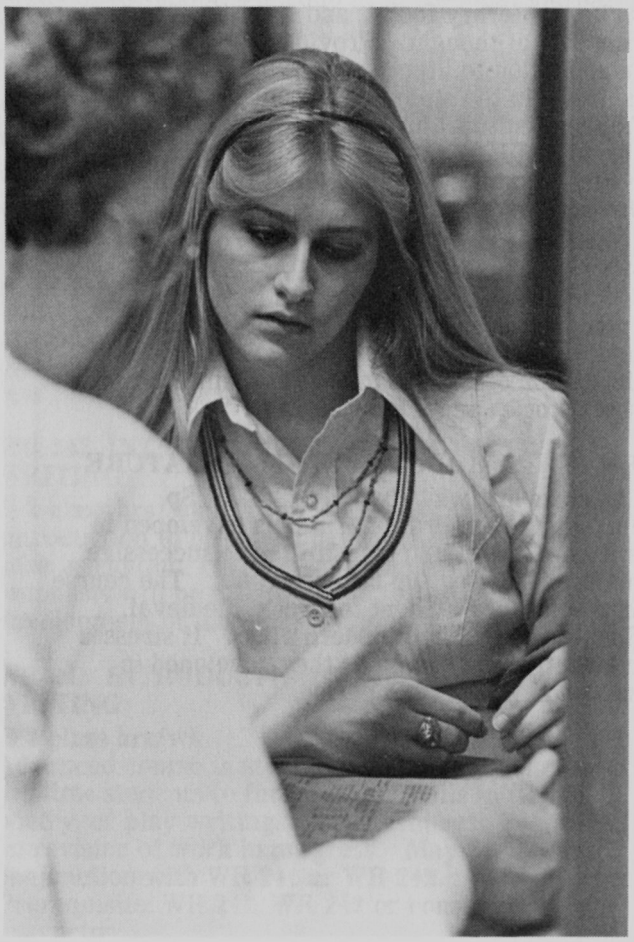
CJ 222 PROCEDURAL LAW
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Developmental history of English common law and U.S. case law, constitutional and statutory provisions relating to arrest, search and seizure. Rights and responsibilities of citizens and criminal justice personnel and agencies. Prerequisite: CJ 100 or consent of instructor.

CJ 223 RULES OF EVIDENCE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search, and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. Prerequisite: CJ 100 or consent of instructor.

5.229 INTRODUCTION TO INTERVIEWING
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Introduction to behavior modification approaches through interviewing and counseling. Counseling and interviewing techniques available to entry level practitioners in corrections. Advanced methods utilized by professional counselors. Traces development of positive relationships between client and corrections personnel. Prerequisite: CJ 100 or consent of instructor.

CJ 224 CIVIL LAW
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Fundamentals of the law of contracts, torts, and personal property, including liens, landlord and tenant as they apply to the criminal justice system.

5.233 INSTITUTIONS AND AGENCIES
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
History, objectives, and evaluation of community, state, and federal agencies involved in the disposition of offenders and potential delinquents. Prerequisite: CJ 100 or consent of instructor.



Faculty:
Arthur Bervin
Shirley Call
Thomas Chase
Donald Minnick
Jane VanSickle
Barbarajene Williams

English

The English curriculum is designed to provide skill-building opportunities in written communication as well as aesthetic appreciation and understanding of the various literary genres.

Literature

EN 101,102,103 SURVEY OF ENGLISH LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Study of the principal works of English literature based on readings selected to represent great writers, literary forms, and significant currents of thought. Provides both an introduction to literature and a background that is useful in the study of other literature and other fields of cultural history. (101) Medieval ballads through Milton, (102) Defoe through Wordsworth, Keats, and Mary Shelley, (103) Browning to Joyce.

EN 104 INTRODUCTION TO LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to narrative fiction (the short story and the novel) through careful reading and discussion of American, English, and European short stories and a novel.

EN 105 INTRODUCTION TO LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to drama as it was developed in ancient Greece and transmitted to successive historical periods up to the present. The course introduces the student to Greek, Medieval, Shakespearian, and modern plays. It stresses conventions of drama as they developed in succeeding historical periods.

EN 106 INTRODUCTION TO LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Study of poetry and the nature of literary experience through the reading of great poetry, drawn from American, English, and world literature. Works are read in entirety when possible with emphasis on such elements as structure, style, imagery, figurative language, and musical devices.

EN 107, 108 109 WORLD LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
A sequence to acquaint the student with outstanding works of ancient, medieval, Renaissance, and modern literature that have permanent and wide appeal outside his own country. (107) Greece, Rome, and the early Middle Ages; (108) The Middle Ages and the Renaissance to the 18th Century; (109) The 18th Century to the Present.

EN 199 THE LITERATURE OF SCIENCE FICTION
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Reviews the history of science fiction, or its predecessors, from the Greeks through Jules Verne and H.G. Wells to Asimov, Ray Bradbury, Arthur Clarke and Andre Norton. Course focuses on contributions of twentieth-century writers.

EN 199 THE BIBLE AS LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Surveys selected Old and New Testament readings to acquaint students with literary forms, styles and content of biblical materials; and to point to literature's indebtedness to the biblical heritage.

EN 199 IMAGES OF WOMEN IN LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Analysis of images, archetypes, and stereotypes of women characters in selected literature and exploration of effects of these literary images upon actual women. An examination of the various definitions and roles suggested for women in literature.

EN 201,202,203 SHAKESPEARE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Chronological reading of important plays - comedies, tragedies, and histories - with emphasis upon Shakespeare as a dramatist and poet. The background of the Elizabethan period, its dramatic tradition, theatre, and culture is emphasized. (201) Histories; (202) Tragedies; (203) Comedies.

EN 253, 254, 255 SURVEY OF AMERICAN LITERATURE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Development of U.S. literature from its beginning to the present day through intensive reading of significant authors representing major literary periods. Provides an understanding and appreciation of American culture as expressed in literature. (253) Puritanism through the Civil War; (254) Transcendentalism to the beginning of Realism; (255) Realism and Naturalism to the present.

Writing

WR 120 BASIC WRITING SKILLS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Emphasizes the mechanics and standard usage of written English. Basic syntax of the sentence and paragraph organization are stressed. Close attention is paid to grammar, spelling, and punctuation. Will not satisfy institutional writing requirements for the transfer student.

WR 121 ENGLISH COMPOSITION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Emphasizes the content and organization of the unified expository prose essay. Topic selection and limitation is stressed. Attention is paid to sentence and paragraph development; effective use of transitions, introductions, conclusions. Study and practice of diction. Competence in mechanics and usage is assumed; students who are deficient in these areas may be advised to enroll in WR 120 prior to attempting this course.

WR 122 ENGLISH COMPOSITION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Emphasizes the development of logic and style in expository writing. The ability to define statements and issues, recognize evidence, use inductive and deductive argument, and avoid logical fallacies is stressed. Continued emphasis on the rhetorical concerns of WR 121 and on the necessity for accuracy in mechanics and usage. Prerequisite: WR 121.

WR 123 ENGLISH COMPOSITION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to use of library, research methods, proper use of sources, documentation. Students will write one or more research papers, making use of an outline, note cards, footnote, bibliography and MS forms. Continued emphasis on the rhetorical concerns of WR 121 and on the necessity for accuracy in mechanics and usage. Prerequisite: WR 121.

1.102 OCCUPATIONAL WRITING
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Emphasizes expository writing skills used and needed by vocational and technical students. Students gain core skills in paragraphing and rhetorical forms and complete selected exercises pertaining to their occupational programs. Prerequisite: WR 120.

1.112 TECHNICAL REPORT WRITING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Provides the technological or scientific student with intensive research and writing practice in own field. Individual instruction emphasized so that the student engages only in writing projects specifically applicable to needs. One major paper integrated with a class project constitutes the major element in the course. Prerequisite: 1.102.

Creative Writing

WR 199 PERSONAL JOURNAL WRITING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Study of technique and content in personal journal writing. Offers disciplined practice in recording observations, reflective thoughts, and events of historic and humanistic importance to the journal writer. Primary emphasis on developing awareness of the writer's world and exploring styles of writing in articulating that awareness.

WR 241 INTRODUCTION TO IMAGINATIVE WRITING
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Combines three weeks of formal lecture concerning the elements of short fiction (dialogue, setting, character, conflict, etc.) with less formal 'workshop' sessions.

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 image. Major emphasis will be placed on the fostering and development of individual style.

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, poetry, or play writing. Major emphasis placed on revision of work in progress. May be taken in conjunction with WR 241 or WR 242. Prerequisite: WR 241, WR 242 or consent of instructor.

Faculty:
Judith Hedberg-Duff
Jennifer Spiker
James Tolbert, Department Chairperson

Graphic Communications and Journalism

Graphic Communications is a 90 hour, Associate of Science Degree program in which students have the option of majoring in Graphic Design, Printing Technology, or Advertising/ Promotion.

Journalism credits may be applied toward a college transfer program in Journalism, as transfer electives toward other majors, toward the Advertising/Promotion option of the Graphic Communications Associate in Science degree, or as electives toward other Associate Degree programs.

Supervised Field Experience

Students may, upon the recommendation of the program coordinator, receive transfer or non-transfer college credit by participating in Supervised Field Experience (SFE). Further information may be found in the Cooperative Work Experience section of this catalog.

1.200/WE 201 SUPERVISED FIELD EXPERIENCE

☐ 3-48 class hrs/wk ☐ 1-16 cr. ☐ F/W/Sp

Students may, upon the recommendation of the department chairman receive transfer or non-transfer college credit by participating in Supervised Field Experience (SFE). Placement and content is with the consent of instructor. Further information may be found in the Cooperative Work Experience section of this catalog.

1.201/WE 202 FIELD EXPERIENCE SEMINAR

☐ 1 class hr/wk ☐ 1 cr. ☐ S/F/W/Sp

Refer to the Cooperative Work Experience section of this catalog.

Printing Technology

The Printing Technology curriculum requires 19 hours of general education, 21 hours of electives, 29 hours of basic graphic arts and related courses, and 21 hours of specialized production courses. Students electing the Printing Technology option may anticipate vocational opportunities as darkroom technician, process camera operator, paste-up technician, stripper, platemaker, duplicating machine operator, offset press helper, screen printer, or bindery worker. Most positions in the industry require individuals with skills in several of the above areas.

Candidates for the associate degree in Graphic Communications with a specialization in Printing Technology must complete the following courses:

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses		4	
	General Education Electives			6
		3	4	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.150	Intro to Graphic Communications	3		
3.152	Layout and Pusteup Procedures	3		
3.158	Advertising Typography and Lettering ...	3		
3.153	Survey of Visual Design		3	
3.162	Intro to Photography		3	
SS121	Typing I		3	
3.151	Publication Design			3
3.164	Process Camera			3
SS124	Typing Skill Building**			3
	Electives or SFE	3	3	6
		12	12	15

Sophomore Year

Course No.	Course Title	F	W	Sp
3.166	Screen Printing	3		
3.180	Publication Lab	2	2	2
3.167-8	Graphic Production I, II		4	4
4.124	Technical Drawing I		2	
6.244	Scientific Aspect of Printing			3
	Electives or SFE	6	3	
		11	11	9

**Students with a demonstrated typing proficiency of 45 words per minute may substitute electives.

3.150 INTRODUCTION TO GRAPHIC COMMUNICATIONS

☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp

History of Graphic Communications; overview of basic reproduction processes--letterpress, offset, gravure, electrostatic and screen printing. Copyfitting, proofreading, printer's measurements and terminology. Introduction to printing papers.

3.151 PUBLICATION DESIGN

☐ 6 class hrs/wk ☐ 3 cr. ☐ F/Sp

Introduction to arranging elements of printed media. Students learn to arrange heads, pictures, and body type for maximum unity, readability, and aesthetic effect. Lectures and design projects are intended to provide a fundamental understanding and competence in the tasks of publication and advertising art direction. Prerequisite: 3.150, 3.152

3.152 LAYOUT AND PASTEUP PROCEDURES

☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp

Preparation of mechanical art. Terminology and practice of layout and pasteup techniques, including use of headlines, body copy, line cuts and halftones. Imposition, screened prints, screen tints, overlays, color preparation. Prerequisite: 3.150 (may be taken concurrently)

3.153 SURVEY OF VISUAL DESIGN

☐ 6 class hrs/wk ☐ 3 cr. ☐ W

An introduction to the design field through a study of art elements, basic color theory and systems, black and white and value studies in composition and design. Students will explore applications; emphasis will be on developing sound judgement and individual creative growth.

3.154 PACKAGING AND 3-DIMENSIONAL DESIGN

☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp

Introduction to merchandising and display projects involving two and three dimensional graphic, structural and marketing solutions; stressing suitability of concept, design, and color of the product. Materials and methods of printing, cutting and folding, and assembly are explored to elicit both tactile and visual expression. Prerequisite: 3.170 or consent of instructor.

3.158 TYPOGRAPHY/LETTERING

☐ 6 class hrs/wk ☐ 3 cr. ☐ F/W

Type layout and design. Hand lettering for the artist is studied on the basis of standard and unusual type faces, number and letter forms. Finished production lettering, type specifications and indications and calligraphy as an element of typographical design. The use of letterpress equipment, phototypesetting and transfer lettering sheets are studied. Prerequisite: 3.150 or consent of instructor.

3.162 INTRODUCTION TO PHOTOGRAPHY

☐ 1 lec/4 lab hrs/wk ☐ 3 cr. ☐ F/W/Sp

An introduction to black and white photography. Students calculate their exposures, develop film and print enlargements. Includes instruction on cameras, lenses, film, filters, lighting, photographic chemistry, composition, and printing techniques. Demonstrations and individual projects. A limited number of cameras are available for check-out. $5.00 take-home materials charge.

3.164 PROCESS CAMERA

☐ 6 class hrs/wk ☐ 3 cr. ☐ W/Sp

Functions and uses of the process camera for making line and halftone negatives, and photo-mechanical transfer positives. Related darkroom techniques including outline type and color imaging. Prerequisite: 3.150 (may be taken concurrently), 3.162.

3.166 SCREEN PRINTING

☐ 6 class hrs/wk ☐ 3 cr. ☐ F

Practice in screen printing techniques using hand-cut paper and aqua stencils, tusche and glue, and photostencil materials. Use of various types of ink for printing on glass, textiles, plastics and paper.

3.167 GRAPHIC PRODUCTION I

☐ 6 class hrs/wk ☐ 4 cr. ☐ W

Introduction to the theory and practice of offset lithography. Stripping and platemaking, press operation, ink and water systems. Ink mixing to the Pantone system. Use of presensitized and direct-image plates. Safety. Project assignments and critiques. Prerequisite: 3.152, 3.164, 3.166.

3.168 GRAPHIC PRODUCTION II

☐ 6 class hrs/wk ☐ 4 cr. ☐ Sp

Advanced theory and practice in offset lithography. Emphasis on multi-color reproduction. Skill-building in ink matching, plate and blanket packing, close register presswork. Students will take a job through all production phases using skills learned in previous courses. Prerequisite: 3.167.

Graphic Design

The Graphic Design curriculum requires 12 hours of general education, 18 hours of electives, 28 hours of basic graphics courses, and 32 hours of specialized training in the field of graphic design. Vocational opportunities for those majoring in Graphic Design include: commercial illustrator, window designer, ad layout designer, brochure designer, educational media designer and illustrator, newspaper layout and pasteup, photographer's assistant, darkroom assistant, director of photographic advertising, screen printer, typographer/letterer/signwriter, package designer, and three-dimensional display designer.

Students selecting the Graphic Design Program reasonably may expect to spend about $500 for materials and supplies during the 2-year program. Candidates for the associate degree in Graphic Communications with a specialization in Graphic Design must complete the following courses:

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
HE250	Health or			
HE252	First Aid	3		
	P.E. Activity			1
		3	3	1

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111	Beg. Oral Comm	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
	General Education Electives			6
		3	4	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.150	Intro to Graphic Comm	3		
3.158	Adv Typ/Lettering		3	
AR195	Design I	4		
AR291	Drawing Fund	4		
3.170	Illustration		3	
SS121	Typing I**		3	
AR282	Inter. Drawing		4	
3.154	Pkging & 3 Dim Dis			3
3.152	Layout & Pasteup Proc			3
AR281	Figure Drawing			4
AR196	Design II			4
		11	13	14

Sophomore Year

Course No.	Course Title	F	W	Sp
3.151	Publication Design	3		
3.162	Intro to Photo	3		
3.172	Graphic Design	3		
3.173	Graphic Design		3	
3.174	Graphic Design			3
3.180	Publication Lab	2	2	2
SS124	Typing Skill Building***	3		
	Technical Drawing****		2	2
	General Education Electives		2	2
		14	9	9

*** Demonstrated proficiency
**** 4.109 Tech Sket, 4.115 Pres. Drawing, 4.123 Tech. Ill.

3.170 ILLUSTRATION

☐ 6 class hrs/wk ☐ 3 cr. ☐ W/Sp

Pen and ink, brushes, water colors, markers, inks, fixatives, colored pencils, washes, compass, rapidiographs, pastels, matt knives, tapes, drafting machines, pencil pointers, templates, acrylics. Class projects explore and develop skill in using the artist's tools. The course intent is to make the student aware of the techniques used by the graphic artist. Prerequisite: 3.150, AR 291 (both may be taken concurrently).

3.172 GRAPHIC DESIGN I

☐ 6 class hrs/wk ☐ 3 cr. ☐ F

Basic course in graphic design for reproduction. Projects explore the methods and techniques of contemporary design. Preparation of illustrated matter including visual instructional materials. Layout and design are of primary intent. Matting, framing presentation, papers, board, effects, are all discussed. Prerequisite: 3.170 or consent of instructor.

3.173 GRAPHIC DESIGN II

☐ 6 class hrs/wk ☐ 3 cr. ☐ W

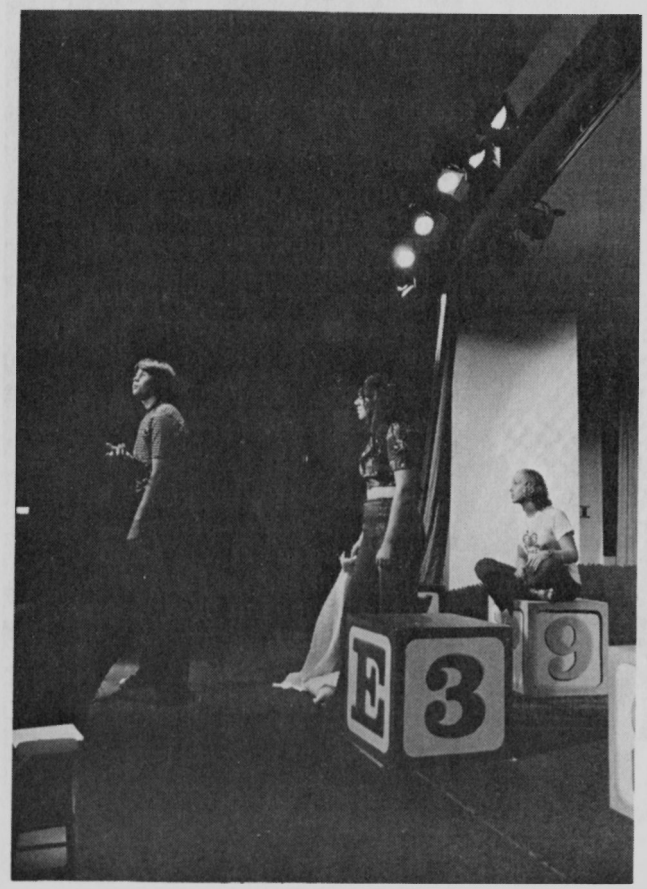
Advanced course in graphic design. Layout and design and effects of color on various subjects included. Proposed use of reproduction is of prime consideration. Projects cover a wide application of materials, techniques and styles. Prerequisite: 3.172 or consent of instructor.

3.174 GRAPHIC DESIGN III
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
An advanced course in color and black and white illustration/design. Individual work and study is emphasized. Prerequisite: 3.173 or consent of instructor.

3.180 PUBLICATION LAB
☐ 4-8 lab hrs/wk ☐ 2-4 cr. ☐ F/W/Sp
Students work on the college newspaper (the Commuter) to gain practical experience in the application of graphic arts skills. Maximum of 6 credits. Prerequisite:3.152, 3.164 or consent of instructor.

3.181 PRODUCTION LAB
☐ 2-10 lab hrs/wk ☐ 1-5 cr. ☐ F/W/Sp
Printing students may select the Graphics department of the LRC to gain practical experience with hands-on operation of offset presses and associated graphic equipment. Maximum of 6 credits. Prerequisite: consent of instructor.

Graphic Design students may select the Graphics department of the LRC to gain practical experience in design, illustration, or layout of designated projects. Maximum of 6 credits. Prerequisite: consent of instructor.



Journalism

Community College journalism credits are transferable as lower-division course work toward a four-year journalism degree or as electives toward other two-year and four-year degrees. JN 215 and JN 216 are required for the Advertising/Promotion curriculum of the Graphic Communications Associate in Science Degree. Most journalism careers favor four-year degrees, but students who combine community college journalism with related courses such as graphic communications and business often can find jobs in small media publications, business, and agency outlets in combinations of writing, advertising sales and design, layout and pasteup, photography, printing technology and promotion.

Advertising / Promotion

The Advertising/Promotion curriculum requires 15 hours of general education, 35 hours of graphic communications, 18 hours of business, 4 hours of journalism and 19 hours of electives. Students electing the Advertising/ Promotion option may anticipate vocational opportunities as newspaper advertising salespersons; radio-TV salespersons; promotional assistants for businesses, including full-time promotion work and a combination of promotion plus part-time work in other graphic communications or business areas; public relations assistants for community, governmental and non- profit organizations; printing company sales representatives; printing company employees who are part-time designers and/or writers for incoming jobs; freelancers in advertising and promotion.

JN 215 JOURNALISM LABORATORY: NEWSPAPER
☐ 3 lab hrs/wk ☐ 1 cr. ☐ F/W/Sp
Work on the student newspaper in reporting, photography, editing or advertising. The lab for JN 216, 217, 218; may also be taken independently from those courses.

JN 216 REPORTING I
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Basics of journalistic writing with an emphasis on real assignments to be used in the student newspaper. Students study interviewing, other news gathering techniques, effective writing of news and features and journalistic ethics while they are actually reporters. JN 215 required in conjunction with this course.

JN 217 REPORTING II
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Journalistic writing with emphasis on backgrounding, depth reporting, interpretive writing and newer journalism forms. Students submit articles for actual publication, most often in student newspaper. JN 215 required in conjunction with this course.

JN 218 COPY EDITING AND MAKEUP
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Copy editing, page makeup, photo editing, headline writing, editorial decision making and proofreading. Students apply their skills to the student newspaper. JN 215 required in conjunction with this course.

JN 225 ADVERTISING/PUBLIC RELATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
An overview of advertising and public relations emphasizing the communication and production skills needed to produce advertising, promotion, and public relations materials. Study includes copywriting, design, marketing research, use of printing technology, and the historical and journalistic perspectives of these fields.

Faculty:
Martha Ayers
Stephen Rossberg
Gary Ruppert
Richard West, Department Chairperson

Performing Arts

The Performing Arts Department provides instruction in the fundamentals of speech, drama and instrumental music and voice, as well as many opportunities for performance. In developing their potential in these areas, students may acquire occupational skills and life-long avocational interests.

All areas of the department work closely together. The faculty encourages students to take courses which develop skills in communication, voice, movement and music.

Drama and Speech

The Speech and Drama curriculum is designed to provide skill-building opportunities in spoken inter-and intra-personal communication as well as performance and technical opportunities in theatre. All courses satisfy lower division college transfer requirements for those students seeking the bachelor's degree, but also offer professional instruction for those students whose interests are primarily vocational or avocational.

D 192 FOLK DANCE PERFORMANCE
☐ 4 lab hrs/wk ☐ 2 cr. ☐ F/W/Sp
A course designed to give students opportunities to perform suites of international songs and dances. Students will become aware of all aspects of folk dance performance (costuming, music, etc.). Audition required.

TH 110 FUNDAMENTALS OF ACTING
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Classroom activities designed to develop skills in improvisation, pantomime, movement and voice. Basic training in the art of acting; increases the student's understanding of the performing artist; increases sensitivity in communication situations. An experience oriented class.

TH 202 INTRODUCTION TO THEATRE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Survey of theatre past and present. Development of dramatic literature, performers, theatres and theatre organizations. Detailed look at modern theatre organizations and opportunities. Not a performance class.

TH 210 INTERMEDIATE ACTING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A follow-up of TH 110. Intended to further polish a student actor's skills primarily through improvisation. A performance class.
Prerequisite: TH 110 or consent of instructor.

TH 248 BACKSTAGE ARTS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Theoretical and practical introduction to theatre support skills. Students may select area of concentration; make-up and costumes; design and construction; lighting and sound. Projects emphasized.

TH 250 PRODUCTION WORKSHOP
☐ 2-6 lab hrs/wk ☐ 1-3 cr. ☐ F/W/Sp
Student preparation of scenery, costumes, properties or publicity for a college production.
Prerequisite: Permission of instructor.

TH 255 REHEARSAL AND PERFORMANCE
☐ 2-6 lab hrs/wk ☐ 1-3 cr. ☐ F/W/Sp
For students participating in a public performance theatre production of the college. Productions provide both extracurricular activity for non-majors and practical application of classroom theory for students of theatre.

TH 265 CREATIVE DRAMATICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Exploration of the use of drama as an aid to those who work with children and young adults in instructional or recreational areas.

SP 111 INTERPERSONAL SPEECH COMMUNICATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Practical approaches to developing effective interpersonal and small group communication skills: listening, non-verbal communication, message construction, group interaction, leadership style, and communication barriers. No prerequisite.

SP 112 FUNDAMENTALS OF SPEECH
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Projects in oral communication to develop skill and confidence in speaking before larger groups, with emphasis on content, organization, audience motivation and language.

SP 229 INTERPRETIVE READING
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Study of literature through oral performance. Analysis and performance of poetry, prose fiction, non fiction and drama. Recommended for those interested in voice, singing, elementary teaching and the study of literature.

1.103 OCCUPATIONAL SPEECH COMMUNICATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Practical approaches to the development of oral communication for vocational/technical students to prepare them in the areas of telephone usage, interviewing, personnel inter-action, public speaking situations, and information sharing/ problem solving situations that occur on the job.

Music

The Music curriculum is designed to provide skill building opportunities in vocal and instrumental music and to develop aesthetic appreciation and theoretical knowledge. The majority of classes are designed to satisfy lower division college transfer requirements for those students seeking the bachelor's degree, but offer as well professional instruction for those students whose interests are primarily vocational or avocational.

MU 50 BASIC PIANO
☐ **2 class hrs/wk** ☐ **2 cr.** ☐ **F/W/Sp**
Classroom instruction for the beginning piano student. May be repeated two times for credit.

MU 51 BASIC VOICE
☐ **2 class hrs/wk** ☐ **2 cr.** ☐ **F/W/Sp**
Classroom instruction for the beginning voice student. May be repeated two times for credit.

MU 101 BASIC MUSICIANSHIP
☐ **3 lec hrs/wk** ☐ **3 cr.** ☐ **F/W/Sp**
For the non-music major. Fundamentals of music: music reading, simple chord structures, use of harmonic voice and instruments.

MU 111,112,113 MUSIC THEORY I
☐ **3 lec/2 lab hrs/wk** ☐ **4 cr.** ☐ **F**
Elements of music science (melodic, harmonic, and rhythmic) taught through analysis of the styles of Bach, Haydn, Mozart, and other eighteenth and nineteenth century composers. Must be taken in sequence.

MU 117 IMPROVISATION
☐ **1 lec/2 lab hrs/wk** ☐ **2 cr.** ☐ **W/Sp**
A course to develop visual and aural skills enabling the performer to improvise freely and upon given material. An examination of all improvisational styles with an emphasis on jazz. In-class student performance required. Prerequisite: MU 101, MU 111 or consent of instructor.

MU 183 CHAMBER ENSEMBLE: MADRIGAL SINGERS
☐ **2 class hrs/wk** ☐ **1 cr.** ☐ **F/W/Sp**
Study and performance of early to contemporary madrigal literature. Concurrent enrollment in MU 197 or MU 297 required. Open by audition only.

MU 194 CONCERT BAND
☐ **2 class hrs/wk** ☐ **1 cr.** ☐ **F/W/Sp/Su**
Rehearsal and performance opportunities in concert band. Students meet one night per week in association with the Corvallis Civic Band.

MU 195 JAZZ ENSEMBLE
☐ **4 class hrs/wk** ☐ **2/6 cr. maximum** ☐ **F/W/Sp**
A performing organization which draws upon the recent trends in jazz and rock as well as traditional big band charts. Audition may be required.

MU 295 JAZZ ENSEMBLE
☐ **4 class hrs/wk** ☐ **2/6 cr. Maximum** ☐ **F/W/Sp**
A continuation of MU 195. Prerequisite: 6 hours of MU 195. Audition may be required.

MU 201, 202, 203 INTRODUCTION TO MUSIC AND ITS LITERATURE
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **F/W/Sp**
Cultivation of understanding and intelligent enjoyment of music through a study of its elements, forms, and historical styles. (201) Music Forms, (202) Middle Ages to Classical, (203) Romantic to contemporary. Need not be taken in sequence.

MU 205 INTRODUCTION TO JAZZ LITERATURE
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On demand**
For the non-major: A listener's approach to the development of jazz through its various styles.

MU 211,212,213 MUSIC THEORY II
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **F/W/Sp**
Study of the disciplines of hearing, performing, analyzing, improvising, and composing different kinds of music, terminology concepts, and the development of aural-visual acuity. (See also MU 214, 215, 216). Must be taken in sequence and in conjunction with MU 214, 215, 216. Prerequisite: MU 111, 112, 113.

MU 214, 215, 216 KEYBOARD HARMONY
☐ **2 lab hrs/wk** ☐ **1 cr.** ☐ **F**
Keyboard application of the theoretical principles studied in MU 211, 212, 213. Exercises are figured bass realization, modulation, transposition, score reading. To be taken concurrently with MU 211, 212, 213. Prerequisite: MU 111, 112, 113.

MU 190 PERFORMANCE STUDIES
☐ 1 class hr/wk ☐ 1 cr. ☐ F/W/Sp
Basic individual instruction in voice, piano, woodwinds, brass, percussion, stringed instruments. $40.00 additional tutorial tuition. Requires instructor approval.

MU 290 PERFORMANCE STUDIES
☐ 1 class hr/wk ☐ 1 cr. ☐ F/W/Sp
Advanced individual instruction in the technical and stylistic aspects of artistic solo performance. $40.00 additional tutorial tuition. Requires instructor approval.

MU 197 CHORUS (CONCERT CHOIR)
☐ 4 class hrs/wk ☐ 2/6 cr. maximum ☐ F/W/Sp
A performance oriented class, practice in performance material as well as music that presents different problems and styles in singing.

MU 297 CHORUS (CONCERT CHOIR)
☐ 4 class hrs/wk ☐ 2/6 cr. maximum ☐ F/W/Sp
Advanced opportunities in concert choir. Prerequisite: 6 credits MU 197.

MU 194 CHORUS (SWING CHOIR)
☐ 4 class hrs/wk ☐ 2/6 cr. maximum ☐ F/W/Sp
Performance of popular vocal arrangements. Exploration of various swing choir concepts. Audition required for enrollment.

MU 294 CHORUS (SWING CHOIR)
☐ 4 class hrs/wk ☐ 2/6 cr. maximum ☐ F/W/Sp
Advanced opportunities in swing choir. Audition required for enrollment. Prerequisite: 6 credits MU 194.

Faculty:
Rolfe Stearns

Philosophy and Religion

The Philosophy curriculum is designed to provide an awareness and understanding of civilized man's ethical, moral, and religious thought and the process of his ability to reason critically. All courses carry college transfer credit.

PH 202 ELEMENTARY ETHICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
A survey of moral strategies, including existentialist, situationist, and Taoist as well as several rule approaches; introduction to the analysis of ethical language and the justification of moral values.

PH 203 ELEMENTARY LOGIC
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Introduction to informal logic and symbolic logic. Recognizing, analyzing and criticizing arguments. Main topics include deduction, invalid forms, connectives, truth tables, logical relations and interpretation of proofs

PH 204 PHILOSOPHY OF RELIGION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Introduction to the analysis of religious behavior and concepts found in modern Eastern and Western religions. Topics include: the existence and nature of gods, problem of evil, religious experience, the functions of religious language and the status of religious knowledge. A companion course to RE 201.

RE 201 RELIGIONS OF THE WORLD
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
A comparative survey of the development and doctrines of the Biblical religions and of several far Eastern religions.

RE 202 THE OLD TESTAMENT AND ITS BACKGROUND
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
An introduction to the themes within the major Old Testament traditions set against the background of the cultural and political history of the Hebrew people.

RE 203 THE NEW TESTAMENT AND ITS BACKGROUND
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
An introduction to New Testament theology and to the traditions about Jesus and Paul.

Faculty:
Douglas Clark
Russell Durham
Max Lieberman
Maribel Montgomery
Martin Rosenson
Regina Vee

Social Sciences

The general objective of the Social Science curricula is to develop in the student accurate and extensive knowledge of society (past and present) and the activities of its members. Specific content fields are anthropology, the study of the varieties of man's physical and cultural characteristics; economics, the study of the things man wants and how he goes about getting them; geography, the study of man's relationship to the surface of the earth and its climates, plants, animals and natural resources; history the study of man in relationship to his recorded past; political science, thetstudy of man's political institutions, or of the principles, organization, and methods of government; psychology, the study of man's individual behavior; and sociology, the study of man's group interaction, the forms of organization of social groups, the relationships among them, and group influences on individual behavior.

Anthropology

May be used to fulfill general education requirements in social science. Transfer students should not complete both AN 101, 102, 103 and AN 207, 208, 209.

AN 101 GENERAL ANTHROPOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Examination of man's place in nature, physical evolution and history of fossil man.

AN 102 INTRODUCTION TO ARCHAEOLOGY/ PREHISTORY
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Examination of man's prehistorical cultural traditions, cultural change, and prehistorical civilizations and cultures.

AN 103 INTRODUCTION TO CULTURAL ANTHROPOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Examination of man's cultural variation throughout the world. Methods of analyzing the elements of culture such as: religion, social organization, family structure, language, and political systems.

AN 104 GENERAL ANTHROPOLOGY LAB
☐ 1 lecture/3 lab hrs/wk ☐ 3 cr. ☐ W/Su
Laboratory exercises in archaeological reconstruction and analysis. Prerequisite: AN102 or Field Archaeology or consent of instructor.

AN 199 FIELD ARCHAEOLOGY
☐ 2 lec/2 lab hrs/wk ☐ 4 cr.
Field exercises in site surveying, mapping, record keeping, laboratory procedures and site report writing. Prerequisite: AN 102 or consent of instructor.

AN 199 SPECIAL STUDIES
☐ 1-3 class hr/wk ☐ 1-3 cr. ☐ On Demand
Provide students with the opportunity to research areas of individual interest within Anthropology. Credit and hours to be arranged with instructor. Prerequisite: consent of instructor.

AN 207 CULTURAL ANTHROPOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Examination of man's cultural traditionals at the band and tribal-chiefdom levels, including discussions of the major theoretical concepts of cultural anthropology that apply to this level of cultural evolution.

AN 208 CULTURAL ANTHROPOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Examination of state level cultural traditions (industrial and
preindustrial), with major theoretical concepts of cultural anthropology that apply to that level of cultural evolution as well as ethnographic examples.

AN 209 CULTURAL ANTHROPOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Examination of the process of growth and diversification of culture; a look at culture change in its many aspects, i.e., evolutionary, adaptive (or acculturative) and applied (or directed) change.

Economics

EC 115 OUTLINE OF ECONOMICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
For those whose major are other than Business or Economics. Emphasis on such major economic activities as supply and demand, fiscal policies of the United States, Federal Reserve functions, unemployment and international trade.

EC 199 CONTEMPORARY ISSUES IN THE WORKPLACE
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Inquiry into work-related issues currently debated by workers, unions, corporations and public policy makers; the organization and nature of work in our society; the quality of life that stems from the time spent in the workplace.

EC 199 THE LIVES, TIMES AND IDEAS OF GREAT ECONOMIC THINKERS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
The lives, times and ideas of the most influential economic thinkers of modern times: Adam Smith, Parson Malthus, David Ricardo, Karl Marx, Thorstein Veblen, John Maynard Keynes.

EC 201 PRINCIPLES OF ECONOMICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Introduction to micro-economic theory, policy and institutions. Includes principles underlying production, exchange and distribution.

EC 202 PRINCIPLES OF ECONOMICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Introduction to macro-economic theory, policy and institutions. Includes problems relating to money and banking, consumption, investment, unemployment and inflation. Prerequisite: EC 201.

EC 203 PRINCIPLES OF ECONOMICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Introduction to international economics and economic development. Includes principles underlying international trade, trade regulations, exchange rates, economics development in both developing and developed parts of the world. Prerequisite: EC 202.

EC 230 CONTEMPORARY WORLD ECONOMIC ISSUES
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Applications of ecomomic principles to selected issues and problems of foreign economies and international economic institutions with such topics as overpopulation, socialism, multinational corporations, etc. Prerequisite:t3 hours of introductory economics.

Family Living

FL 222 MARRIAGE PREPARATION
☐ 2 class hrs/wk ☐ 3 cr ☐ F
The nature of courtship and marriage; role expectations and responsibilities. Topics covered include establishing a relationship, communication, conflict, self-understanding, love--its expression and dimensions, human sexuality, family finances, use of non-work time, divorce, and alternatives to marriage.

FL 223 FAMILY LIVING
☐ 2 class hrs/wk ☐ 2 cr. ☐ W
Emphasis on the relationships of the married couple and parenthood. Topics covered include role conflict, marital adjustments, crisis of marriage, and resources to strengthen family life. Continued attention given to developing skills and competencies involved in interpersonal relationships.

FL 225 CHILD DEVELOPMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Introduction to the study of social, emotional, intellectual and physical growth and development of infants and young children. Observations in child development laboratory.

FL 240 CONTEMPORARY AMERICAN FAMILIES
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
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.

Geography

GE 105 INTRODUCTORY GEOGRAPHY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Introduction to man's physical environment, with emphasis upon the basic concepts of the earth as a planet; weather, climate, vegetation, and geology.

GE 106 INTRODUCTORY GEOGRAPHY
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Overview of man's occupance of the earth. Emphasis on the division of the world into regions of similar environments, the potential of each region for human use, and man's cultural and economic adaptations to such regions.

GE 107 INTRODUCTORY GEOGRAPHY
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
An examination of the occurrences, patterns and interrelations of man's economic activities. The

principles of economics and human behavior which structure our use of resources will be stressed.

History

HS 101 HISTORY OF WESTERN CIVILIZATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Origins and development of Western Civilization from ancient times to medieval civilization at its height. Emphasis is placed on the important influence of Greece, Rome, India, China as well as Byzantium and Islam to modern times.

HS 102 HISTORY OF WESTERN CIVILIZATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Origins and development of Western Civilization from Medieval Times through the French Revolution.

HE 103 HISTORY OF WESTERN CIVILIZATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Development of Western Civilization from the French Revolution to the present.

HS 199 TOWARDS THE YEAR 2000
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Study of the various problems that have to be faced by our society, and the psychological adjustment to the solutions or control of these problems.

HS 199 ORAL HISTORY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Designed to introduce students to the basic techniques of establishing a permanent historical record through the use of oral history and the collection and organization of documents.

HS 201 HISTORY OF THE UNITED STATES
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
In-depth study of the exploration and colonization of the American colonies, the attainment of independence, the formation of government under the Constitution and subsequent events up to the presidency of Jackson.

HS 202 HISTORY OF THE UNITED STATES
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
History of the United States from the presidency of Jackson, through the Civil War and Radical Reconstruction, the conquering of the West, the ascendancy of industry, the early labor movement, and the ultimate emergence of our nation as a world power.

HS 203 HISTORY OF THE UNITED STATES
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Analysis of the United States in the 20th Century encompassing the 'War to end all War', The Roaring Twenties, The Great Depression, World War II, The Cold War, the Viet Nam conflict, Nixon, Watergate and post Nixon through Ford.

Political Science

PS 201 AMERICAN GOVERNMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
Focuses on the structure of power in the United States; the functions, sources, and uses of power in American politics.

PS 202 AMERICAN GOVERNMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ W
Focuses on public policymaking; what political institutions do and how they do it. Also emphasizes the mechanisms and outcomes of the policymaking process.

PS 203 AMERICAN GOVERNMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Focuses on local political institutions and their relationship to citizens. Special emphasis on examining the meaning and operation of participatory institutions.

PS 205 INTERNATIONAL RELATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Structural characteristics of the relations among nations with particular emphasis on the predominant economic and political mechanisms in the world today.

PS 207 INTRODUCTION TO POLITICAL SCIENCE
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Theories, concepts and research methods appropriate to understanding how conflicts among people are resolved; emphasizes community political analysis, and organizations which operate to resolve conflict.

PS 199 CHINA: A NEW SOCIETY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
General examination of contemporary China with particular emphasis on the post revolutionary period from 1949. Strategies and experiences of the Chinese experiment in social organization.

1.124 AMERICAN INSTITUTIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ SpThe students relate directly to various social, political and economic institutions in the community.

Psychology/Education

PY 20L GENERAL PSYCHOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Introduction to the use of objective scientific procedures in the study of behavior. A brief overview of the variety of fields of psychology followed by a more concentrated study of social psychology and personality. Included are discussion of mental illness, conflict, and adjustment. Sophomore standing recommended.

PY 202 GENERAL PSYCHOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
Survey of current knowledge about special areas of individual functioning including intelligence, language, learning and memory, motivation and perception. Prerequisite: PY 201.

PY 203 GENERAL PSYCHOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
Primarily for the psychology major. Examination of psychophysics, biological processes in perception, learning and memory, and comparative psychology. Independent research assignment required. Prerequisite: PY 201-202.

PY 205 APPLIED PSYCHOLOGY
☐ 1-3 class hrs/wk ☐ 1-3 crs. ☐ Sp
Offered as a supplement to the General Psychology sequence: Three one-credit classes, each meeting once a week, may be taken separately. Credit may not transfer unless all three parts are completed. Creative Thinking (1 credit); Variety Applications (1 credit); Behavior Modification (1 credit). Prerequisite: PY 201 prior or concurrent.

PY 111 PERSONAL DEVELOPMENT
☐ 4 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Experience in interpersonal communication and group dynamics, with emphasis on the communication of feelings.

PY 231 HUMAN SEXUALITY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Physiology, terminology and varieties of human sexual response. Emphasis upon the in-cultural and cross-cultural breadth of normal sexual expression. The kinds and treatments of sexual dysfunction, anomalous development and behavior will be considered. Prerequisite: one quarter of PY 201,or SO 204,205,206; or consent of instructor.

1.606 INTRODUCTION TO PSYCHOLOGY OF HUMAN RELATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Helps prepare students to solve potential work oriented individual and/or interpersonal behavioral problems. Includes study of fundamental psychological principles of development, personality, motivation, conflict, group behavior and occupational choice.

ED 207 LEADERSHIP PRACTICUM
☐ 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 210 THEORY AND PRACTICUM II A (FIELD EXPERIENCE)
☐ 15 lab hrs/wk ☐ 6 cr. ☐ F/W/Sp
A field based program to provide students in teacher education experience in working with pupils in public elementary and secondary schools on problems related to reading, careers, the affective and cognitive development of children and youth (learning), in understanding the school as a social system, cultural diversity, behavior modification and change, and the use of educational media.

Sociology

SO 199 INTRODUCTION TO WOMEN'S STUDIES
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
An examination of the research and theories in the area of sex-role ascription from the sociological perspective and the social stereotypes to which both men and women are expected to conform. Diversified roles and status of women in the community, their involvement in education, politics, business, economics, religion and the family are examined.

SO 204 GENERAL SOCIOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W
Introduction to the sociological perspective: the components of society and social organization; culture; socialization; stratification.

SO 205 GENERAL SOCIOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ W/Sp
Analysis of major sociological institutions.

SO 206 GENERAL SOIOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/Sp
Social issues and social movements. Stresses application of basic concepts to the analysis of contemporary problems in group life.

Industrial Division

Director: Marvin Seeman

Both male and female students are encouraged to seek a major area of study in one or more of the nine departments of the division. Programs in the Industrial and Apprenticeship Division have been planned to meet the educational needs of many kinds of students, including those already employed full time in industry.

A variety of courses for students with special needs are provided. Many of these are offered in the evenings and on weekends, for the convenience of those who are currently employed and want to improve their skills and knowledge of new technology and production techniques. Basic Skill and Designated Job-Energy Level Certificates may be earned through a departmental competency based evaluation related to the student's acquired knowledge, skills, and attitudes.

An Associate of Science Degree may be earned upon successful program completion. (18 credits must be general education courses.)

Students should communicate with an advisor in the major area of concentration concerning specific requirements for certification and degree programs.

Apprenticeship Program

The Industrial and 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 training for those trades that have minimal numbers needing related training.

Apprenticeship is a two-fold program; the indentured apprentice is employed as a learner of skills through on-the-job work experience and receives approximately 114 clock hours of related training in the classroom. Classes are currently being offered at Linn-Benton Community College for the following crafts and trades: Inside Wireman, Machinist, Carpenter, Industrial Maintenance Mechanic, Industrial Pipe-fitters, Industrial Welder, Manufacturing Plant Electrician, Power Linemen, Industrial Instrumentation and Industrial Millwright. Being an indentured apprentice is a condition for entering related training classes. Information on entrance procedures and requirements for apprenticeship related training is available from the Industrial and Apprenticeship Division office at Linn-Benton Community College.

Upon completion of the required training program, the apprentice is eligible to take a state required examination for journeyman standing. Linn-Benton Community College 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 Trades degree. An additional 45 credits must be earned; of these credits, 18 must be General Education courses.

Supervised Field Experience

All Industrial and Apprenticeship students may, upon recommendation of the program chairman, receive transfer or non-transfer college credit by participating in Supervised Field Experience. Further information may be found in the Cooperative Work Experience section of this catalog.

1.200/WE 201 SUPERVISED FIELD EXPERIENCE (SFE)
☐ 3-48 class hrs/wk ☐ 1-16 cr. ☐ F/W/Sp/Sm
Supervised Field Experience is designed to give the student actual work experience which closely parallels his or her field of study. Further information is available in the Cooperative Work Experience section of this catalog.

1.201/WE 202 FIELD EXPERIENCE SEMINAR
☐ 1 class hr/wk ☐ 1 cr. ☐ F/W/Sp/Sm
Refer to the Cooperative Work Experience section of this catalog.

Faculty:
Clifford Harrison
Daryl Hogan
Larry Thornton, Chairperson

Auto Body Repair

The Auto Body Repair curriculum is designed to develop the skills, habits, attitudes and knowledge necessary to prepare students for a wide range of job opportunities in vehicle collision repair and refinishing. Skills are taught in a series of individualized vocational instructional packages in which students may progress at their own rate of learning. Students interested in specializing in a particular field of study. such as frame straightening, supervision, custom painting or insurance adjusting, may elect to take the fundamentals in that area of Auto Body Repair training.

The Auto Body Repair program combines variable credit 'open-entry/open exit' block classes with individualized 'hands-on' instruction. This means that a student may enter the program anytime during the year on a space available basis. This system places students of all training levels within a block class, thereby creating an industry type environment.

Any previous experience a student might have may be accredited after a performance test and/or written test has been taken to allow training to progress at the appropriate level. Each day, the student is assigned classroom and laboratory learning experience activities to coordinate with the instructional learning packages currently undertaken.

Students registered in any of the daily auto body repair block classes conducted the first four days of the week are eligible and encouraged to register and participate in the Friday open laboratory session. This eight hour study skills period offers the student an opportunity for make-up work, special learning activities, and/or additional credits.

Either an Associate of Science Degree program or a Designated Certificate program are available. An Associate of Science Degree is awarded upon successful completion of a minimum of 96 program credits (18 of these must be general education required courses). Either a Designated Basic Skills Certificate or a Job Entry-Level Certificate may be awarded upon successful student competency evaluation by the instructor in required designated skills. Students are urged to consult with the instructor concerning their chosen program of study.

The student will be required to purchase a set of auto body hand tools for personal use. The identified tool costs may vary from $180 to $265 depending upon the quality, source and inflation.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
PE180-90 ...	P.E. Activity		1	
		3	5	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi Media First Aid and/or			
	P.E. Activity	3		
	Electives		3	3
		6	3	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.511-3	Auto Body Repair I, II, III	10	10	10
4.151	Welding I, II, III	2	2	2
3.195	Vocational Study Skills	1	1	1
4.108	Indus Safety			3
		13	13	16

Sophomore Year

Course No.	Course Title	F	W	Sp
3.514-6	Auto Body Repair IV, V, VI	10	10	10
2.110	Salesmanship		3	
1.195	Vocational Study Skills	1	1	1
		11	14	11

Additional course work as recommended by the Auto Body instructional staff to bring the total number of units to 96 or more. Students registering for Auto Body Repair block will progress at their own pace through the six courses comprising the Auto Body Program. Grades and credits will be issued only for levels achieved by the end of the quarter.

3.195 AUTO BODY STUDY SKILLS LABORATORY

☐ 8 class hrs/wk ☐ 1-3 cr. ☐ F/W/Sp

Individualized 'hands-on' instruction to provide additional basic skills and knowledge in actual auto collision rebuilding and refinishing shop practices. This eight hour open study skills period offers the student an opportunity for make-up work, special learning activities and/or additional credits on a space available basis.

3.511 AUTO BODY REPAIR I

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp

Introduction to correct shop procedure, cleanliness, care, use and safety of tools and equipment. Types and use of sandpaper and grinding discs, operation and maintenance of paint guns, masking, priming, sealing and panel painting, auto body and chassis construction, procedures of metal working, assembly and disassembly of components, alignment practices, preparation of vehicle surfaces, use of solder and plastic materials, application of primer and spray painting surface finishes.

3.512 AUTO BODY REPAIR II

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp

Procedures for pulling out areas of impact, shrinking, and restressing metal areas, sheet metal corrections, damage correction planning, displaced metal. Principles of heat corrections to metal, filing, picking, and metal finishing.

3.513 AUTO BODY REPAIR III
☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Minor collision damage repair, alignment of doors, fenders, hood and trunk lids. Forming curvature of metal, repairing holes in panels, sectioning and welding torn and damaged areas. Introduction to door and panel replacement including sectioning, sanding, priming, and painting. Diagnosis and correction of water and dustleaks.

3.514 AUTO BODY REPAIR IV
☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
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 and alignment of sheet metal. Replacement of glass, moulding, hardware, headlinings and interior trim.

3.515 AUTO BODY REPAIR V
☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Unitized body repair and major section replacement. Body structure alignment, panel replacement, custom styling and fabrication. Principles of estimating all collision damage, appearance reconditioning and refinishing. Instruction in parts and materials purchasing, retail labor rate, flat rate, time and materials jobs,and judgment items. Agreed prices and guaranteed bids are contrasted.

3.516 AUTO BODY REPAIR VI
☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Major collision rebuilding, vehicle structure fabrication, major section replacement, detailing final repairs, and complete refinishing. Employer-employee relations, employment search techniques and final preparation for occupational employment. Principles of insurance claim handling techniques, policies coverage and types of loss. Instruction in types of payment forms. Adjustor-shop manager relations are clarified.

Faculty:
David E. Carter, Chairperson
Edward Collins
Keith Pond

Automotive Technology

The Automotive Technology Program provides students with the facilities, equipment and instruction necessary to develop the skills and abilities to perform mechanical work for the purpose of entering the auto service trade as an auto mechanic, as a specialty shop operator, or a related position in the auto mechanical trade.

The Automotive curriculum leads to a two-year Associate of Science Degree or a two-year Vocational Certificate or courses within the curriculum to achieve a specialty certificate.

The curriculum is designed so that students may enter the program at the beginning of each term and in any auto course (except tune-up) depending upon the availability of course openings.

Successful completion of the Automotive program will lead to the following job opportunities:

As a job entry mechanic - Auto dealership, independent shops, mill mechanic.

As a specialty shop operator - Auto machine shop, alignment shop, brake shop, tune-up specialist, rebuilder shop.

Related positions - Service station operator and mechanic, farm equipment mechanic, small engine mechanic (saw shop, cycle or snowmobile shop),parts man at parts house, mechanic shop or related shop.

Starting salaries range from $5.00 to 7.50 per hour, depending upon the size of the city or shop and the state in which the job is located.

Former students are employed from Alaska to California which signifies the mobility of the auto mechanic. The Placement Office of the College and/or the faculty will assist the student in seeking a post college position.

Successful completion of the program requires an interest in mechanics and basic science coupled with the motivation of curiosity for the purpose of 'wanting to know what makes a mechanical unit work' in a constantly changing technical field.

To adapt to the constant technical change, the student should be able to read and comprehend and to understand basic math at the tenth grade-level (determined by a general aptitude test) prior to entering the program, or to concurrently upgrade reading and math skills through LBCC entry level courses while progressing through the first year of the program.

Physical requirements include the willingness to get involved with grease, oils and sludge, and to be able to lift and carry up to 75 pounds.

In addition to the usual textbooks, the student will need safety glasses, a set of tools adequate for disassembly and assembly of units, and gloves. Tool lists are available upon request from the Automotive Department. Tools adequate for disassembly and assembly of units cost approximately $275.00.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Composition	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
HE252	First Aid		3	
		3	7	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm	3		
	Electives		3	3
PE180-90	Physical Education	1		
		4	3	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.295-301	Auto Mechanics I-VI	10	10	10
3.305	Automotive Fundamentals	1	1	1
4.130	Machine Processes			2
2.415	Human Rel in Business	3		
4.108	Industrial Safety		3	
		14	14	13

Sophomore Year

Course No.	Course Title	F	W	Sp
3.295-301	Automotive Mechanics I-VI	10	10	10
3.305	Automotive Fundamentals	1	1	1
4.151	Welding	2		
		13	11	11

*Block IV must be taken before Block V. **Auto Mechanics VII is available to students that have completed any one or more of the Auto Mechanics Courses I through VI. This is an optional course. ***6.330 General Electricity I is recommended to be taken prior to Auto Mechanics IV.

3.295 AUTO MECHANICS I

☐ 22 hrs/wk ☐ 1-10 cr. ☐ W

Introduction to correct shop procedures and cleanliness. Information on the correct selection, use, care and safety of tools and equipment in conjunction with skill development for the repair and adjustment of auto brakes, suspension/steering systems, and wheel balance. *See Auto Fundamentals (3.305) below.

3.296 AUTO MECHANICS II

☐ 22 hrs/wk ☐ 1-10 cr. ☐ F/Sp

Study of the complete power train system. Emphasis upon the theory, application, and servicing of clutch systems, manual transmissions, transfer cases, drive lines, universal joints, and differential assemblies. *See Auto Fundamentals (3.305) below.

3.297 AUTO MECHANICS III

☐ 22 hrs/wk ☐ 1-10 cr. ☐ W

Operating principles, maintenance, repair, and overhaul of the internal combustion engine. The various engine types, their component parts, and related accessories are studied, and in conjunction with the correct engine machining skills, a specific engine is rebuilt and returned to manufacturers' specifications, that operates correctly on a test stand. *See Auto Fundamentals (3.305) below.

3.298 AUTO MECHANICS IV

☐ 22 hrs/wk ☐ 1-10 cr. ☐ F/Sp

Instruction and practice in the operating principles and servicing of the auto fuel and electrical systems and their accessories. Conditions similar to those experienced by the live mechanic are provided to aid in correctly selecting equipment to be used for testing, adjusting, and servicing these systems. *See Auto Fundamentals (3.305) below.

3.299 AUTO MECHANICS V
☐ 22 hrs/wk ☐ 1-10 cr. ☐ W
A problem solving course designed to develop the student's knowledge and skills of tune-up. Emphasis on selection and use of equipment to include electrical test equipment, oscilloscope, emission test equipment, and the dynamometer to find various malfunctions and make necessary repairs for optimum engine performance in operating autos. *See Auto Fundamentals (3.305) Below.

3.300 AUTO MECHANICS VI
☐ 22 hrs/wk ☐ 1-10 cr. ☐ F/Sp
Operating principles, testing, and repair procedures of the automotive transmission, air conditioning and cooling systems. Direction towards developing ability to accurately analyze the performance factors or diagnose the malfunctions of these systems through the use of live units. *See Auto Fundamentals (3.305) below.

3.301 AUTO MECHANICS VII
☐ 2-20 hrs/wk ☐ 1-10 cr. ☐ F/W/Sp
Advanced instruction and practice in diagnosis and servicing of automotive problems. Summarizes all the learning units in the Auto Technology two year program. Students are responsible for the subject content of all these units or the completion of a specialist curriculum. Emphasis on the attitudes and philosophy of automotive employees who must frequently meet and deal with supervisory personnel and with the public. Experiences provided through the use of live autos, to simulate the work of an auto technician in a shop of an independent or a dealership, to prepare the student for job entry.

3.310 KNOW YOUR AUTO
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
For the Interested & Inexperienced Man & Woman. Know Your Auto has been designed to give the students an understanding of their automobiles such as cooling system, fuel system, air cleaner, basic ignition, storage battery, hydraulic brakes, tires, using a jack and changing tires.

3.311 AUTOMOBILE MECHANICAL RESTORATION
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Automobile Mechanical Restoration has been designed to assist and advise the restoration buff in rebuilding carry-in units such as differentials, transmissions, electrical and carburetor units and engine components, using professional equipment.

3.312 BASIC TUNE-UP
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
A course designed for the automobile owner. To provide students with the knowledge and skills necessary to service and maintain their automobiles to optimum running condition.

3.305 AUTOMOTIVE FUNDAMENTALS
☐ 2 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
This class is to be taken concurrently with Auto Mechanics I through VI. Develops the student's skills and knowledge in the use of hand tools, fasteners, precision measuring instruments, tubings and fittings, and safety practices as they pertain to the automotive industry. Additional training will be provided in shop procedures, metric measurement, reference materials, methods of lubrication, car appearance and detailing, parts inventory, sales and stocking, public relations, and business management.

Faculty:
Harry Armstrong, Chairperson
Bill Harris
Randy Hughey

Construction Technology

The Construction Technology program is designed to develop the skills, knowledge and attitudes necessary for entry into a broad range of jobs in the construction industry. Students may specialize in carpentry, cabinetmaking or masonry, and may choose either a two-year program leading to the Associate of Science degree or courses that provide basic skills certification.

Construction work entails the cutting, shaping and fastening of wood, brick, stone, or other building materials, and assembling elements into a completed structure.

Students in the program learn the use of tools, machines, equipment and materials associated with the trade. Well-equipped laboratories and classrooms are available both for class participation and individual student use.

The program combines variable credit block classes with individualized 'hands on' tasks that relate to various job skills. Each student is assigned specific course materials to complete within a scheduled time period. Block classes are scheduled mornings and afternoons Monday through Thursday, with shorter class periods on Friday and Saturday. Students are encouraged to enroll in the Friday open laboratory sessions for make-up work, individual projects and specialized learning activities.

Work experience is gained through actual construction of projects, including a private residence. A maximum of 15 second-year students are chosen to participate in the college-sponsored house construction project. Both the school and the community serve as laboratories for other work experience projects. College credit may be awarded through Cooperative Work Experience while the student is gaining skills on the job. The Cooperative Work Experience coordinator helps students secure an appropriate training site.

Success in the construction field requires the ability to work with people, as well as stamina for a variety of physical activities. Strong math and communications skills are needed. Construction workers must read blueprints, estimate materials and costs, do sketches and fundamental layouts, and make sure work meets building code requirements.

Students are required to purchase a set of carpentry tools for their own use. Tools may cost from $125 to $200, depending upon quality and source.

There is good opportunity for employment in the construction field for those who have acquired appropriate skills. Those who gain sufficient experience and competence after employment can progress to supervisory jobs as foremen and superintendents. A wide knowledge of construction coupled with good mathematical ability can lead to a job as an estimator. Construction workers may be self-employed as finish carpenters, cabinetmakers, masons, contractors or subcontractors.

Entry level wages for carpenters and masons generally range from $5.50 to $10 per hour, depending on location, type of job, whether union or non-union, and degree of skill required.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
	P.E. Activity			
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	4		
	Electives		3	3
		4	3	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.200-2	Construction Tech. I, II, III	10	10	10
4.151	Welding I		2	
3.429	Blueprint Reading	2		
4.114	Architectural Drafting			4
6.330	General Electricity		2	
1.134	Vocational Study Skills	2		
		14	14	14

Sophomore Year

Course No.	Course Title	F	W	Sp
3.211-3	Construction Tech IV, V, VI	10	10	10
4.108	Industrial Safety		3	
		10	13	10

3.200 CONSTRUCTION TECH I

☐ 16-20 class hrs/wk ☐ 6-10 cr. ☐ F

Variable credit from 6-10 will be awarded to the student at the successful completion of this block of construction basic skills. The student must complete at least six credits to remain in good standing in the department. Course materials include Construction Terminology, one credit; Vocational Basic Skills, one credit; Tool Maintenance, one credit; Construction Materials and Processing five credits; and Construction Practices and Procedures two credits. The program is designed to give the student necessary knowledge, skills and experience in safety as well as basic skills in each of the curriculum areas. 'Hands-on' experience in the use of tools, equipment and materials will be utilized as a process in producing finished projects. The student will need basic skills in Blueprint Reading and Industrial Safety to enter the Construction Tech II block.

3.201 CONSTRUCTION TECHNOLOGY II

☐ 16-20 class hrs/wk ☐ 6-10 cr. ☐ W

Course materials in 3.201 are designed to build previously acquired basic skills. Content will include, Residential Codes, two credits; Plumbing, two credits; and Construction Materials and Processing, four credits; Automated Production Methods, two credits. Related courses include Electricity (2), Welding (2) and for the degree candidates, Math II (4). The student will participate in both theory and practical lab experiences in each skill area of construction.

3.202 CONSTRUCTION TECHNOLOGY III

☐ 16-20 class hrs/wk ☐ 6-10 cr. ☐ Sp

Course materials in 3.202 are designed to build upon previous basic skills as well as to prepare the student for sophomore specialized construction project participation. Course content includes Job Advancement, one credit; Estimating, two credits; Air Conditioning/ Sheetmetal, two credits; and Practical Methods in Construction, five credits. Related courses include Architectural Drafting and Occupational Writing. Orderly habits, adaptability to job changes and competence in trade standards will be utilized to develop technical skills.

3.211-13 CONSTRUCTION TECHNOLOGY IV, V, VI

☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp

This course of study is designed to complement and develop carpentry skills by utilizing an applied residential project. Students will build a family residence in the community. Selected students must be able to work with others on the construction project. The student is required to follow rigorous building codes and practices. The trade demands speed and efficiency while producing a neat and structurally accurate piece of work. The student must achieve a competence necessary to translate blueprints into structural elements while working in a systematic and planned construction project.

3.216-18 CONSTRUCTION TECHNOLOGY VII, VIII, IX

☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp

This course is designed to give the student 'on-the-job' experience in the community. The student will work part time and continue related courses at college. Credit will be awarded for experience gained while on the job. Additional experience will be gained by the student while participating as a supervisor on the college sponsored house project. This block of courses contains twenty-six credits of Supervised Field Experience, seventeen in Cooperative Education and nine in Construction Handling Applications on the applied residential project. The remaining four of these thirty credits are Construction electives.

Faculty:
R.D. Lane, Chairperson
Merle Jackson

Heavy Equipment Mechanics/Diesel

The work of a diesel mechanic will vary, depending upon whether he services automotive engines, industrial power engines, marine engines, stationary, agricultural, or railway engines. Even though each type of diesel engine is based upon the same theoretical principle, the equipment they power may vary in terms of transmission, gear systems and accessory items. The work of the diesel mechanic can be divided into diagnosis, service, repair and rebuilding.

Diesel mechanics repair and maintain diesel engines which power railroad trains, ships, generators, and construction, highway and farm equipment. To become a diesel mechanic one should have a mechanical aptitude and a knack for shop work, mathematics and science. It is essential to be able to read with understanding, as a considerable amount of time is spent in reading service manuals. The training consists of both theory and practice of maintenance and repair of specialized equipment. The trainee usually gets initial mechanics experience on gasoline or other small engines.

The curriculum of the Heavy Equipment Mechanics/Diesel program is so organized as to impart to the student a balance of theory and practical experience. The student can expect to spend approximately 200 clock hours in each of six areas of study. Practical experience will be gained by diagnosing, servicing, repairing, and rebuilding of components and live equipment. Students may be admitted to advanced standing upon confirmation of appropriate education/experience. This confirmation may be accomplished by a combination of transcripts, evaluation of experience and competence examination. Permission of the Division Director is required to gain advanced standing.

To function as mechanics, the students must purchase their own hand tools. The necessary tools of the trade cost approximately $500.

The starting pay range for diesel mechanics is usually between $1000 and $1,500 monthly, depending upon the type of equipment and the employing industry.

Upon completion of the program, the student may gain additional experience and skill in possible job positions in service departments of distributors and dealers that sell diesel powered autos, trucks, farm and construction equipment. Bus lines, railways, truck and marine industries employ diesel mechanics. Electric power plants, local industries and both state and federal government have a great need for trained mechanics. A qualified mechanic is hard to find. Diesel power will be a predominant source of power in spite of increased use of atomic reactors and gas turbines.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi Media First Aid	1	1	2
		1	5	2

Sophomore Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
	General Education Electives	3		3
		3	6	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.125	Heavy Equip Machanics I, II, III	10	10	10
4.151-2	Welding I & II	2	2	
1.134	Vocational Study Skills	1		
6.330-1	Electricity I & II	3	3	
		16	15	10

Sophomore Year

Course No.	Course Title	F	W	Sp
3.128-130	Heavy Equipment Diesel IV, V, VI	10	10	10
3.555	Pneumatics & Hydraulics	4		
4.108	Indus Safety			3
		14	10	13

3.125 HEAVY EQUIPMENT MECHANICS/ DIESEL I

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ F

This block of courses deals with basic mechanical theory and the practical use of specialized tools. Mensuration abilities will be developed with the use of precision instruments. Assembly and disassembly will be utilized as a method of teaching terminology, selection and use of proper tools, accurate measurement, safety and maintenance of tools, materials and equipment. Initial mechanical experience will be gained from smaller gasoline equipment. The student must complete this course or have equivalent courses or experience to enter successive courses in Heavy Equipment Mechanics.

3.126 HEAVY EQUIPMENT MECHANICS/ DIESEL II

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ W

This block of courses deals with the inspection and analysis of disassembled component parts to determine necessary repairs. Proper machine tools for engines, transmissions and differentials will be selected and utilized in practical laboratory projects. Operating principles, maintenance and repair of component parts and accessories will be studied and concurrently be re-built to manufacturer's specifications. All equipment will be tested for correct operation.

3.127 HEAVY EQUIPMENT MECHANICS/ DIESEL III

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ Sp

This block of courses is designed to develop the student's knowledge and skill in problem solving exercises of electrical, carburetion and fuel injection systems. Operational theory of electrical and fuel injection systems will be studied. The student will gain practical experience through the use of specialized testing equipment. Trouble shooting, diagnosis and service of these components will be completed in the laboratory as well as on available live equipment.

3.128 HEAVY EQUIPMENT MECHANICS/ DIESEL IV

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ F

This block of courses is designed to develop the student's abilities to diagnose, service, maintain and repair hydraulic and air brake systems. Instruction and practice as well as problem solving exercises will be utilized in testing, adjusting, servicing and repairing these systems. Both theory and practical experience will be compiled to facilitate the student's skill development.

3.129 HEAVY EQUIPMENT MECHANICS/ DIESEL V

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ W

This block of courses is designed to build on previous knowledge and skills of the students. Theory will be transformed to practical applications of problem solving. The student will be taught recognition factors necessary for repair decisions. A great variety of live equipment, both on and off the road types, will be utilized as training devices for the student. The student will gain experience in equipment selection and use in the process of testing, adjusting, servicing, and repairing heavy duty mechanical components.

3.130 HEAVY EQUIPMENT MECHANICS/ DIESEL VI

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ Sp

This group of courses is designed to serve as a problem solving sequence in further developing the student's abilities to diagnose malfunctions and make necessary repairs. After repair completion, the student will use proper equipment in analyzing systems performance of the repaired components. Operational experience in the repair and testing of all units will be accomplished under similar conditions of those experienced by a heavy duty mechanic employed by a dealer.

Faculty:
Mike Burke
John Griffiths, Chairperson

Machine Tool Technology

Machine Tool curriculum is designed to develop skills in a wide variety of machining processes including the operation of engine lathe, milling machine, drill press, surface grinder, tracer lathe, radial drill press and tool and cutter grinders.

Students work through a sequence of assignments ranging from simple exercises to complex assemblies. Hands-on experiences, lecture-discussion periods, textbooks, manuals, audio visual aids and field trips are employed throughout the six terms. 'People skills' of finding and keeping a job, and employer-employee relations are continually emphasized.

Students finishing the first year of the curriculum should be able to enter the job market as trainees with basic skill in machining processes at their disposal. Students completing the full two year curriculum are granted an Associate of Science degree and are in a strong position to enter a rapidly growing job market.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
	Electives		3	3
		3	7	3

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm			3
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi Media First Aid and/or			
	P.E. Activity Courses	2	1	1
		2	1	4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.403-5	Machine Tool I, II, III	10	10	10
4.100	Blueprint Reading & Sketching	2		
4.151	Welding I	2		
1.134	Vocational Study Skills	1		1
		15	10	11

Sophomore Year

Course No.	Course Title	F	W	Sp
3.406-9	Machine Tool IV, V, VI	10	10	10
6.293	Intro to Metallurgy	2		
4.152	Welding II	2		
1.134	Vocational Study Skills	2		
4.108	Indus Safety		3	
		16	13	10

3.403 MACHINE TOOL I

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Introductory information for the student seeking a career as a machinist. Emphasis on safe operation of engine lathes, drill press, and band saw; fundamental precision measurement, and blueprint reading. Students will sharpen lathe tool bits & twist drills.

3.404 MACHINE TOOL II

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Involves more advanced engine lathe work, including internal and external tapers and single point threads of various forms. Vertical milling machine operations and surface plate inspection procedures are introduced. Tool selection, cutting speeds and, feed rates are emphasized. Prerequisite: Machine Tool I or instructors approval.

3.405 MACHINE TOOL III

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Previously acquired skills are expanded and updated. Right angle trigonometry is employed in set ups. Projects typically require the use of two or more machine tools. Various horizontal milling operations are frequently involved. Prerequisite: Machine Tool II

3.406 MACHINE TOOL IV

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Advanced lathe and milling machine training including dividing heads and rotary tables, and simple tracer lathe work with emphasis on industry accepted metal removal rates. Assigned projects require use of the surface grinder and other abrasive metal removal techniques. Production of iron, steel, ferrous and non-ferrous alloys is studied. Prerequisite: Machine Tool III

3.407 MACHINE TOOL V

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Projects will be assemblies requiring the use of a combination of machine tools on each part to produce items such as spur gears and racks. Tolerances will be much closer than in previous terms. Emphasis is on precision. Metal processing including heat treating, hardening, tempering, and annealing are covered. Prerequisite: Mach Tool IV

3.408 MACHINE TOOL VI

☐ 20 class hrs/wk ☐ 10 cr. ☐ F/W/Sp
Engine lathes and milling machine skills will be further expanded with emphasis on quality and speed. Introduction to cylindrical grinding, tool and cutter grinding, and jig boring. Prerequisite: Machine Tool V

4.130 MACHINE PROCESSES

☐ 20 class hrs/wk ☐ 2 cr. ☐ F/W/Wp

A lecture-discussion, demonstration course for non-machine tool majors. Intent of the course is to show students the relationship between their fields and the machine tool trade. No text is required; handouts and audio-visual aids are used.

Faculty:
L. Carl Love, Chairperson

Metallurgical Technology

The Metallurgical program is intended to present information regarding the extraction and purification of metals; the subsequent alloying or combining treatment, and fabrication of metals; and the examination, analysis, and testing related to quality control and product development.

Metallurgical theory as presented deals with the processing of raw products to metals, internal structure of metals, the influence of microstructure on properties, and the influence of alloying elements as they are conditioned by mechanical working and heat treatment.

Satisfactory completion of the following program will lead to the Associate of Science degree. Certificates will be offered to students who satisfactorily complete specific courses in metals testing.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
		3		

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	4		
	General Education Electives			6
		4	3	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
6.293	Intro to Metallurgy	4		
6.276	Physical Metallurgy		4	
6.294	Process Metallurgy			4
4.151	Welding I			2
3.444	Welding Metallurgy			4
4.100	Blueprint Reading & Sketching			2
4.205-6	Basic Chemistry I, II	4	4	
6.551	Technical Math I	4		
MT101	College Algebra or			
6.552	Technical Math II		4	
4.200-2	Practical Physics		4	4
		12	16	16

Sophomore Year

Course No.	Course Title	F	W	Sp
6.330	General Electricity	3		
4.120	Fundamentals of Specification			3
4.130	Machines Processes		2	
4.161-2	Materials Testing I, II	3	3	
6.281-3	Non-Destructive Testing I, II, III	3	3	3
6.298-99	Metallography I, II	3	3	
	Technical Elective	2		
4.108	Industrial Safety			3
		14	11	9

3.444 WELDING METALLURGY I

☐ 3 class/2 lab hrs/wk ☐ 3 cr. ☐ Sp

An introduction to the physical and mechanical properties of weld metal and how the application of soldering, brazing, and fusion processes affect the structural and service requirements of metal joints. Investigations will be made to determine operator responsibility in regard to completing joints in welded metals that are capable of matching or exceeding the strength and reliability of the base metals.

3.445 WELDING METALLURGY II

☐ 3 class/2 lab hrs/wk ☐ 4 cr. ☐ W

An introduction to the basic processes of welding fabrications as they affect metallic products. Structural characteristics of metals are investigated as this information relates to quality low-cost welded assemblies.

4.161-2 MATERIALS TESTING I,II
☐ 4 class hrs/wk ☐ 3 cr. ☐ F/W
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 measurements, methodology test equipment, instrumentation, and analysis of data.

6.270 METALLURGY READINGS AND CONFERENCES
☐ 1-20 hrs/wk ☐ 1-10 cr. ☐ On Demand
Topics covered are at the discretion of 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. Number of credits can vary from 1 to 10. Prerequisite: Consent of instructor.

6.276 PHYSICAL METALLURGY
☐ 6 class hrs/wk ☐ 4 cr. ☐ W
Study of the concepts, structures, properties, heat treatment, methods of forming, and evaluation of metals and alloys. Prerequisite: Introduction to Metallurgy or consent of instructor.

6.281 NON-DESTRUCTIVE TESTING I
☐ 5 class hrs/wk ☐ 3 cr. ☐ F
Introduction to theory and applied techniques of liquid penetrant, eddy current, and magnetic particle inspection dealing with industrial applications as an integral part of metals fabrication and development along with testing and inspection process in quality control.

6.283 NON-DESTRUCTIVE TESTING III
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sp
A continuation of Non-destructive Testing I with a major emphasis upon X-ray and gamma ray testing and inspection.

6.288 VACUUM TECHNOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Several phases of vacuum technology starting with basic terminology and progressing through industrial applications and equipment selection. Includes specifics, such as what happens in a vacuum, need for a vacuum, and vacuum chambers requirements. Maintenance of equipment stressed.

6.293 INTRODUCTION TO METALLURGY
☐ 6 class hrs/wk ☐ 4 cr. ☐ F
Introduction to crystalline and atomic structure of metals, alloys, methods of bonding, types of solid solutions, analysis of phase diagrams, heat treatment and hardening mechanisms of metals, and the affect of alloying elements.

6.294 PROCESS METALLURGY
☐ 6 class hrs/wk ☐ 4 cr. ☐ Sp
Metallurgical principles including raw materials requirements for metals processing, furnaces and refractories, furnace fuels and combustion, heat flow energy balances and alloy systems. Prerequisite: Basic Chemistry or consent of instructor.

6.298-9 METALLOGRAPHY I, II
☐ 4 class hrs/wk ☐ 3 cr. ☐ F/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.

4.120 FUNDAMENTALS OF SPECIFICATIONS
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
This course is designed to acquaint students with usage and practice in preparation and interpretation of manufacturing and fabrication specifications. Practical problems will be assigned to relate classwork to industry.

4.122 STRENGTH OF MATERIALS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
An introduction to the mechanics dealing with forces as they relate to tension, compression, torsion, and shear. Three major factors will be involved including metals, time and force. Mechanical properties of metal will be examined as these properties relate to service performance. Prerequisite: College Algebra.

Recreational Vehicle and Small Engine Repair

The Recreational Vehicle and Small Engine Repair program includes a number of options ranging from one term to two years. To learn mechanical skills to repair recreational vehicles, lawn & garden equipment and industrial portable tools, each of the three areas within the program is two terms in length so the student can choose basic or comprehensive training in any or all of the three areas.

The recreational vehicles course of study includes work on snowmobiles, motorcycles and all-terrain vehicles. The small engine curriculum covers such equipment as garden tractors, rototiller, edgers and motorized lawn sweepers. In the area of industrial portable tools the students study the repair of outboard marine engines, chain saws, drills and generators.

During their instruction students work on actual equipment in need of repair and are trained as complete mechanics.

The employment outlook is good as the sale of recreational vehicles is increasing. Beginning or entry-level salaries range from $3.50 to $5.00 per hour. Advancement is dependent upon the ability of the mechanic and the size and location of the employer. Self-employment in some areas is good.

An Associate of Science degree is awarded to those who complete 60 credits along with the required related courses. A Certificate of Completion is awarded to those who complete 20 credits (2 consecutive courses) or more in this program.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math	4		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
		4	3	4

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm			3
	General Education Electives		3	3
			3	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.560	Small Engine Repair I or			
3.562	Small Engine Repair III or			
3.570	Rec Vehicle Repair I	10	10	10
1.134	Vocational Study Skills	1	3	
1.200	Supervised Field Experience			3
		11	13	13

Sophomore Year

Course No.	Course Title	F	W	Sp
3.561	Small Engine Repair II or			
3.563	Small Engine Repair III or			
3.571	Rec Vehicle Repair II	10	10	10
4.151	Welding I	2		
1.200	Supervised Field Experience		3	
1.134	Vocational; Study Skills	1	1	
4.108	Industrial Safety	3		
		16	14	10

3.556 BASIC SMALL ENGINE REPAIR

☐ 4-6 class hrs/wk ☐ 1-3 cr. ☐ F/W/Sp

The operating theory of 2 stroke cycle and 4 stroke cycle engines and performance of specific electrical, carburetion and service maintenance on small engines. Designed for students who wish only a basic understanding of small engine service and tune-up. Credit will be variable depending on student progress, understanding and time spent in shop activities.

3.560 SMALL ENGINE REPAIR I

☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp

Operating theory of 2 stroke and 4 stroke cycle engines and performance of specific electrical, carburetion, service, maintenance and overhaul techniques on lawn and garden equipment.

3.561 SMALL ENGINE REPAIR II

☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp

Improves the skills and proficiency learned in Small Engine I. Service and repair of related lawn and garden equipment. Prerequisite: Small Engine Repair I.

3.562 SMALL ENGINE REPAIR III
☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp
Operating principles of engines used for chain saws, outboard marine and industrial tools. Proficiency in performing specific electrical, carburetion, service, maintenance and overhaul technique Prerequisite; Small Engine Repair III.

3.563 SMALL ENGINE REPAIR IV
☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp
Improves skills and proficiency in service and repair related to chain saw, outboard marine components and industrial equipment. Prerequisite: Small Engine Repair III.

3.570 RECREATIONAL VEHICLE REPAIR I
☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp
Operating principles of engines used for motorcycles and/or snowmobiles and A.T.V.'s. Proficiency in performing specific electrical, carburetion, service, maintenance and overhaul techniques.

3.571 RECREATIONAL VEHICLE REPAIR II
☐ 20 class hrs/wk ☐ 1-10 cr. ☐ F/W/Sp
Improves skills and proficiency in service and repair of the complete motorcycle, snowmobile and A.T.V.'s. Prerequisite: Recreational Vehicle Repair I.

Faculty:
Michael Butler

Refrigeration, Heating and Air Conditioning

The Refrigeration, Heating and Air Conditioning program is designed to help students acquire the mechanical skills necessary to install, maintain and repair refrigeration, heating and air conditioning equipment and accessory units. Courses include both theory and practical experience in diagnosis, service and repair of units commonly installed in residences and businesses.

Both a two-year Associate of Science degree and a one-year Certificate course of study are offered.

Refrigeration mechanics install, maintain and repair cooling devices of all kinds; service room-size air conditioniners, central cooling systems, refrigerators and freezers in private homes, offices, hotels, stores and commercial plants; and are responsible for cooling equipment in the frozen food industry and locker plants. Mechanics may also specialize in automobile, bus, train or airplane air conditioning units.

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.

Students entering the program should have good math and reading skills or be prepared to improve them while enrolled in the program. Courses related to the program include math, physics, electricity, welding, plumbing and sheetmetal. Students learn to read, interpret and work from sketches, layouts and blueprints; develop knowledge of standard practices, methods, tools and materials of the trade; learn to analyze machine operation and diagnose faulty performance; and develop skills in making replacements or repairs.

A variety of tools and specialized instruments are required for the course. In addition to the usual books and supplies, students should expect to spend about $400 for a personal set of tools over the two-year period.

Job prospects in this field are good. Beginning pay ranges from $5.50 to $12.50 per hour, depending on location and the type of equipment to be serviced or repaired. Qualified workers may advance to positions as supervisors, estimators, city or county inspectors, or manufacturers' representatives.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Composition	3		
1.110	Elements of Algrebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm			3
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	4		
	General Education Electives		3	3
		4	3	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.530-2	R/H/AC I, II, III	10	10	10
6.330-1	Electricity I, II	3	3	
4.151	Welding I	2		
3.429	Blueprint Reading	2		
4.300	Practical Physics			4
		17	13	14

Sophomore Year

Course No.	Course Title	F	W	Sp
3.540-2	R/H/AC IV, VI VI	10	10	10
	Technical Elec	2		
4.108	Industrial Safety		3	
		12	13	10

3.530 REFRIGERATION/HEATING/AIR CONDITIONING I

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ F

This block of courses is designed to convey to the student theories and principles that are necessary for building a solid operating foundation for future job-entry. The technologies of heating and cooling will be examined through lecture and practical laboratory activities. Essential knowledge related to basic skill development will be utilized to produce a transfer of learning to the world of refrigeration, heating and air conditioning. Course content includes: six credits in Basic Introduction to Ref/Heat/AC, three credits in Basic Layout Procedures (sheetmetal) and one credit in Basic Vocational Skills. Related subject matter needed for foundational work includes three credits in electricity and four credits in General Education requirements. The student must maintain six credits of enrollment in Refrigeration/Heating/Air-Conditioning courses as a major.

3.531 REFRIGERATION/HEATING/AIR-CONDITIONING II

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ W

This block of courses is designed to build skills and operational knowledge in three specific areas of concentration; Principles of Refrigeration, six credits; Plumbing, two credits; and Sheet Metal Applications, two credits. This basic knowledge and skill development is prerequisite to becoming a refrigeration mechanic. Necessary related classes include Electricity II, three credits; Welding I, two credits; Math II, four credits. Fundamental refrigeration theory is applied to techniques and procedures necessary for the understanding of refrigeration maintenance and repair.

3.532 REFRIGERATION/HEATING/AIR-CONDITIONING III

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ Sp

This block of courses is designed to build upon previous knowledge and skills. The Principles of Heating, (six credits) is utilized to increase the students' knowledge and skills necessary to understand the repair, service and maintenance of heating systems. Mechanical Installation Procedures (four credits) is generalized to build skills necessary to design and install mechanical systems in Refrigeration/ Heating/Air Conditioning. Related subject matter, Occupational Writing, three credits, and Practical Physics, four credits, contain the necessary skills to communicate learned principles and theories to practical applications in making a living.

3.540 REFRIGERATION/HEATING/AIR-CONDITIONING IV

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ F

A thorough knowledge of refrigeration and heating is necessary to understand the Operational Principles of Air Conditioning and Air Movement (six credits). The introduction of psychrometrics to the student will increase abilities necessary to analyze and understand air conditioning technology. Practical aspects of designing, sizing, maintaining and trouble shooting will be emphasized. Principles of Hydraulics (four credits) will integrate concepts of hydrostatics, fluid mechanics, pressure control, flow rates and pump operations into practical applications related to refrigeration and heating. Automotive refrigeration may be taken as a technical elective. This course is specialized to build skills in the diagnosis, service and repair of automotive refrigerating units.

3.541 REFRIGERATION/HEATING/AIR-CONDITIONG V

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ W

This block of courses is utilized to develop specialized knowledge and skills needed in analyzing problems and developing solutions related to the repair of refrigeration, heating and air conditioning systems. Diagnosis, Service and Repair (eight credits) will develop practical experience in trouble shooting and decision making for repairs. Actual repair and rebuilding experiences in simulated live situations will be accomplished. Control Applications (two credits) will be utilized to examine the function and operation of electromechanical pneumatic-hydraulic control systems. The operation and repair of control systems commonly utilized in Refrigeration, Heating and Air Conditioning will serve as an experience building activity in the laboratory.

3.542 REFRIGERATION/HEATING/AIR-CONDITIONING VI

☐ 12-20 class hrs/wk ☐ 6-10 cr. ☐ Sp

The intent of this block of courses is to involve the student in the application of developed knowledge and skills to a specific student designed project. Systems Design and Development (six credits) is organized to promote problem solving and ingenuity, to the application of new product development or use. Commercial/Industrial Refrigeration (four credits) is an advanced course designed to apply trouble shooting expertise to the maintenance and repairs of units used in commercial and industrial plants. Practical experience will be utilized in both the laboratory and community to gain a broad experience in repair of industrial units.

Faculty:
John Alvin, Chairperson
Ed Stewart
Dennis Wood

Welding

The one-year Certificate Welding program, with qualification, can be entered at any time during the academic year and be completed in three quarters. Classes and laboratory periods are provided so that the student can develop the skills, habits, attitudes and knowledge to prepare for a wide range of job opportunities. Time is provided to prepare for and undergo certain welder certification tests. These tests are administered by independent agencies. A one-year Certificate of Completion will be issued upon fulfillment of the program requirement.

The student can exercise the option of completing a second year and obtain either an Associate of Science Degree or a Certificate of Completion. The second year is designed to provide valuable experience in specific areas such as layout, fabrication, repair, and other related subjects.

The Welding program requires a general interest in mechanical concepts and good motor coordination (hand-eye). Welders work outdoors, indoors, in confined areas, and in high places, depending upon the industry. For these reasons, a student should be in good physical condition and be able to maneuver well.

Employment opportunities are always good and a student can expect from $3.50 per hour to $8.00 per hour to start, depending upon the industry and the student's ability.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Composition	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
9.317	Multi-Media First Aid and/or			
HE250	Health and/or			
HE252	First Aid and/or			
	P.E. Activity Courses			4
		3	4	4

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
	General Education Electives		3	3
		3	3	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
3.444	Welding Metallurgy			4
4.100	Blueprint Reading & Sketching	2		
4.240	Basic Arc Welding	6		
4.241	Intermediate Arc Welding		6	
4.242	Basic Oxyacetylene Welding	4		
4.243	Welding Projects I		4	
4.245	Layout Procedures for Welding.....		3	
4.246	Advanced Arc Welding			6
4.250	Welding Projects II.....			4
		12	13	14

Sophomore Year

Course No.	Course Title	F	W	Sp
4.124	Technical Drawing I.....	2		
4.130	Machine Processes	2		
4.255-7	Fabrication Repair Prac I, II, III	6	6	6
3.445	Welding Metallurgy II		4	
6.330	General Electricity.....		3	
2.415	Human Relations in Business	3		
3.555	Pneumatics/Hydraulics			4
4.108	Industrial Safety			3
		13	13	13

4.151-2 WELDING I, II

☐ 4 class hrs/wk ☐ 2 cr. ☐ F/W/Sp

Set-up and operation of oxyacetylene welding, metal arc welding, and cutting equipment. Demonstrations and practice in welding, brazing and soldering ferrous and non-ferrous metals and their alloys. Technical information on use of electrodes and composition of metal and application are included. (For non-majors).

4.153 WELDING III
☐ 4 class hrs/wk ☐ 2 cr. ☐ Sp
A continuation of Welding II with more indepth study of specific areas such as all position manual stick electrode welding, all position TIG & MIG welding and braze welding, brazing and oxyacetylene welding. Demonstrations and supervised practice will be provided on these operations. Technical information will be introduced as required by the various processes and procedures studied.

4.154 WELDING SEMINAR
☐ 2 class hrs/wk ☐ 1-4 cr. ☐ F/W/Sp
Open entry, open exit, variable credit course to provide upgrading skills leading to various certifications or specific job related needs.

4.240 BASIC ARC WELDING
☐ 14 class hrs/wk ☐ 6 cr. ☐ F
Introduction to arc welding practices on mild steel of various thickness and joint configurations in all positions.

4.241 INTERMEDIATE ARC WELDING
☐ 14 class hrs/wk ☐ 6cr. ☐ W
Continuation of Basic Arc Welding 4.240. Areas of consideration will be arc welding, mild steel, and special ferrous and non-ferrous alloys employing 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 INTERMEDIATE OXYACETYLENE WELDING
☐ 8 class hrs/wk ☐ 4 cr. ☐ W
Continuation of Basic Oxyacetylene Welding 4.242. Areas of consideration will be oxyacetylene welding, soldering, brazing and brace welding of various similar and dissimilar metals.

4.245 LAYOUT PROCEDURES FOR WELDING
☐ 5 class hrs/wk ☐ 3 cr. ☐ W
Introduces layout principles and applications. Tools and equipment for layout studied in respect to their operating performance with stress on maintenance. Planning and construction of templates, layout, actual fabrication in specific areas to examine the quality of the layout process.

4.256 ADVANCED ARC WELDING
☐ 14 class hrs/wk ☐ 6 cr. ☐ Sp
Continuation of Intermediate Arc Welding 4.241. Preparation for weld certification in all positions with the manual arc process.

4.250 ADVANCED OXYACETYLENE WELDING
☐ 8 class hrs/wk ☐ 4 cr. ☐ Sp
Continuation of Intermediate Oxyacetylene Welding 4.243. Fabrication layout procedures, pipe joint preparation, and large and small diameter pipe welding in all positions.

4.255-7 FABRICATION & REPAIR PRACTICES I, II, III
☐ 14 class hrs/wk ☐ 6 cr. ☐ F/W/Sp
Advanced information and skills related to welding repair and fabrication. Instructor-evaluated group or individual projects. Projects require knowledge gained from related classes as outlined in the curriculum. Blueprint reading, cost estimation, ordering and inventory of materials, layout skills, fabrication and final assembly.

9.148 PREPARATION FOR WELDER CERTIFICATION-PRESSURE PIPE
☐ 8 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
Necessary information and skill development to undergo a welder certification test administered by State of Oregon, Dept. of Commerce, Boiler Division. The test is provided upon completion of the course. Prerequisite: Approval of instructor.

9.151-2 WELDING I & II
☐ 4 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
Set-up and operation of oxyacetylene welding, metal arc welding (including TIG and MIG equipment) and cutting equipment. Demonstrations and supervised practice provided on ferrous and non-ferrous metals in all positions. Technical information on choice of electrodes and their application, welding power sources and accessories, and metal identification are included.

9.153 WELDING III
☐ 4 class hrs/wk ☐ 2 cr. ☐ Sp
A continuation of Welding II with more indepth study of specific areas such as all position manual stick electrode welding, all position TIG & MIG welding and braze welding, brazing and oxyacetylene welding. Demonstrations and supervised practice will be provided on these operations. Technical information will be introduced as required by the various processes and procedures studied.

Science and Technology Division

Director: Peter C. Scott

The Science and Technology Division provides students with science-related curricula enhancing their career development. The Division meets the need of both the vocational student and the student who is pursuing a professional career in science and science-related fields. Programs are offered in the engineering technologies such as drafting, electronics, and civil-mechanical engineering.

Science-related programs are offered in agriculture, laboratory technology, water/wastewater technology and fire science. The programs in mathematics, physical science, and biological science serve the general education needs of the college as a whole.

The Division provides the technical background for students majoring in forestry, engineering, medicine and similar transfer programs. The entire Division is involved in community development by providing the community with educational opportunities outside the traditional educational setting. Continuous upgrading for personnel presently employed within the district is provided through inservice training, workshops, and evening classes to meet these special needs.

TWO YEAR ASSOCIATE OF SCIENCE DEGREE PROGRAM

Crop Management
Turf Management
Animal Technology
Civil-Mechanical Engineering Technology
Drafting Technology
Electricity and Electronics Technology
Science Laboratory Technology
Wastewater Technology
Water/Wastewater Technology
Fire Science

ONE YEAR PROGRAMS

Crop Management Certificate
Turf Management Certificate
Water/Wastewater Treatment Plant Operation

Supervised Field Experience

Students may, upon the recommendation of the program coordinator, receive transfer or non-transfer college credit by participating in Supervised Field Experience (SFE). Further information may be found in the Cooperative Work Experience section of this catalog.

1.200/WE 201 SUPERVISED FIELD EXPERIENCE (SFE)

☐ 3-48 class hrs/wk ☐ 1-16 cr. ☐ F/W/Sp/Sm
Supervised Field Experience is designed to give the student actual work experience which closely parallels his field of study. Further information is available in the Cooperative Work Experience section of this catalog.

1.201/WE 202 FIELD EXPERIENCE SEMINAR

☐ 1 class hr/wk ☐ 1 cr. ☐ F/W/Sp/Sm
Refer to the Cooperative Work Experience section of this catalog.

Faculty:
David Miller, Chairperson
James Reynolds
Lann Richardson

Engineering Technology

Associate Science degree programs are offered in areas of Civil-Mechanical and General Drafting. For those interested in obtaining a Bachelor of Science Degree in Engineering, Linn-Benton Community College offers a freshman-level orientation sequence. Students completing the freshman Architectural Engineering and general studies classes at Linn-Benton may then transfer to a four year school. Specialty courses in Energy, Electronics, Mechanics and Illustration, etc., are provided for those desiring additional technical knowledge and skills.

Drafting Technology

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

The first year of study provides a sound general background with the second year providing broader coverage of subject selections, while permitting the student to work toward such specialties as civil, mechanical, electronics, architectural, product design, technical illustration and computer drafting.

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 Pre-Tech Math and Basic English as indicated by the comparative guidance and placement test scores.

Students new to the subject area should be prepared to purchase the basic tools of the profession at an approximate cost range of from $30 to $90.

Students interested in Cooperative Work Experience should refer to the appropriate section of the catalog and consult with the Cooperative Work Experience or Drafting Department.

Candidates for the Associate Science Degree in Drafting Technology must complete the following courses.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
		3	3	

Sophomore Year

Course No.	Course Title	F	W	Sp
HE250	Health and/or			
HE252	First Aid and/or			
	P.E. Activity Courses	4		
	General Education Electives	2	3	2
		6	3	2

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
4.109	Technical Sketching	1		
4.110-2	Drafting Lab	3	3	3
4.121	Electronics Drafting		2	
4.148	Practical Descriptive Geometry			2
6.196	Drafting Engineering Practices	2		
6.550	Pre-Tech Math	4		
6.551-2	Tech Math I, II		4	4
3.494	Construction Methods & Materials		2	
4.119	Methods & Materials of Manufacturing			2
1.112	Tech Report Writing			3
		10	11	14

Sophomore Year

Course No.	Course Title	F	W	Sp
3.498	Product Design			2
4.114	Architectural Drafting		4	
4.115	Presentation Drawing		2	
4.116	Architectural Planning	3		
4.123	Technical Illustration			3
4.125	Project Drafting or			
	Cooperative Work Experience			2
4.300-2	Practical Physics		4	4
6.200	Surveying I	2		
6.205-6	Civil Drafting I, II		3	3
6.208	Machine Drafting	4		
6.340	Technical Calculations I	2		
		11	13	14

Suggested Electives: Materials and Estimating, Machine Processes, Applied Hydraulics, Principles of Road Design, Electricity Controls, Fluid Power, Integrated Circuit Layout and Design, Alternate Energy Resources, Coop Work Experience, Prototype and Model Construction, Electronics Drafting. Department approval required for technical electives not listed above.

3.494 CONSTRUCTION METHODS & MATERIALS

☐ 2 class hrs/wk ☐ 2 cr. ☐ W

Fundamental aspects of materials used in modern construction. Designed to familiarize the student with terminology, construction details, tools, equipment, and processes as related to the manufacturing and construction industries. A wide scope of methods and procedures will be studied utilizing a variety of resource materials.

3.498 PRODUCT DESIGN

☐ 2 class hrs/wk ☐ 2 cr. ☐ Sp

Relates the humanistic elements of design to a product or a concept, designing for human use and for aesthetic human appreciation.

4.100 BLUEPRINT READING/VOCATIONAL AREA

☐ 3 class hrs/wk ☐ 0-3 cr. ☐ On Demand

Individualized course for students in related occupational programs to provide job-related skills in interpreting industrial drawings, symbols, and in the preparation of idea-explanation sketches. Print reading areas can include: architectural, machine, welding, electrical, metallurgy, air conditioning and refrigeration, etc. As specified within the vocational program curricula.

4.109 TECHNICAL SKETCHING

☐ 2 class hrs/wk ☐ 1 cr. ☐ F

Freehand sketching designed to develop skills related to technical and industrial applications. Includes spatial visualization, multiview theory, pictorial views, graphic enlargement, shade and shadow techniques, and 'on-the-spot' sketches.

4.110 DRAFTING LAB
☐ 6 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp/Sm
Individualized drafting course designed to develop basic skills and knowledge of drafting techniques. Students can earn from 0-3 credits and are placed at a performance level that compensates for previous drafting experiences. The 9 hour sequence course includes the application of drafting instruments, dimensioning techniques, sketching, lettering, pictorial drawings, auxiliary views, sectioning, tolerances, fasteners, detail drawing, assembly drawings, inking, technical illustration, architectural and design drafting. Beginning students should sign up for 4.110.

4.111 DRAFTING LAB
☐ 6 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp/Sm
Prerequisite: 3 cr. 4.110 Drafting Lab or consent of instructor.

4.112 DRAFTING LAB
☐ 6 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp/Sm
Prerequisite: 3 cr. 4.111 Drafting Lab or consent of instructor.

4.114 ARCHITECTURAL DRAFTING
☐ 7 class hrs/wk ☐ 4 cr. ☐ W
Individualized course in architectural drawings related to light commercial and residential structures. Requires completion of a full set of working drawings for a structure, using a wide variety of architectural reference media. Analysis of the planning and drawing requirements of the selected structure. Prerequisite: 6 hrs. of Drafting Lab and Architectural Planning or the consent of the instructor.

4.115 PRESENTATION DRAWING
☐ 4 class hrs/wk ☐ 2 cr. ☐ W
Involves drawing of interior and exterior views of architectural subjects for display purposes. One and two-point perspective, inking, basic rendering and presentation techniques. Various media employed. Prerequisites: 3 hrs. Drafting Lab and Technical Sketching or consent of instructor.

4.116 ARCHITECTURAL PLANNING
☐ 7 class hrs/wk ☐ 3 cr. ☐ F
Introduction to residential and light commercial planning. Architectural styles, orientation, site planning, kitchen planning, elevations, symbols, and specifications. Prerequisite: 3 hrs Drafting Lab or consent of instructor.

4.119 METHODS AND MATERIALS OF MANUFACTURING
☐ 2 class hrs/wk ☐ 2 cr. ☐ Sp
A lecture course that surveys the modern methods and materials of manufacturing. An emphasis is on the manufacture and use of metals, finishes, and abrasives as used in modern manufacturing.

4.121 ELECTRONICS DRAFTING
☐ 4 class hrs/wk ☐ 2 cr. ☐ W
Introduction to drafting techniques and methods used in the electronics industry. Emphasis on drawing and interpretation of electronics symbols, connection diagrams and schematics. Prerequisite: 3 hrs Drafting Lab or consent of instructor.

4.123 TECHNICAL ILLUSTRATION
☐ 5 class hrs/wk ☐ 3 cr. ☐ Sp
Introduction to techniques and skills involved in graphic production of illustrations for brochures, catalogs, service and training manuals. Production of detailed isometric drawings, exploded assembly drawings, pencil and ink shading, and color rendering. Prerequisites: 3 hrs Drafting Lab and Technical Sketching.

4.124 TECHNICAL DRAWING I
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Introductory general instruction and drafting practices as related to the basic graphic communication and interpretive needs of industrial, occupational and technical students.

4.125 PROJECT DRAFTING
☐ 6 class hrs/wk ☐ 2 cr. ☐ Sp
Advanced study, in depth, of an area of interest. The student selects, or is assigned, problems requiring analysis, mathematical calculations, and use of reference materials. Concurrent related Cooperative Work Experience employment may be substituted. Prerequisites: Sophomore standing; Drafting or Engineering Tech student.

4.134 PROTOTYPE & MODEL CONSTRUCTION
☐ 4 class hrs/wk ☐ 2 cr. ☐ On Demand
Introduction to materials, techniques, tools, and skills involved in production of models and three dimensional prototypes used in industry.

4.148 PRACTICAL DESCRIPTIVE GEOMETRY
☐ 4 class hrs/wk ☐ 2 cr. ☐ Sp
Individualized course in spatial graphics required by the drafting and engineering technician. Includes design problems incorporating auxiliary views, true lengths, true size and shape of angles, planes and points of intersection. Development from point-line-plane through the use of revolution and auxiliary projection. Prerequisite: 6 hrs. of Drafting Lab or consent of instructor.

9.643 TECHNICAL DRAWING I
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Introductory instruction and drafting practice related to basic graphical communication and interpretive needs of industrial, occupational and technical students. Designed for those who have either occupational entry level skills, or are currently employed and require mechanical drawing competencies for their work.

Civil-Mechanical Engineering Technology

The Engineering Technology program offers technician level training for civil and mechanical engineering fields with an option for energy specialization and a freshman level engineering orientation sequence for transfer students.

Students enrolling for the two-year vocational program learn drafting, surveying and problem solving skills essential for technicians who work with civil and mechanical engineers in the planning, designing, and construction of machinery, highways, bridges, dams and other industrial facilities.

Tasks performed by the engineering technician include layout and detail drafting, preparation of specifications, surveying, inspection, cost and material estimating, and supervising draftsmen. They may also be involved in design, development and analysis of projects.

Engineering Technology is a highly technical field. A strong interest in the field is required as well as a good background in mathematics and physical science. The student who expects to graduate in two years must enter with sufficient mathematics and English to enroll in Tech Math I and Communication Skills II.

Students completing the two-year vocational program receive an Associate of Science Degree in Engineering and have an opportunity to be qualified as a Certified Engineering Technician.

Students entering the Engineering Tech program should be prepared to purchase the basic drafting tools at an approximate cost of from $30 to $90. A scientific type electronic calculator and a technical pen set are also recommended.

Students interested in Cooperative Work Experience should refer to the appropriate section of the catalog and consult with the Engineering-Drafting Department.

Candidates for the Associate of Science Degree in Engineering Technology must complete the following courses:

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
			3	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	4		
	General Education Electives		3	3
		7	3	3

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
4.109	Technical Sketching	1		
4.110-12	Drafting Lab	3	3	3
4.148	Practical Descriptive Geometry			2
6.169	Drafting-Engineering Practices	2		
6.202	Statics			3
6.214-6	Technical Physics	4	4	4
6.551-3	Technical Math I, II, III	4	4	4
		14	11	16

Sophomore Year

Course No.	Course Title	F	W	Sp
4.126	Mechanical Design Principles		3	
6.200-1	Surveying I, II	2		2
6.203	Strength of Materials	3		
6.204	Computer Applications			3
6.205-6	Cival Drafting I, II		3	3
6.208	Machine Drafting	4		
6.210	Engineering Design Project			3
6.235	Applied Hydraulics		4	
6.340-1	Technical Calculations I, II	2	2	
1.112	Technical Report Writing			3
		11	12	14

Suggested Electives: Machine Processes, General Electricity I, Principles of Road Design, Electricity Controls, Calculus, Integrated Circuit Layout and Design, Alternate Energy Resources, Solar Energy, Energy Systems Management, Energy Management Projects, Coop Work Experience, Prototype and Model Construction, Electronics Drafting. Department approval required for technical electives not listed above.

4.126 MECHANICAL DESIGN PRINCIPLES

☐ 3 class hrs/wk ☐ 3 cr. ☐ W

Mechanical design as it relates to the engineering technician or draftsman. Emphasis on creativity, design considerations, analysis, procedures, calculations, processes, problem solving and evaluation. Prerequisite: Tech Math II, Strength of Materials or Applied Mechanics, Machine Drafting.

6.196 DRAFTING-ENGINEERING PRACTICES

☐ 2 class hrs/wk ☐ 2 cr. ☐ F

Introductory study of industry practices for students planning a drafting or engineering tech career. Orientation to the technical program and occupational information presented through lectures, films, discussions and field trips.

6.200 SURVEYING I

☐ 4 class hrs/wk ☐ 2 cr. ☐ F

Basic study of surveying techniques. Fundamentals of chaining and leveling, care and use of surveying instruments, and office procedures will be major topics of discussion. Practical application is provided through appropriate field work. Prerequisite: Tech Math II or equivalent.

6.201 SURVEYING II

☐ 4 class hrs/wk ☐ 2 cr. ☐ Sp

Advanced study of surveying techniques stressing practical problems of surveying land, roads, water and sewer lines and gathering data for mapping and other surveying problems. Prerequisite: Surveying I.

6.202 STATICS

☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp

Basic course analysis of forces and the effects of forces on rigid bodies such as machine parts, structures, or trusses. Emphasis on problem solving and problem solving techniques. Prerequisite: Tech Math II, Technical Physics, or equivalent.

6.203 STRENGTH OF MATERIALS

☐ 3 class hrs/wk ☐ 3 cr. ☐ F

Analysis of stresses and strains produced in machine parts or structures under typical loading conditions. Design of beams, columns and shafts. Prerequisite: Statics.

6.204 COMPUTER APPLICATIONS

☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp

Provides opportunity to solve engineering and drafting type problems both analytically and graphically by using the computer. Students develop programs or use existing programs to solve problems. Prerequisite: Math 213-Intro. to Symbolic Language-Fortran.

6.205 CIVIL DRAFTING I

☐ 6 class hrs/wk ☐ 3 cr. ☐ W

Introduction to drafting room problems related to civil engineering. Class discussion and drawings related to structures, sewer and water lines, earth works, highways and mapping. Prerequisite: Surveying I or equivalent.

6.206 CIVIL DRAFTING II

☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp

Advanced course in preparation of construction drawings and detail sheets for pumping stations, sewer and storm drains, street construction, topography plotting including field work and cost estimating. Prerequisite: Civil Drafting I.

6.208 MACHINE DRAFTING
☐ 8 class hrs/wk ☐ 4 cr. ☐ F
Advanced course in preparation of working drawings as used in the manufacture of machinery. Emphasis on speed and accuracy in preparation of layouts, arrangements, and detail drawings incorporating drafting standards, dimensioning, tolerances and symbolic notations as required by industry.

6.210 ENGINEERING DESIGN PROJECT
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
Advanced design and development of a machine, plant, or structure from the conception stage through the design stage to the finished working drawings. Prerequisite: Mechanical Design Principles, Machine Drafting, and Civil Drafting I.

6.220 ENERGY SYSTEMS MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Analysis of energy processing systems including conversion systems. Computation of heat loss and heat gain and energy efficiencies.

6.221 SOLAR ENERGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
The design of solar systems for space and water heating. Estimating heat requirements, available solar heat and system efficiency. Sizing solar collectors and heat storage systems. Judging cost effectiveness. Design techniques for active, passive, integrated and modular solar heated buildings. Solar homes and greenhouses.

3.527 ALTERNATIVE ENERGY SOURCES
☐ 6 class hrs/wk ☐ 4 cr. ☐ On Demand
An independent technical project course for students in refrigeration/heating/ air conditioning and related fields. Studies will involve use of solar, wind, methane and geothermal energy sources. Prerequisite: Second year standing in Refrigeration/Heating/Air Conditioning Department.

9.643 TECHNICAL DRAWING I
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Introductory instruction and drafting practice related to basic graphical communication and interpretive needs of industrial, occupational and technical students. Designed for those who have either occupational entry level skills, or are currently employed and require mechanical drawing competencies for their work.

GE 101, 102, 103 ENGINEERING ORIENTATION
☐ 2 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
Departmental engineering orientation. Prerequisite: Concurrent enrollment in Math 101. To be taken in sequence.

Transfer Engineering or Engineering Technology

Students may complete a one-year program in Pre-Engineering Tech at LBCC. The remaining three years to complete a degree would be completed at Oregon State University.

Freshman Year

Course No.	Course Title	F	W	Sp
GE101-3	Geography	2	2	2
MT101-2	College Algebra, Trigonometry	4	4	
MT110	Analytic Geometry			4
CH201-3	General Chemistry	4	4	4
WR121	English Composition	3		
PE190	Physical Education	1	1	1
	Electives Humanities & Soc Sc		5	5
		14	16	16

Transfer Architecture and Interior Architecture

Students may complete up to two years in Pre-Architecture at Linn-Benton Community College. The remaining three to four years to complete a degree would be completed at the University of Oregon.

Freshman Year

Course No.	Course Title	F	W	Sp
WR121-3	English Comp	3	3	3
MT101-2	Math	4	4	
MT200	Calculus			4
PY201-3	Gen Psychology	3	3	3
PE180-90	Phys Ed	1	1	1
HE250	Personal Health	3		
AR191	Drawing Fund.		3	
	Electives Humanities & Soc Sc			3
		14	14	14

Sophomore Year

Course No.	Course Title	F	W	Sp
MT233	Intro Num Comp		4	
GE105-7	Intro Geography	3	3	3
AN101-3	Gen Anthropology	3	3	3
SO204-6	Gen Sociology	3	3	3
AR195-7	Design	3	3	3
	Electives Humanities & Soc Sc	3		3
		15	16	15

Faculty:
Al Benjaminson
Kent Hansen, Chairperson
Dale Trautman

Electricity and Electronics Technology

The Electricity and Electronics program is divided into three sub-programs.

CAREER ELECTRICITY AND ELECTRONICS--Prepares students for occupations as electrical or electronics technicians. This is primarily an Associate Degree program. Typical job opportunities open to qualified personnel include installation, maintenance, research and development, engineering technician positions in the computer field, communications, biomedical electronics, electromechanical, and instrumentation fields.

GENERAL ELECTRICITY--Designed to support other curricula at the community college. Students that need a basic knowledge and practical skills in electricity and its measurements will benefit from this program. Some of the curricula this course supports are Heating and Air Conditioning, Environmental Technology, Automotive Technology, Welding, and Drafting Technology.

ELECTRICITY AND ELECTRONICS (Evening)--This program has been set up to serve the various needs of persons working in business and industry who want to begin or continue an educational program in Electricity and Electronics.

All of the Electricity and Electronics programs at Linn-Benton Community College are provided with a variety of learning resources which back up an individualized learning process.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
			3	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm			3
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. acitivity Courses	4		
	General Education Electives		3	3
		4	3	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
6.316	Intro Electricity/Electronics	1		
6.320-2	Electricity/Electronics I, II, III	6	6	6
6.551-3	Tech Math I, II, III or			
MT101-2	College Algebra, Trig and			
MT110	Analytical Geometry	4	4	4
4.100	Blueprint Reading & Sketching			2
6.214-6	Technical Physics	4	4	4
		15	14	16

Sophomore Year

Course No.	Course Title	F	W	Sp
6.323-5	Electricity/Electronics IV, V, VI	10	10	10
6.340-1	Technical Calculations I, II	2	2	
1.606	Intro Psych of Human Relations		3	
		12	15	10

6.316 INTRODUCTION TO ELECTRICITY/ ELECTRONICS

☐ **1 class hr/wk** ☐ **1 cr.** ☐ **F**

This is a preparatory course designed to help the student better understand his/her role in electricity/electronics. The E/E program at LBCC, co-operative work experience and job placement will be outlined and discussed. All electricity/electronics career students are required to take this course.

6.320 ELECTRICITY/ELECTRONICS I

☐ **7 class hrs/wk** ☐ **1-5 cr.** ☐ **F**

Introduction to electricity and electronics; basic theories and laws relating to DC electricity; basic skills in hand tool use, soldering, electrical wiring and multimeter use. Individualized course with variable credit, allowing the student to proceed at own pace. Co-requisite: Tech Math I or MT 101 and Tech Physics I or PH 201. Prerequisite: High school algebra and geometry.

6.321 ELECTRICITY/ELECTRONICS II

☐ **8 class hrs/wk** ☐ **1-6 cr.** ☐ **W**

Continuation of Electricity/Electronics I; theories and laws relating to AC electricity; basic skills in oscilliscope, function generator and power supply operation. Individualized course with variable credit, allowing the student to proceed at own pace. Co-requisites: Tech Math II or MT 102 and Tech Physics II or PH 202. Prerequisite: Electricity/Electronics I or consent of instructor.

6.322 ELECTRICITY/ELECTRONICS III
☐ 12 class hrs/wk ☐ 1-8 cr. ☐ Sp
Theory and application of electronic devices such as semiconductor diodes, transistors, and vacuum tubes. Recorder use, component testing, trouble shooting--printed circuit layout and fabrication. Individualized course with variable credit, allowing the student to proceed at own pace. Prerequisite: Electricity/Electronics II or consent of instructor.

6.323 ELECTRICITY/ELECTRONICS IV
☐ 15 class hrs/wk ☐ 1-10 cr. ☐ F
Circuit theory and practical applications of linear circuits, some composed of discrete components and some integrated circuits (ICs). Individualized course with variable credit, allowing the student to proceed at own pace. Prerequisite: Electricity/Electronics III or consent of instructor.

6.324 ELECTRICITY/ELECTRONICS V
☐ 15 class hrs/wk ☐ 1-10 cr. ☐ W
1. General survey of basic electronic communications. Covers problems of preparing information for transmission as well as separating information upon reception. 2. Theory and application of digital concepts and circuits based primarily around integrated circuits. Prerequisite: 6.323 or consent of instructor.

6.325 ELECTRICITY-ELECTRONICS VI
☐ 15 class hrs/wk ☐ 1-10 cr. ☐ Sp
Instrumentation techniques covering transducers, signal conditioning, data recording and control loops are studied. Medium and large scale integrated digital circuit concepts aimed primarily at microprocessors and support hardware are covered.

6.330 GENERAL ELECTRICITY I
☐ 4 class hrs/wk ☐ 3 cr. ☐ F/W
General electricity course designed to service other vocational-technical programs, basic working knowledge of electrical theories and laws. Basic skills in hand tool use, soldering and multimeter. A general course without the depth and detail of a career electricity/electronics course.

6.331 GENERAL ELECTRICITY II
☐ 4 class hrs/wk ☐ 3 cr. ☐ Sp
Follows General Electricity I, providing working knowledge of basic power distribution motors, generators, electricial switching, and basic instrumentation. A general course without the depth and detail of a career electricity/ electronics course.

6.554 TECHNICAL PROJECT
☐ 3-9 class hrs/wk ☐ 1-3 cr. ☐ W/Sp
Course related field problems with student undertaking special study in a field of interest. Develops skill in gathering, sorting, finding solutions to field problems. This is an elective course for various technical curricula. Prerequisite: 6.552, Technical Math II.

Fire Science

The Fire Science program is a part-time curriculum designed to meet the specific needs of students currently employed in fire science. Many of the courses in this curriculum are offered only in the evening and only on demand. However, courses in related areas such as communication skills, humanities, and mathematics are offered during the day as well as in the evening.

Satisfactory completion of the requirements of the program lead to the Associate Degree in Fire Science.

It may be helpful for students interested in Fire Science to obtain interviews with prospective employers to help them plan their careers. Some municipal fire departments may have certain requirements that must be satisfied for employment.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE242	First Aid and/or			
9.317	Multi Media First Aid and/or			
	P.E. Activity Courses			4
		3		4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
1.200	Work Experience	4	3	3
5.254	Intro Fire Prot	3		
5.264	Build Const for Fire Prot	3		
5.256	Elem Science-F.F.		3	
5.257	Fire Service Hydraulics		2	
1.606	Psychology or			
PY201	Psychology			3
5.275	Fire Science I			4
5.245	F.S. Rescue Practices			3
5.263	Fire Pump Construction and Operations			4
		10	8	17

Sophomore Year

Course No.	Course Title	F	W	Sp
9.313	EMT	6		
5.277	Fire Science II	4		
5.262	Fund Fire Prev	3		
5.260-1	Hazardous Materials I, II	3	3	
4.100	Blue Print Reading	2		
5.273	Fire Investigation		3	
5.258	Fire Company Organization and Station Management		3	
9.500	Elem of Supervision			3
1.124	American Institutions			3
	Technical Electives		6	9
		18	15	15

5.254 INTRODUCTION TO FIRE PROTECTION

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

Philosophy and history of fire protection, history of loss of life and property by fire; role and responsibility of the fire department in the community; organization and function of local, county, state, federal and private fire protection agencies and allied organizations; sources of professional literature; survey of professional career opportunities.

5.245 FIRE SERVICE RESCUE PRACTICE

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

The use of rescue tools and related equipment in carrying out practical methods and procedures of search and rescue of trapped victims in fires, building collapse, cave-ins, mechanical and auto entrapment, and the care and transportation of victims to safety. A review of standard first aid methods is also covered, but this course is not a substitute for a first aid course.

5.256 ELEMENTARY SCIENCE FOR FIREFIGHTING

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

Characteristics and behavior of fire; fundamentals of physics laws and chemical reactions occurring in fire and fire suppression; analysis of factors contributing to fire--its cause, rate of burning, heat generation and travel, by-products of combustion, and its confinement, control, and extinguishment.

5.257 FIRE SCIENCE HYDRAULICS

☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand

The student will review basic mathematics and learn hydraulic laws and formulas as applied to the fire science, application of formulas and metal calculations to hydraulics with emphasis on complicated pumping operations and underwriter requirements for pumps and accessories, fire ground water supply and other fire scene operations problems.

5.258 FIRE COMPANY ORGANIZATION & STATION MANAGEMENT

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

The student will study fire company organization and operation, company responsibilities in station, response to alarms, public relations, fire prevention, records, reports, communications, and company morale. Basics of why and how various functions of administration are carried out; authority and responsibilities of command officers, chiefs, and elected officials. Prerequisite: 5.254, 5.262

5.260 HAZARDOUS MATERIALS I

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

Student will review basic chemistry and study the chemical characteristics and behavior of materials that burn or react violently, including flammable solids & liquids, pressurized gases, liquified gases, combustible metals, cryogenics, plastics, and oxidizing agents. Prerequisite: 5.256 or instructor approval.

5.261 HAZARDOUS MATERIALS II

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

A study of the composition, characteristics, and behavior of unstable materials, explosives, rocket propellents, water reactive materials, poisons, corrosives, combustion products, and radioactive materials. Prerequisite: 5.260

5.262 FUNDAMENTALS OF FIRE PREVENTION

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

The student will learn fundamentals of fire inspections including standards, recognizing fire hazards, techniques of evaluation of hazards as to degree of hazard, home inspections, fire company surveys, fire fighter responsibilities and practical recommendations. The student will learn to write reports which include maps and sketches of each on-the-site building inspected and to recommend safe practices and improvements.

5.263 FIRE PUMP CONSTRUCTION AND OPERATION
☐ **5 class hrs/wk** ☐ **4 cr.** ☐ **On Demand**
A basic course for pump operators presenting theory, construction and principle of operation of fire service pumps, and the principles of driving, drafting, and pumping from hydrant. Basic 'rule of thumb' hydraulics, emergency operations and actual practice using local department's apparatus.

5.264 BUILDING CONSTRUCTION FOR FIRE PROTECTION
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
The student will learn classification of buildings; structural features affecting fire spread; effects of fire on structural strength and construction materials; fire stops and ratings of materials, and fire retardants, fire spread, representative fire loads.

5.267 FIRE DEPARTMENT COMMUNICATIONS AND ALERTING SYSTEMS
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
The student will learn and demonstrate receiving, dispatching, and radio communication procedures; FCC regulation, municipal alarm; telephone and tone-activated alarm; recording messages; tap-out procedures, running cards, etc. Prerequisite: 5.254, 5.258

5.269 WATER DISTRIBUTION SYSTEMS
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
A study of sources of water supply, fire flow requirements, pumping stations, storage tanks and cisterns; main systems and high pressure systems, mobile supplies. Also covered are hydrants, their sizes, types, distribution and service testing and the measuring of available water in mains. Prerequisite: 4.202,5.263

5.272 FIXED SYSTEMS & EXTINGUISHERS
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
The study of portable extinguisher equipment; fire alarm and detection systems; sprinkler systems and standpipes, protection systems for special hazards; explosion release; ventilation systems; inert atmospheres and static bonding. Prerequisite: 5.254, 5.256

5.273 FIRE INVESTIGATION
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Teaches the effect on fire prevention by isolating the cause of fire; a study of the burning characteristics of combustibles and effects of fire on materials; interpreting clues and burn patterns leading to the point of origin; identifying incendiary indications, sources of ignition and materials ignited; preservation of the scene and evidence. Prerequisite: 5.264, 5.260

5.275 FIRE SCIENCE I
☐ **5 class hrs/wk** ☐ **4 cr.** ☐ **On Demand**
A course in practical physics covering matter, measurement, machines and energy. Laboratory time provided for demonstrations and experiments to help clarify the principles and procedures covered in class.

5.277 FIRE SCIENCE II
☐ **5 class hrs/wk** ☐ **4 cr.** ☐ **On Demand**
The student will learn physical and chemical properties of substances, chemical changes, bonds, reactions, chemical combinations, atomic structures, covalent substances, theory of metals, acids, bases, salts, solutions, and basic organic chemistry. Laboratory time is provided for clarifying demonstrations and experiments.

5.282 FIRE CODES AND RELATED ORDINANCES
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
The student will study fire codes, building, exits, flammable liquid, and other codes as related to fire prevention, followed by supervised building inspection field trips. Designed primarily for fire service inspectors.

5.286 FIRE INSURANCE PRINCIPLES AND GRADING SCHEDULES
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Insurance grading schedules and their application. Methods of analyzing fire hazards and the effects of fire hazards on fire insurance rates. A study of the National Board Grading Schedule is made in detail with other schedules covered briefly. The fundamentals of fire insurance rating methods, loss records, municipal gradings, etc.

5.287 TRAINING PROGRAMS & TECHNIQUES
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Teaches purposes of fire service drills and training programs. The development and operation of the departmental training program. Facilities and equipment necessary for modern training. Psychology of learning, four-step method, lesson planning, instruction techniques, training aids, tests, workbooks, training objectives and curriculum development, conducting conferences and meetings.

5.288 FIRE REPORTS AND RECORDS
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Analysis of fire department records and reports systems, their origins, types and functions. Application of these systems to the areas of pre-fire surveys, routine inspections, post-fire reporting, cost accounting, research and planning.

Faculty:
Stewart Floyd
Leroy Heaton
Richard Liebaert
James Lucas
Bruce Moos
Carolyn Mullikin
Greg Paulson
Robert Ross

Life Sciences

The Life Science Department offers one and two year programs in the agricultural sciences as well as providing biological science instruction for occupational and lower division transfer students. The department has excellent instructional facilities including three laboratories, a greenhouse, an animal technology facility, plus land areas for the practical application of classroom instruction.

Animal Technology

The Animal Technology program offers students a course of study in preparation for a wide variety of career options.

Graduates of this program are prepared for positions relating to on-farm livestock production, for jobs in the feed industry or for employment as technical assistants in an off-farm occupation such as artificial breeding.

Typical jobs open to students completing the animal technology program include livestock supplies fieldman, artificial breeding technician, herdsman, farm manager or feed technician.

LBCC is the only community college in the Willamette Valley with an animal technology program.

Persons in this program also have the opportunity to participate in related activities such as the agriculture club and livestock judging teams.

An Associate of Science degree is awarded students upon completion of the two-year curriculum, which includes general studies classes in addition to the animal technology course work.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math	4		
	General Education Electives			6
		4	3	6

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm			3
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	3	1	
	General Education Electives		3	3
		3	4	6

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
8.100	Survey of Agric	1		
8.125-6	Soils I, II	3	3	
8.143	Anat & Physio of Farm Animals		3	
8.150	Animal Genetics			4
8.146	Intro to Livestock Selection			4
8.152	Beef Production	4		
8.153	Sheep Production		4	
8.154	Swine Production			4
		8	10	12

Sophomore Year

Course No.	Course Title	F	W	Sp
	Biology or Chemistry	4	4	
8.130	Ag Chemicals		4	
8.167	Forage Crops			3
	Accounting Course			3
8.144	Animal Nutrition	4		
8.145	Feeds & Feeding		3	
	Work Experience and/or electives	6	4	9
		14	15	15

8.143 ANATOMY AND PHYSIOLOGY OF FARM ANIMALS

☐ 4 class hrs/wk ☐ 3 cr. ☐ W

Basic background in the physiology of farm animals. Emphasis on practical information and application valuable to the student interested in animal agriculture. Male and female anatomy, basic reproductive physiology, milk production, digestion and digestive systems, embryonic development, parasitology, immunology, endocrine, nervous, circulatory and respiratory systems.

8.144 ANIMAL NUTRITION
☐ 5 class hrs/wk ☐ 4 cr. ☐ W
Applied animal nutrition, covering proteins, carbohydrates, vitamins, minerals, feed additives and the utilization of these nutrients by livestock. Methods of determining feed value, basic digestion and nutrient requirements of livestock and their practical application to various livestock enterprises.

8.145 FEEDS AND FEEDING
☐ 4 class hrs/wk ☐ 3 cr. ☐ Sp
Formulating rations for livestock. Choice of ration ingredients in relation to cost and suitability. Identification of ingredients used in livestock feeds and analysis of a prepared ration. Economics of livestock feeding and performance indicators necessary. Feed preparation, mixing and handling.

8.146 INTRODUCTION TO LIVESTOCK SELECTION
☐ 5 class hrs/wk ☐ 4 cr. ☐ Sp
Methods of criteria used to select the proper types of beef, sheep and swine. Structural soundness, correctness of body type, acceptable market standards and common deformities will be emphasized. Instruction includes applying techniques learned on live animals and oral justification.

8.147 LIVESTOCK SELECTION TECHNIQUES
☐ 6 class hrs/wk ☐ 4 cr. ☐ FTechniques of judging beef, sheep, swine and horses. In-depth selection and comparative judging; concentrated work on oral reasons. Members of this class are selected for the first step in competitive inter-collegiate judging.

8.148 ADVANCED LIVESTOCK SELECTION
☐ 6 class hrs/wk ☐ 4 cr. ☐ F
For those previously enrolled in Livestock Selection Techniques and Introduction to Livestock Selection. Further development of judging skills and techniques. Oral reasons, determining market grades and classifications, defects, soundness and the breed characteristics. Course participants selected to compete at the top level of inter-collegiate judging.

8.149 LIVESTOCK DISEASES AND PARASITES
☐ 4 class hrs/wk ☐ 3 cr. ☐ Sp
Course covers how sickness is caused and transmitted in livestock. Common diseases and parasites of livestock, and their prevention is studied. The practical application of class material is stressed with emphasis on diagnosis and treatment.

8.150 ANIMAL GENETICS
☐ 5 class hrs/wk ☐ 4 cr. ☐ Sp
Basic concepts fundamental to animal genetics. Includes genetic possibilities, utilizing heritability for production gains, inbreeding coefficient computation and practical systems of breeding for the modern livestock breeder.

8.152 BEEF PRODUCTION
☐ 5 class hrs/wk ☐ 4 cr. ☐ F
Basics of modern beef production and management. Breeds of cattle, mating systems, nutrition, reproduction, marketing, production testing, diseases and parasites and other management practices. Particular emphasis is on the development of beef husbandry skills.

8.153 SHEEP PRODUCTION
☐ 5 class hrs/wk ☐ 4 cr. ☐ W
Fundamentals of modern sheep production. Breeds of sheep, nutrition, reproduction, diseases and parasites, wool evaluation, marketing and modern management practices. The opportunity to develop practical skill is afforded each student.

8.154 SWINE PRODUCTION
☐ 5 class hrs/wk ☐ 4 cr. ☐ Sp
All aspects of modern swine production. Opportunity to develop skills associated with swine production. Includes breeds of swine, marketing, breeding, feeding, production testing, diseases and parasites and modern swine production problems.

8.158 ARTIFICIAL INSEMINATION
☐ 5 class hrs/wk ☐ 4 cr. ☐ F/Sp
Inseminator training program with emphasis on cattle. Knowledge of the female reproductive organs and reproductive hormones. Diagnosis of heat semen, along with insemination techniques on other species. Persons concurrently employed should enroll for 9.822 Artificial Insemination.

9.818 HORSEMANSHIP AND HORSE HUSBANDRY
☐ 4 class hrs/wk ☐ 3 cr. ☐ W
Fundamentals of horse husbandry in horse behavior, reproduction and nutrition. Laboratories demonstrating basic horsemanship techniques in breaking, training, judging, foot trimming and shoeing.

9.819 LIVESTOCK BREEDING AND REPRODUCTION

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

Reproduction function and its importance in the livestock industry. Male and female reproductive tract, reproductive hormones, artificial insemination, animal breeding, genetics, heritability, inbreeding coefficient and systems of breeding.

9.821 LIVESTOCK NUTRITION

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

Familiarization with various aspects of livestock nutrition. Essential vitamins and minerals - their importance, role, function, deficiency symptoms and sources, protein, feed additives, ration formulation and balancing, digestion and digestive systems.

9.822 ARTIFICIAL INSEMINATION

☐ 5 class hrs/wk ☐ 4 cr. ☐ On Demand

Inseminator training program with emphasis on dairy and beef cattle. Female reproductive organs and their general function; essentials of animal hygiene and observance of sanitation practices; proper care, handling and storage of seman. Necessary breeding and calving records. Proper insemination techniques, using live animals. Those currently employed should enroll in this class.

Biological Sciences

4.220-1 INTEGRATED BASIC SCIENCE I,II (DENTAL)

☐ 4-6 class hrs/wk ☐ 3-4 cr. ☐ Sm/F/W/Sp

An integrated science course offered to Dental Assistant students. 4.220: Includes principles of general anatomy and physiology of the head and teeth. 4.221: Includes microbiology, pharmacology and nutrition.

BI 101, 102, 103 GENERAL BIOLOGY

☐ 5 class hrs/wk ☐ 4 cr. ☐ Sm/F/W/Sp

For those needing a lab science--BUT NOT FOR BIOLOGY MAJORS. Alternative courses are occasionally offered. Alternatives are as valid as General Biology since each alternative contains many of the same principles as are taught in the General Biology course listed under the same course number; alternatives differ in point of view. General Biology may not be used to complete a previously begun sequence in Botany or Zoology. BI 101: The cellular level of life. It includes units on methods and history of science, basic chemistry of life, structures and functions of the cell, energy manipulation, cell reproduction, basic inheritance patterns and gene function. Alternative: Diseases and Drugs. BI 102: This course deals with the structures and functions of plants and animals, as well as their behavior. Alternative: Human Body. BI 103: This course deals with the diversity, evolution and ecology of living things. Alternative: Marine Biology.

BI 221, 222, 223 HUMAN BIOLOGY

☐ 4-6 class hrs/wk ☐ 3-4 cr. ☐ F/W/Sp

This course is of particular benefit to those students in the health profession, biology majors, and others who are interested in the anatomical and physiological basis of health and disease. It emphasizes the concepts and information critical to a basic understanding and working knowledge of the human body. Laboratory experiences are directly related to lectures. College level prerequisites: Elements of Algebra (1.110) and Basic Chemistry (4.205) or equivalent. BI 221: Gives the student the basic biochemistry needed for a full understanding of human anatomy and physiology, then, beginning at the cellular level, progresses through the skeletal system and the anatomy of the muscular system. BI 222: Begins with physiology of muscular system and covers the anatomy and physiology of the nervous system, senses, endocrine and finally anatomy of the circulatory system. Prerequisite: BI 221. BI 223: Physiology of circulatory system, anatomy and physiology of respiratory, digestive, urinary and reproductive systems plus fluid and electrolyte balance. Prerequisite: BI 222.

BO 201, 202, 203 GENERAL BOTANY

☐ 6 class hrs/wk ☐ 4 cr. ☐ F/W/Sp

Primarily for science majors. Other interested students are not excluded. No college level prerequisites, but it is expected that students have a recent background in high school science and mathematics or equivalent. Science majors encouraged to enroll in chemistry and mathematics concurrently. BO 201: Survey of plant kingdom, including bacteria, algae, fungi, mosses, and vascular plants (ferns and allies gymnosperms and angiosperms). Some fossil plants included. BO 202: Morphology (structure), physiology (function), and genetics of seed plants (mostly angiosperms, although gymnosperms discussed when obviously different). Prerequisite: BO 201 or instructor approval. BO 203: Identification of flowering plants, both native and introduced weeds. Study of important families, their floral morphology and if distinctive their vegetative characteristics. Brief introduction to ecology.

ZO 201, 202, 203 GENERAL ZOOLOGY
☐ 5 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
Primarily for science majors. Other interested students are not excluded. No college level prerequisites, but it is expected that students have recent background in high school science and mathematics or equivalent. Science majors encouraged to enroll in chemistry and mathematics concurrently. ZO 201: Introduction to animal physiology: The study of cell physiology and animal systems with emphasis on vertebrates. ZO 202: Introduction to genetics, evolution and ecology, and embryology. ZO 203: Survey of the animal kingdom, with emphasis on environmental relationships.

4.215 MICROBIOLOGY FOR NURSES
☐ 3 class hrs/wk ☐ 2 cr. ☐ F
A basic course in general microbiology with emphasis on microorganisms associated with disease; cause and effects of various diseases, transmissions of pathogens; control of microbial infections and disease.

FN 225 NUTRITION
☐ 4 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
The individual nutrients, their functions, sources, effects of deficiency, and recommended daily allowances are covered. Digestion and metabolism are discussed. Socio-economic influences as well as an expanded discussion of infant nutrition and obesity are included. Current areas of interest in nutrition and food fads are discussed. A background in chemistry is helpful.

GS 199 GENERAL SCIENCE/SPECIAL STUDIES
☐ 1-12 class hrs/wk ☐ 1-4 cr. ☐ F/W/Sp/Sm
Students desiring to take another General Biology alternative under the same course number may do so under this number and receive transferable credits. Student desiring to carry independent studies in the life sciences may do so under this number. 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.

Crop Management

Agriculture is an industry offering a wide variety of employment including providing supplies and services to farmers, production of food and fiber, processing and distribution of the farm products.

The Crop Management curriculum is designed to qualify students for a variety of occupations in crop agriculture. The student has the opportunity to choose from specific agriculture courses and related business courses that will enable him or her to work towards one of the following areas of employment:

Agriculture chemical fieldman, food processor fieldman, seed fieldman, retail sales, farm supply sales representative, seed salesman, farmer, farm foreman, custom applicator, warehouse manager.

Individuals interested in the program should enjoy working outdoors and with living things. The combination of manual and mental work make for satisfying careers.

Students enrolling in the program may choose a one-year certificate program or the two-year curriculum leading to an Associate of Science Degree.

Students are encouraged to participate in an on-the-job experience during spring and/or summer quarter between the first and second year of the Associate Degree program. Those interested should refer to the appropriate section of the catalog under Cooperative Work Experience and consult the Department Chairperson.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp		3	
1.110	Elements of Algebra or			
4.202	Math II	4		
2.515	Business Math			
	General Education Electives			3
		4	3	3

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	2	1	1
	General Education Electives		3	
		5	4	1

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
1.606	Intro to Psychology			3
8.100	Survey of Agriculture	1		
8.125-7	Soils I, II, III	3	3	3
8.130	Agricultural Chemistry		4	
8.131	Pest Management	3		
8.165	Plant Science	4		
8.167	Forage Crops			3
8.188	Ag Equipment Maintenance		3	
	Electives			2
		11	10	11

Sophomore Year

Course No.	Course Title	F	W	Sp
1.200-1	Work Experience & Seminar			12
4.151	Welding		3	
4.205-6	Basic Chemistry I, II	4	4	
8.138	Irrigation & Drainage	3		
8.166	Vegetable Technology		3	
8.170	Farm Management or			
AE111	Agricultural Economics		3	
	Business Electives	6		
		13	13	12

8.100 SURVEY OF AGRICULTURE

☐ 1 class hr/wk ☐ 1 cr. ☐ F

Information on employment opportunities in marketing, sales, service, processing, management, and distribution functions that are related to agriculture off-farm occupations.

8.120 SEED TECHNOLOGY

☐ 4 class hrs/wk ☐ 3 cr. ☐ On Demand

Reproductive processes, environmental response and the harvesting and processing of seed crops. Laws and regulations governing the seed industry and seed certification programs. Laboratory work emphasizes weed and crop identification, seed processing and seed testing.

8.125 SOILS I

☐ 4 class hrs/wk ☐ 3 cr. ☐ F

Necessary soil science background for work with fertilizer, irrigation, drainage, and other management practices. Physical, chemical and biological properties of the soil 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 recommendation, methods of application and storage and handling emphasized.

8.127 SOILS III

☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp

Third sequence to deal with practical application of knowledge of fertilizers. Special emphasis given to field projects to promote understanding and skill competencies.

8.130 AGRICULTURE CHEMICALS

☐ 5 class hrs/wk ☐ 4 cr. ☐ W

Use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of material, safety in handling and storage and methods of application emphasized. Students develop ability to interpret and explain to customers the directions and precautions to be observed with various agriculture chemicals. Attention also given to procedures used in keeping current with new product development.

8.131 PEST MANAGEMENT

☐ 4 class hrs/wk ☐ 3 cr. ☐ F

Includes the classification, anatomy, growth, life history, recognition and control principles of selected weeds, diseases, and insect pests.

Turf Management

Turf Management offers a combination of manual and mental work, much of it out of doors, involving all manner of planning, installing and maintaining turf facilities such as parks, lawns, playing fields and golf courses. It also encompasses allied work in seed and sod production, irrigation, sales of equipment, fertilizers and pesticides as well as other sales and service functions related to the turf industry such as landscaping.

The Turf Management curriculum is designed to qualify students for entry level employment in the following fields:

Golf course maintenance, grounds maintenance, landscape construction and maintenance and equipment and supply sales.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm	3		
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives		3	3
		3	3	7

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
1.606	Intro to Psychology			3
8.100	Survey of Agriculture	1		
8.125-7	Soils I, II, III	3	3	3
8.130	Agricultural Chemicals		4	
8.131	Pest Management	3		
8.135-6	Turf Management I, II		3	3
8.165	Plant Science	4		
8.188	Ag Equipment Maintenance		3	
8.168	Plant Identification			3
		11	13	12

Sophomore Year

Course No.	Course Title	F	W	Sp
1.200-1	Work Experience & Seminar			12
4.151	Welding		3	
4.205-6	Basic Chemistry I, II	4	4	
8.137	Plant Propagation		3	
8.138	Irrigation and Drainage	3		
8.140	Landscape Maintenance	3		
8.141	Landscape Planning		3	
		10	13	12

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.

8.136 TURF MANAGEMENT II

☐ 4 class hrs/wk ☐ 3 cr. ☐ Sp

Provides students with opportunity to adapt and apply principles and theories taught in Turf Management I. Field trips to observe common practices, and actual maintenance and management of turf areas by students. Business practices and procedures also emphasized.

8.137 PLANT PROPAGATION

☐ 4 class hrs/wk ☐ 3 cr. ☐ F

Principles, methods, techniques and facilities used to propagate turf grasses and other ornamentals.

8.138 IRRIGATION AND DRAINAGE

☐ 4 class hrs/wk ☐ 3 cr. ☐ F

Principles and practices of irrigation, including soil, water, and plant relations; and water sources, quality, methods of distribution and measurement. System design and selection also emphasized. Surface and subsurface drainage systems.

8.140 LANDSCAPE MAINTENANCE

☐ 5 class hrs/wk ☐ 3 cr. ☐ F

Principles, methods, techniques, and use of equipment for maintenance of turf areas.

8.141 LANDSCAPE PLANNING

☐ 5 class hrs/wk ☐ 3 cr. ☐ W

Basic layout and design, site utilization and orientation of turf facilities. Landscape contours, grading, trees, shrubs, floral selection, utilization and fertilization.

8.165 PLANT SCIENCE

☐ 5 class hrs/wk ☐ 4 cr. ☐ F

Basic structure of plant life with emphasis on crop and ornamental plants. Environmental forces discussed in relation to plant development and selection. Identification of common plants.

8.166 VEGETABLE TECHNOLOGY

☐ 4 class hrs/wk ☐ 3 cr. ☐ W

Applied course of study of the major vegetable crops. Cultural practices such as fertilization, irrigation, cultivation, pest control, harvesting, marketing and cost analysis emphasized.

8.167 FORAGE CROPS

☐ 4 class hrs/wk ☐ 3 cr. ☐ Sp

Emphasizes practices that produce maximum economic returns for land devoted to hay, pasture or range land. Establishment, management, fertilization, pest control, rotations, irrigation and renovation.

8.168 PLANT IDENTIFICATION

☐ 4 class hrs/wk ☐ 3 cr. ☐ Sp

An 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.

8.170 FARM MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Selection, organization, and operation of the modern farm. Emphasis on the basic economic and agricultural principles upon which the farm business is organized and operated. Laboratory periods provide time for observing and practicing farm operations and management.

8.188 AGRICULTURAL EQUIPMENT MAINTENANCE
☐ 4 class hrs/wk ☐ 3 cr. ☐ W
Principles, maintenance and repair of small engines used on power equipment.

AE 111 AGRICULTURAL ECONOMICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Introduction to the application of economics to agriculture. Includes production economics, marketing, agriculture policy and a discussion of agri-business.

9.812 SEED CLEANING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Entry and updating skills for seed cleanermen. Includes equipment operation, safety, maintenance, and repair. Seed laws and regulations, seed and weed identification, and warehouse practices.

9.813 AGRICULTURE CHEMICALS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of materials, safety in handling and storage, and methods of application emphasized. Students develop the ability to interpret and to explain to customers the directions and precautions to be observed with various agriculture chemicals. Attention to procedures used in keeping current with new product development.

9.814 SOILS AND FERTILIZERS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Presentation and discussion of basic facts of science as they relate to crop production.

Farm Management/ Records Analysis

Farm Management-Records Analysis is a specialized adult program designed for a minimum of three years for local farm families--including all members of the farm unit--who are now actively farming or ranching on a full-time basis. The program is a service as well as an educational program. Enrollment will be for a period of one year.

The three-year program consists of: Scheduled class meetings Scheduled farm visits by the instructor Keeping basic farm records for each farm business. Annual computer analysis for each completed record, including group averages.

Application of analysis information to improving the management and organization of each business. (Individual records are confidential)

Individual enrollment may extend beyond three years on a seminar basis if desired, providing continued analysis of farm records and assistance with management decisions. The frequency of class sessions and instructor visits would be reduced for an advanced group.

PROGRAM PREREQUISITES

(1) The family unit is engaged in full-time farm operation and is making the family living from the operation. (2) The farm operation is financially stable for continued operation. (3) The family unit has the ability to maintain basic farm records.

9.835 FARM MANAGEMENT-RECORDS ANALYSIS I
☐ 10 lec/20 lab hrs/mo. ☐ 8 cr./yr. ☐ F/W/Sp/Sm
The participating farm or ranch family--including both husband and wife--attends a series of scheduled class sessions. Class sessions are supplemented by scheduled farm visits by the instructor. Subject matter for this first year will be keeping basic farm records.

9.836 FARM MANAGEMENT-RECORDS ANALYSIS II
☐ 10 lec/20 lab hrs/mo. ☐ 8 cr./yr. ☐ F/W/Sp/Sm
Same as 9.835 - Subject matter for this second year will be farm business analysis.

9.837 FARM MANAGEMENT-RECORDS ANALYSIS III
☐ 10 lec/20 lab hrs/mo. ☐ 8 cr./yr. ☐ F/W/Sp/Sm
Class meeting and instructor visits continue as for the preceding two-years 9.835 and 9.836.

9.838 FARM MANAGEMENT-RECORDS ANALYSIS SEMINAR IV
☐ 5 lec/10 lab hrs/mo. ☐ 4 cr./yr. ☐ F/W/Sp/Sm
Class meeting and instructor visits as needed to keep and analyze records.

Faculty:
Micheal Morgan
Raymond Perkins
Wally Reed
Dell Swearingen
Edward Wright, Chairperson
Robert Ulrich

Mathematics

1.109 PRE-BUSINESS MATHEMATICS
☐ 4 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp
Preparation for 2.515, Business Mathematics. Includes a review of fundamental operations with whole numbers, fractions, decimals and percentages.

1.110 ELEMENTS OF ALGEBRA
☐ 4 class hrs/wk ☐ 0-4 cr. ☐ F/W/Sp
Introduction to field properties for real numbers. Development of the basic operations with algebraic expressions and methods for solving linear equations.. Introduces rational expressions, factoring, and graphing and develops the solution of quadratic equations by factoring. Designed for the student who has no previous instruction in algebra, needs a review of elementary algebra, or has had previous algebra, but has not been exposed to the 'modern' concepts.

1.127 STUDY SKILLS SEMINAR-MATHEMATICS
☐ 3 class hrs/wk ☐ 0-3 cr. ☐ F/W/Sp
Fulfills student objectives which are developed in conjunction with the instructor. After the objectives and level of instruction are determined, a schedule is developed to provide optimum instruction and opportunity to practice and improve in the specific math area. Since the objectives vary greatly, number of credits are determined in conference with the instructor.

4.200 MATH I
☐ 4 class hrs/wk ☐ 0-4 cr. ☐ F/W/Sp
Thorough review of arithmetical processes. Provides a basis for the study of algebra or Math II. Includes fundamental operations with whole numbers, fractions, decimals, percentages, and measurement.

4.202,4.204 MATH II,III
☐ 5 class hrs/wk ☐ 0-4 cr. ☐ F/W/Sp
Develops mathematical skills necessary for problem solving associated with occupational programs. 4.202: Emphasis on measurement and conversion, integers, introduction to algebra, solving simple equations, ratio and/or geometry. Algebra and geometry are applied to the solution of typical occupational formulas and related problems. Prerequisite: Math I (4.200) or satisfactory arithmetic score or consent of instructor. 4.204: Emphasis on ratio and proportion and/or geometry, graphing and right triangle trigonometry. Geometry and trigonometry are used to solve typical occupational formulas and related applied problems. Prerequisite: MT II (4.202) or consent of instructor.

6.550 PRE-TECH MATHEMATICS
☐ 4 class hrs/wk ☐ 4 cr. ☐ F
Algebra used to solve basic problems in geometry, emphasizing both the metric and the coordinate approach. Prerequisite: At least a 'B' in high school Algebra I, Elements of Algebra (1.110) and/or consent of the instructor.

6.551-3 TECHNICAL MATH I,II,III
☐ 4 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
Develops general mathematical and computational skills that assist technicians in their training and on their jobs. Emphasis on problem solving. It is necessary for an entering student to have had two years of algebra and a year of geometry in high school. An entering student not meeting these criteria should complete Elements of Algebra (1.110) and Pre-Tech Mathematics (6.550) before beginning the Tech Math I,II,III sequence. 6.551: A study of albegraic functions, systems of linear equations, quadratic equations, exponents and radicals, logarithms, and exponential function. Emphasis on technical applications and problem solving. Prerequisite: Albegra I and Geometry, Pre-Tech Math (6.550) or consent of instructor. 6.552: Trigonometric functions and identities with applications, vectors, conditional equations, and complex numbers with applications. Prerequisite: 6.551. 6.553: Analytic Geometry, intuitive introduction to differential and integral calculus. Emphasis placed on functions and applications to technical areas. Prerequisite: 6.552.

MT 95 INTERMEDIATE ALGEBRA
☐ **4 class hrs/wk** ☐ **0-4 cr.** ☐ **F/W/Sp**
Basic operations on algebraic, rational, and radical expressions. Solution of first and second degree equations and equations involving radicals, algebraic and graphical solutions for inequalities and absolute values, linear and quadratic functions. Stated problems and applications. Recommended for students having high school algebra and geometry with above average grades or those with lower grades and more math in high school. Prerequisite: Must demonstrate the knowledge of the stated objectives for Elements of Algebra course.

MT 101 COLLEGE ALGEBRA
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **F/W/Sp**
Review of algebraic operations; introduction to functions; graphs of relations and functions; emphasizing linear, quadratic, exponential and logarithmic functions; polynomials; theory of equations. Linear inequalities and systems of equations with introduction to matrices. Prerequisite: MT 95 and/or consent of instructor.

MT 102 TRIGONOMETRY
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **F/W/Sp**
Introduction to circular functions, trigonometric functions, curve sketching, complex numbers, polar coordinates, right triangle trigonometry, identities, trigonometric equations. Prerequisite: MT 101.

MT 103 PROBABILITY & STATISTICS
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **W/Sp**
Probability; binomial, normal, student-t, chi-square, and F-distributions; confidence intervals; hypothesis testing; linear regression; contingency tables, analysis of variance. Prequisite: MT 95.

MT 106 ELEMENTARY CALCULUS
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **Sp**
The differential and integral calculus of algebraic functions. Prerequisite: MT 95.

MT 110 ANALYTIC GEOMETRY
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **F/Sp**
Conic sections, polar coordinates, polar graphing, vectors and solid analytical geometry. Prerequisite: MT 101, 102.

MT 161, 162, 163 MATHEMATICS FOR NON-SCIENCE MAJORS
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **F/W/Sp**
Mathematical foundation and computation skills for the non-science major. Selected topics from the broad field of mathematics relevant to business and social science courses with the usefulness of mathematical concepts stressed. MT 161, 162, 163 need not be taken in sequence. Prerequisite: MT 95 and/or consent of instructor.

MT 200, 210, 202, 203 CALCULUS
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **F/W/Sp**
Standard sequence for students in mathematics, science, and engineering. MT 200: Functions and graphs, limits, continuity, differentiation, application of differentiation, related rates and extrema, anti-differentiation. Prerequisite: MT 110 and/or consent of instructor. MT 201: The definite integral, fundamental theorem of calculus applications of integration, differentiation and integration of transcendental and trigonometric functions. Prerequisite: MT 200. MT 202: Techniques of integration, approximate integration, vectors in the plane, hyperbolic functions, improper integrals, vectors and analytic geometry in three dimensional space. Prerequisite: MT 201. MT 203: The calculus of functions of several variables, infinite series, Taylor's theorem, differentiation and integration of power series, partial differentiation, the gradient, and integration of power series, directional derivative, and multiple integrals. Prerequisite: MT 202.

MT 221, 222 APPLIED DIFFERENTIAL EQUATIONS
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **F/W**
Ordinary differential equations, systems of differential equations. Laplace transforms, series solutions, boundary-value problems. Must be taken in sequence. Prerequisite for MT 221: MT 203. Offered every other year.

MT 233 INTRODUCTION TO NUMERICAL COMPUTATION
☐ **5 class hrs/wk** ☐ **4 cr.** ☐ **On Demand**
Emphasis on using the computer as a problem solving tool. Programming techniques will be introduced to facilitate problem solving. The student will solve a wide variety of problems from the fields of Business, Mathematics, Physics, Biology and other sciences. The computer language used will be BASIC. Prerequisite: MT 101.

MT 241 ELEMENTARY LINEAR ALGEBRA
☐ **4 class hrs/wk** ☐ **4 cr.** ☐ **W/Sp**
Vector spaces, linear transformation, matrices and determinants, characteristic roots. Prerequisite: MT 200.

GS 199 SMALL CALCULATORS
☐ **1 class hr/wk** ☐ **1 cr.** ☐ **F/W/Sp**
Individualized instruction and practice in the use of small calculators--information on prices, availability, and features of small calculators. Topics covered may include reverse polish notation, algebraic notation, the uses of memory register, chain arithmetic, scientific notation, root approximation, numerical integration, and programming.

Faculty:
Dave Benson
John Kraft
Raymond Perkins
Steve Rasmussen, Chairperson

Physical Sciences

The Physical Science Department offers a two year program in Science Laboratory Technology as well as providing physical science instruction for other occupational programs and lower division transfer students. The department has excellent teaching laboratories and lecture rooms plus an analytical instrumentation laboratory. Courses are offered in physics, chemistry, astronomy, geology and meterology. Scientific glass blowing is a specialized course offered by the department.

4.205, 206, 207 BASIC CHEMISTRY I,II,III
☐ 6 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
Introductory three-quarter sequence for vocational students or students needing preparation prior to entering CH 104 or CH 201. Includes inorganic and organic chemistry with practical laboratory experiments integrated with discussion material. No previous chemistry course work required. Three lectures, a two-hour lab, and a one-hour study-help session per week. Prerequisite: Concurrent enrollment in MT 1.110.

CH 104, 105, 106 GENERAL CHEMISTRY
☐ 7 class hrs/wk ☐ 5 cr. ☐ F/W/Sp
Introduction to atoms, ions, molecules, their chemical and physical interactions, and how that affects the nature of matter. Includes inorganic, organic, and biochemistry. Co-requisite: MT 95. Prerequisite: High school physical science (high school chemistry is desirable). An inexpensive calculator performing scientific notation is recommended.

CH 201, 202, 203 GENERAL CHEMISTRY
☐ 6 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
A year sequence for chemistry, science and engineering students. Introduces the physical and chemical aspects of inorganic and organic Co-requisite: MT 101. Prerequisite: High school chemistry or Basic Chemistry I and II. An inexpensive calculator performing scientific notation is strongly recommended.

CH 226, 227, 228 ORGANIC CHEMISTRY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
The chemistry of the carbon compounds: aliphatic, aromatic, heterocyclic and compounds of biochemical importance. Prerequisite: CH 106 or CH 203.

CH 229 ORGANIC CHEMISTRY LAB
☐ 6 class hrs/wk ☐ 2 cr. ☐ Sp
A laboratory course taken concurrently with CH 228.

CH 234 QUANTITATIVE ANALYSIS
☐ 8 class hrs/wk ☐ 4 cr. ☐ W
Service course on gravimetric, volumetric and instrumental analytical techniques for students in biological and physical sciences. Prerequisite: CH 106 or CH 203.

GS 104, 105, 106 PHYSICAL SCIENCE
☐ 5 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
Survey course in physical science intended to provide a broad background in physical science for the liberal arts student and the non-science major. No previous science background is required. May not be taken for credit if the student has completed six or more hours in a college-level course in chemistry or physics. Students may enter any term. GS 104: Fundamental principles of physics. GS 105: Principles of chemistry. GS 106: Nuclear energy, astronomy, meteorology and earth science. Prerequisite: 1.110 Elements of Algebra completed.

GS 199 GENERAL SCIENCE SPECIAL TOPICS
☐ 1-4 class hrs/wk ☐ 1-4 cr. ☐ On Demand
General introductory one-term course in the physical sciences. Topics may include chemistry, physics, astronomy, geology and alternate energy resources.

P 201, 202, 203 GENERAL PHYSICS
☐ 6 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
College physics for science majors and others planning to transfer credit to a four-year college or university. Includes the study of motion, forces, momentum and energy, vibration, wave motion, sound and light, optics, heat, electricity and magnetism, elementary atomic and nuclear physics, and special relativity. Prerequisite: Tech Math I or MT 95, and be taking Tech Math II or MT 101 concurrently. Inexpensive calculator with trig functions and scientific notation is strongly recommended.

P 221-223 GENERAL PHYSICS
☐ 4 class hrs/wk ☐ 4 cr. ☐ On Demand
A treatment of the basic principles of physics, intended primarily for students in science and engineering. Mathematical techniques in physics

are emphasized; elementary vector analysis and the physical interpretation of calculus are developed concurrently. Three lectures and one recitation.

P 224-226 GENERAL PHYSICS LABORATORY
☐ 1 class hr/wk ☐ 1 cr. ☐ On Demand
An introductory course in experimental physics designed to accompany P 221,222,223. One 3-hour laboratory.

4.300, 4.302 PRACTICAL PHYSICS
☐ 6 class hrs/wk ☐ 4 cr. ☐ W/Sp
A two-term introductory course in principles of physics for vocational students in refrigeration-air conditioning, carpentry, auto mechanics, lab technician programs, etc., who need to learn the basic principles of physics with a minimum of mathematics background. Winter: Mechanics. Spring: Optics, Heat, Electricity and Energy. Prerequisite: Math III or Elements of Algebra completed.

6.214, 6.215, 6.216 TECHNICAL PHYSICS
☐ 6 class hrs/wk ☐ 4 cr. ☐ F/W/Sp
An introductory physics course which may be taken for two terms or three terms. For students in technical fields such as drafting, electronics-electricity, metallurgy, etc., who need a background in physical principles. Fall: Mechanics. Winter: Electricity-Magnetism. Spring: Optics, Heat, Energy. Prerequisite: Pre-Tech Math completed; Tech Math I concurrently. Inexpensive calculator with trig functions and scientific notation is strongly recommended.

6.244 SCIENTIFIC ASPECT OF PRINTING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
An introduction to the chemical and physical processes involved in the printing process and industry. Topics include basic chemistry and physics of paper, ink, photography, simple machines, gases, liquids, light and color with examples drawn from printing equipment and materials.

G201,202,203 GEOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ F/W/Sp
A study of earth materials, processes and forms, and the main events in the history of the earth. Accompanied by labs G204,205,206. May not be offered every year. Prerequisities: Math 95 and Ch 104 concurrently, or consent of instructor.

G204,205,206 GEOLOGY LABORATORY
☐ 2 class hrs/wk ☐ 1 cr. ☐ F/W/Sp
Laboratory and field work to accompany G 201,202,203.

AS 101 RUDIMENTS OF METEOROLOGY
☐ 1-3 class hrs/wk ☐ 1-3 cr. ☐ On Demand
A descriptive treatment of weather phenomena, including winds, air masses, fronts, clouds and precipitation. No prerequisite.

9.645 SCIENTIFIC GLASS BLOWING
☐ 6 class hrs/wk ☐ 3 cr. ☐ On Demand
Introduction to scientific glass blowing. Properties of glasses, construction, repair, and modification of glass laboratory equipment.

GS199 ASTRONOMY
☐ 3 class hrs/wk ☐ 3 cr. ☐ Sp
An introductory one-term course covering rudiments of astronomy. Topics include studies of the solar system, our galaxy, and the universe. Students will have opportunities during the laboratory sessions to view the moon, planets, and stars through LBCC's 6-inch and 8-inch reflector telescopes.

Science Lab Technology

The Science Lab Technology program at Linn-Benton expands career options for students interested in environmetal and science-related work.

Course work for students in the two-year vocational program covers biological and physical science laboratory operation. Additionally, lower division transfer courses can be taken at LBCC and transferred later to an Oregon four-year college or university.

The vocational science lab curriculum prepares students for positions as laboratory technicians in chemical and biological labs and water treatment plants.

Specific job openings are available in treatment plants, rare metals laboratories, pulp and paper companies, governmental laboratories associated with environmental concerns, and university research laboratories.

Technicians are needed to work with scientists and engineers on numerous current areas of research including energy sources, pollution control, environmental monitoring, and food production.

Graduates of the two-year program receive an Associate of Science degree upon completion of course work.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Alg or			
4.202	Math II or			
2.515	Business Math	4		
		7		

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12 ...	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses	4		
	General Education Electives	3	3	
		7	6	

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
4.205-7	Basic Chem I, II, III	4	4	4
6.130-2	Lab Procedures I, II, III	2	2	2
MT95	Intermediate Algebra		4	
6.330	General Electricity I	3		
BI123	Microbiology		4	
6.114	Aquatic Micro			4
6.174	Basic Aquatic Chem			4
		9	14	14

Sophomore Year

Course No.	Course Title	F	W	Sp
4.300-2	Practical Physics		4	4
9.645	Scientific Glassblowing	3		
6.135	Instrumental Analysis		4	
1.200	Cooperative Work Experience			12
	Electives	4	2	
		7	10	16

Electives include scientific glassblowing, lab animal care, electronics, computer programming, blueprint reading, machine processes, ecology, aquatic biology, animal behavior, genetics.

Faculty:
Everett Arasmith
John Carnegie
James Felton
Paul Klopping
John Wooley

Wastewater Technology

The Water/Wastewater Technology program is divided into three programs.

Wastewater Technology

Wastewater Technology--Develops graduates qualified for employment as wastewater plant operators, engineering technicians, technical representatives for various manufacturing concerns. A firm foundation in the sciences of chemistry, microbiology, and fluid hydraulics is offered, followed by specialized courses in which the student performs the actual tests used in treatment plant control.

This curriculum leads to a two-year Associate of Science Degree. Curriculum requires enrollment for seven consecutive quarters. Due to the technical nature of the field, students must enter the curriculum with a mathematics background allowing enrollment in Tech Mathematics I (6.551).

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writing or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives	4		
		4	3	4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
6.114	Aquatic Microbiology			4
6.151	Collection and Pre-Treatment	4		
6.152	P/S Sed/Dig Op Con Pro		4	
6.153	Introduction to AS & TF			4
6.163	Intro to Potable Water	3		
6.173	Basic Aquatic Chemistry			4
6.180	Wastewater Mechanics I			3
6.551-2	Technical Math I, II	4	4	
BI	Microbiology		4	
4.205-6	Basic Chemistry I, II	4	4	
		15	16	15

Sophomore Year

Course No.	Course Title	F	W	Sp
6.154	Process Interaction	4		
6.155	Adv Waste Treatment		4	
6.174	Inter Aquatic Chemistry	4		
6.181	Wastewater Mechancis II	2		
6.235	Applied Hydraulics		4	
6.554	Technical Project			3
1.124	American Institutions			3
6.161	Managment		3	
9.500	Elements of Supervision	3		
	Technical Electives	4	4	9
		17	15	15

Water/Wastewater Technology

Water/Wastewater Technology--Develops graduates who will be employable in either the water treatment field or the wastewater treatment field at the technician level. Course work is similar to that described for the Wastewater Technology program, but includes additional courses in water treatment processes. A two-year Associate of Science Degree in Water/Wastewater which is awarded upon completion.

GENERAL EDUCATION REQUIREMENTS

*Note: The English and math requirements have class prerequisites. These prerequisites may be waived based on the Comparative Guidance and Placement Examination or transfer credit. Also a combined total of four credits is required in health and/or first aid and/or multi-media first aid and/or physical education activity courses. The following shows only suggested courses and times.

Freshman Year

Course No.	Course Title	F	W	Sp
1.102	Occupational Writign or			
WR121	English Comp	3		
1.110	Elements of Algebra or			
4.202	Math II or			
2.515	Business Math		4	
		3	4	

Sophomore Year

Course No.	Course Title	F	W	Sp
1.103	Occupational Speech or			
SP111-12	Beg or Inter. Oral Comm		3	
HE250	Health and/or			
HE252	First Aid and/or			
9.317	Multi-Media First Aid and/or			
	P.E. Activity Courses			4
	General Education Electives	4		
		4	3	4

PROGRAM REQUIREMENTS

Freshman Year

Course No.	Course Title	F	W	Sp
6.114	Aquatic Microbiology			3
6.151	Collection and Pre-Treatment	4		
6.152	P/S Sed/Dig Op Con Pro		4	
6.153	Introduction to AS & TF			4
6.163	Intro to Potable Water	3		
6.173	Basic Aquatic Chemistry			4
6.180	Wastewater Mechanics I			3
6.551-2	Technical Math I, II	4	4	
BI	Microbiology		4	
4.205-6	Basic Chemistry I, II	4	4	
		15	16	14

Sophomore Year

Course No.	Course Title	F	W	Sp
6.154	Process Interaction	4		
6.164	Water Sources	4		
6.165	Water Distribution		4	
6.166	Water Purification Systems			4
6.174	Inter Aquatic Chemistry	4		
6.181	Wastewater Mechanics II	2		
6.235	Applied Hydraulics		4	
6.554	Technical Projects			3
1.124	American Institutions			3
6.161	Management		3	
9.500	Supervision	3		
	Technical Electives		4	6
		17	15	16

Water/Wastewater Plant Operator

Water/Wastewater Plant Operator--Prepares students in a four quarter certificate program to find employment as treatment plant operators. Further courses, in the above three programs, cover all phases of treatment plant operation including maintenance, administration, budget preparation, public relations, purchasing, and report writing. Hands-on-training is provided when the student works full-time in a watewater treatment plant.

Program starts Winter term and lasts four quarters.

1 YEAR CERTIFICATE

Winter Term

Course No.	Course Title	Credits
6.185	Water/Wastewater TPO I	10
4.202	Math II	4
1.150	Reading Skills	3
		17

Spring Term

Course No.	Course Title	Credits
6.186	Water/Wastewater TPO II	10
4.204	Math III	4
6.181	Water/Wastewater Management	4
		18

Summer Term

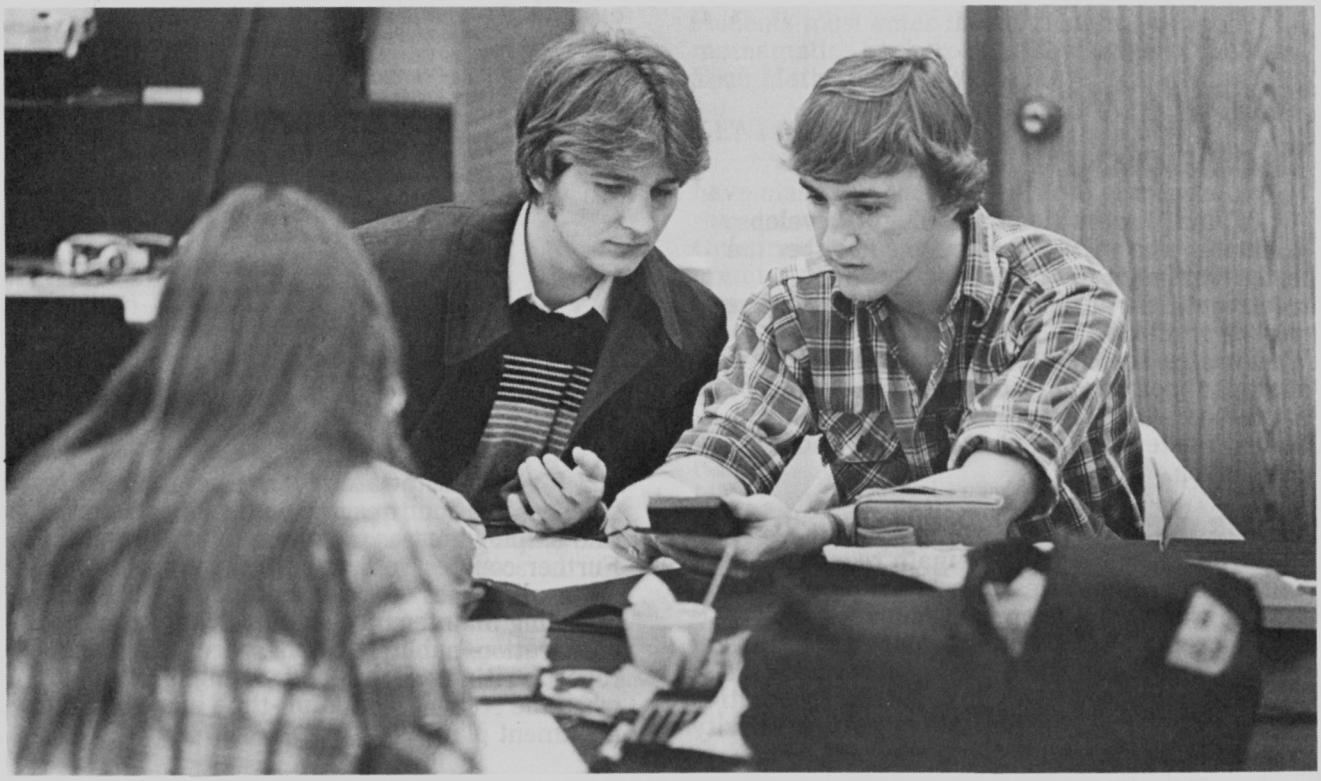
Course No.	Course Title	Credits
6.168	In-Plant Practicum	16
		16

Fall Term

Course No.	Course Title	Credits
6.187	Water/Wastewater TPO III	10
1.101	Basic English	3
HE252	First Aid	3
		16

6.114 AQUATIC MICROBIOLOGY
☐ 6 class hrs/wk ☐ 4 cr. ☐ Sp
A basic course in water microbiology with emphasis on microorganisms found in surface and wastewater; cell biology, growth and behavior of bacterial cells, bacteria as indicators of pollution, collection and handling of samples, MPN test, membrane filter test, and selection of sample filtration volumes. Prerequisite: General Microbiology.

6.130-2 LABORATORY PROCEDURES I,II,III
☐ 4 class hrs/wk ☐ 2 cr. ☐ F/W/Sp
Practical experience and orientation in the field of Laboratory Technology. On-site observation of the role of laboratory technicians in industrial, governmental and academic laboratories. Practical and theoretical training in techniques and procedures common to science laboratories: safety, storage and housekeeping procedures; laboratory data handling and recordkeeping; sampling techniques; handling and preparation of chemicals, including weighing, preparation of solutions, and standardizing reagents. Systematic theoretical and practical study of analytical techniques including both chemical methods and instrumental methods such as chromatography and spectrophotometry. Prerequisite: Enrollment in Science Laboratory Technology Curriculum. Corequisite: Basic Chemistry I (4.205) or equivalent. and ecology of protozoa.



6.135 INSTRUMENTAL ANALYSIS
☐ 6 class hrs/wk ☐ 4 cr. ☐ W
Systematic study of instrumental laboratory procedures as applied to analytical chemistry. Designed to provide an understanding of both theory and techniques required to perform analysis associated with the techniques of chromatography and spectrophotometry. Prerequisite: Basic Chemistry II, 4.206.

6.151 COLLECTION AND PRE-TREATMENT
☐ 6 class hrs/wk ☐ 4 cr. ☐ F
This course is an introduction to the wastewater treatment system, its process, and the identification of its subsystems and processes. The emphasis is placed on: collection system design; construction; lift stations; operation and maintenance; screening and grinding equipment, including operation and maintenance; grit removal, including design criteria, operation and maintenance; the impact of the collection system and pre-treatment facilities on plant operation. Prerequisite: Admission to Water/Wastewater Program.

6.152 PRIMARY/SECONDARY SEDIMENTATION/DIGESTER OPERATION CONTROL PROC.
☐ 6 class hrs/wk ☐ 4 cr. ☐ W
This course deals with primary and secondary clarifiers and the equipment used in sludge removal. It develops: understanding of detention time formulas and recognition of failures in the system; anaerobic and aerobic sludge digestion; solids handling, including dewatering by vacuum filtration and centrifugation; sludge disposal methods, including land application and incineration. Prerequisite: 6.151.

6.153 INTRODUCTION TO ACTIVATED SLUDGE AND TRICKLING FILTERS
☐ 6 class hrs/wk ☐ 4 cr. ☐ Sp
This course develops an understanding of the operation of activated sludge and trickling filter treatment plant processes. Emphasis is on: laboratory analysis in establishing optimum process balance; disinfection as it is related to water and wastewater; operation and maintenance of equipment used in disinfection; a field workshop including stream flow measurement with the use of weirs and current meters, field laboratory tests for stream analysis, general aquatic stream survey. Prerequisite: 6.152.

6.154 PROCESS INTERACTION
☐ 6 class hrs/wk ☐ 4 cr. ☐ F
This course deals with wastewater treatment process interaction and total systems design. The emphasis is on mathematical concepts relating to organic and hydraulic loading to design criteria and plant performance. Depending upon which area is most interesting to the student, he or she will present a technical paper and oral presentation on the aspect of water or wastewater treatment and how the selected topic relates to the treatment facility as a whole. Prerequisite: 6.552, 6.186, 6.153.

6.155 ADVANCED WASTE TREATMENT
☐ 6 class hrs/wk ☐ 4 cr. ☐ W
Introduction to the methods of advanced waste treatment which includes physical-chemical treatment process, reverse osmosis and flash evaporation. Includes discussion of microscreening, filtration, phosphorous removal, nitrification and nitrogen removal, and activated carbon. Prerequisite: 6.154.

6.161 WATER/WASTEWATER MANAGEMENT
☐ 4 class hrs/wk ☐ 4 cr. ☐ Sp
This course will enable the student to prepare orders for supplies, service and parts, operational reports, annual budgets, as well as list manpower requirements and needed capital improvements in the operation of a water/wastewater facility.

6.163 INTRODUCTION TO POTABLE WATER SYSTEMS
☐ 3 class hrs/wk ☐ 3 cr. ☐ F
A general view of potable water systems includes: water needs and uses; characteristics; hydrological cycle; watershed operation and management; ground water movement; wells, intake structures; storage facilities; treatment via filtration and softening; odor and taste control; distribution systems.

6.164 WATER SOURCES
☐ 6 class hrs/wk ☐ 4 cr. ☐ F
The study of surface water sources. Included for surface water--water rights; classification, selection and management of water sheds; measurement; collection; and storage. For ground water--search; measurement, and flow. Construction and maintenance of both systems. Prerequisite: 6.163.

6.165 WATER DISTRIBUTION
☐ 6 class hrs/wk ☐ 4 cr. ☐ Sp
A basic course of study in the techniques of installation, operation, maintenance of water distribution systems.

6.166 WATER PURIFICATION SYSTEMS
☐ 6 class hrs/wk ☐ 4 cr. ☐ W
The study of theory and operation of water purification will include: 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 ☐ 16 cr. ☐ S
In-Plant Practicum consists of full time work in a water or wastewater treatment facility. Skills and knowledge developed in prerequisite courses will be combined with on the job training by both plant supervisory personnel and LBCC visiting instructors. Prerequisite: 6.552 or 4.204 6.153 or 6.186.

6.173 BASIC AQUATIC CHEMISTRY
☐ 5 class hrs/wk ☐ 4 cr. ☐ Sp
A basic course in applied aquatic chemistry with emphasis on test necessary for monitoring treatment of water and wastewater. Tests include settleable solids, suspended solids, volatile solids, pH, dissolved oxygen, biochemical oxygen demand, chlorine residual, and temperature.

6.174 INTERMEDIATE AQUATIC CHEMISTRY
☐ 5 class hrs/wk ☐ 4 cr. ☐ F
The student will be able to properly obtain samples for and, using proper procedures, perform and calculate the results for the following tests: COD; activated sludge tests; SDI; SVI; total acidity; total alkalinity; volatile acid; and chlorine requirement. The student will be able to relate the data obtained in the above tests to water and wastewater treatment operational controls. Prerequisite: 6.173.

6.175 ADVANCED AQUATIC CHEMISTRY
☐ 5 class hrs/wk ☐ 4 cr. ☐ On Demand
This course is an optional third term of a three term sequence in applied aquatic chemistry. Emphasis on instrumental analysis as it relates to water and wastewater treatment control tests. Tests include ammonia nitrogen, nitrite nitrogen, nitrate nitrogen, Kjeldahl nitrogen, phosphate determination, iron, manganese, aluminum, Warburg test. Prerequisite: 6.174.

6.180 WASTEWATER MECHANICS I
☐ 6 class hrs/wk ☐ 3 cr. ☐ Sp
This course of study will include equipment used in a treatment plant including: identification of component parts of the equipment from drawings; disassembly and reassembly of pumps; flow level measuring devices; chlorinators; use of hand and power tools.

6.181 WASTEWATER MECHANICS II
☐ 4 class hrs/wk ☐ 2 cr. ☐ F
This course will include setting up parts inventory and extensive preventive maintenance file systems; air compressors and their role in equipment operations; and mechanical projects simulating work performed in actual treatment plant. Prerequisite: 6.180.

6.185 WATER/WASTEWATER TREATMENT PLANT OPERATOR I
☐ 20 class hrs/wk ☐ 10 cr. ☐ W
Introduction to water and wastewater treatment plant operation including water distribution systems, collection systems, and primary treatment. Includes sanitary microbiology, sanitary chemistry, and a mechanical lab.

6.186 WATER/WASTEWATER TREATMENT PLANT OPERATOR II
☐ 20 class hrs/wk ☐ 10 cr. ☐ Sp
Water purification processes and secondary waste treatment processes. Also includes sanitary microbiology, sanitary chemistry and a mechanical lab. Prerequisite: 6.185.

6.187 WATER/WASTEWATER TREATMENT PLANT OPERATOR III
☐ 20 class hrs/wk ☐ 10 cr. ☐ F
Treatment plant process interaction, municipal finance and record keeping, reporting requirements. Includes sanitary microbiology, sanitary chemistry, and a mechanical lab. Prerequisite: 6.186.

6.235 APPLIED HYDRAULICS
☐ 4 class hrs/wk ☐ 4 cr. ☐ W
A practical course in Applied Hydraulics will enable the student to use and understand common flow charts for flow and head loss calculations in simple water distributions and sewage collection systems. Prerequisite: 6.552 or equivalent.

9.650 WATER TREATMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A general discussion of the needs and uses of water, the effect of water quality standards, the laws affecting water use and quality, and the agencies involved. Special attention is given to waterborne disease and the need for water treatment.

9.651 WATER SOURCES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the location, development and operation of both ground and surface water sources. Will include surface water storage and intake structures.

9.652 WATER TREATMENT FACILITIES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the theory, operation, and maintenance of water treatment facilities. Will include mixing and sedimentation, flocculation, coagulation, filtration, softening, removal of iron and manganese, control of odor and taste, chemical feed equipment, and diatomaseous earth filtration.

9.654 DISINFECTION AND FLUORIDATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the theory of disinfection via chlorine, ozone, ultraviolets, etc.; safety in handling disinfecting chemicals; the operation and maintenance of disinfecting equipment; the operation and maintenance of fluoridation equipment.

9.655 SPECIAL WATER TREATMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the operational theory of special treatment techniques, such as desalting, reverse osmosis, control of corrosion and radioactivity, odor and taste problems.

9.656 WASTEWATER TREATMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
This course deals with the history of treatment, the laws and agencies involved in wastewater treatment, the construction, operation, and maintenance of sanitary sewage collection systems.

9.657 PRIMARY TREATMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the theory, operation and maintenance of flow measurement devices, grit, grinding and removal, primary sedimentation, and anaerobic digesters.

9.658 SECONDARY TREATMENT I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the theory, operation and maintenance of sewage lagoons and trickling filters.

9.659 SECONDARY TREATMENT II
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the theory, operation and maintenance of the activated sludge sewage treatment process.

9.660 ADVANCED WASTE TREATMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of advanced waste treatment systems, to include phosphorus removal, ammonia removal, reverse osmosis, desalting, and physical chemical treatment.

9.661 MANAGEMENT OF WATER & WASTEWATER SYSTEMS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A general study of the types of governmental entities that operate water and wastewater systems. Special attention given to the items of records, budgets, supervisory training, safety programs, rates, emergency planning, planning and public relations.

9.662 PRACTICAL HYDRAULICS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of the relationship of pressure, force, flow, and head loss in both closed and open conduits.

9.663 SLUDGE HANDLING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of various systems of concentrating, conditioning, and disposing of sewage sludge and solids.

9.664 SANITARY MICROBIOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A basic course in sanitary microbiology for water and wastewater personnel. Emphasis is on microorganisms and the laboratory procedures for identifying and differentiating organisms peculiar to water and wastewater treatment.

9.665 SANITARY CHEMISTRY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A basic course in sanitary chemistry for water and wastewater personnel. Emphasis is on basic laboratory skills and familiarization with the methodology for the analysis of pH; alkalinity; BOD; chlorine residual; suspended solids and hardness.

9.666 DISTRIBUTION SYSTEMS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A study of construction techniques and service installation procedures of water distribution systems.

9.667 DISTRIBUTION SYSTEMS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
The study of operation and maintenance procedures for distribution, storage, pump station, hydrants, valves and related record keeping and evaluation systems.

Community Education

Associate Dean: Mike Patrick

The Community Education Division provides a broad range of adult course offerings at the Main Campus and in various locations throughout Linn and Benton Counties.

Courses are available for: lower division credit (at off-campus centers); job skill improvement; life enrichment off the job; improving health and physical condition; enhancing human and family relationships; adult high school equivalency; handicapped adults. Course offerings are designed to meet the educational needs of local population.

Faculty and Staff:
Mary Arman, Coordinator, Lincoln City
Laurel Bible, Adult Basic Education Instructor
Ann Crisp, Director, Albany Center
Harry Earles, Coodinator, Lincoln County
Melvin Gilson, Coordinator, Special Education Programs
Paula Grigsby, Living Skills Instructor
Genevieve Hatfield, RSVP Coordinator
Hal Johnson, Director, Benton Center
W.A. Jordan, Director, Lebanon Center
Lee McDaniel, Farrier Instructor
Nancy Meyrick, Adult Basic Education Instuctor
Carolyn Miller, Special Programs Instructor
Jean Schreiber, Human Services Coordinator
Mona Waibel, Coordinator, Sweet Home Center
Roberta Weber, Parent Education Coordinator

Class Offerings

The Community Education Division offers many college classes at various locations throughout the college district. These are generally 'entry' college classes which may be used to satisfy some of the requirements of the college's various certificate and degree programs. Additionally, a wide variety of both credit and non-credit classes are made available to the community by the Community Education Division. These course offerings include vocational upgrading classes, human relations, conversational languages, physical education and health, art, and other general self-improvement classes. Those credit classes which do not meet specific requirements for a college degree or certificate program may be used to fulfill elective requirements of some certificate and degrees offered by LBCC, including an Associate in General Studies degree.

Community Education Centers

The staff and facilities of the Community Education Division are separated geographically into four centers in order to serve the community by providing instruction at times and places convenient to residents of the college district.

The Albany Center is located on the main LBCC campus in the College Center Building and serves the general populations of Albany, N. Albany, Tangent, and Shedd. Ann Crisp, Director.

The Benton Center is located at 630 N.W. Seventh Street (formerly Washington School) in Corvallis, and serves the areas of Corvallis, Philomath, Monroe, Blodgett and Alsea. Hal Johnson, Director.

The Lebanon Center is located at 1715 Fifth St., Lebanon, across from Lebanon High School, and serves the communities of Lebanon, Scio, and rural East Linn County. Wilfred A. Jorden, Director.

The Sweet Home Center is located at 1314 Long Street in Sweet Home directly behind 'Mollies' Bakery. The Sweet Home Center serves the communities of Sweet Home, Foster, Cascadia, Brownsville, and Halsey. Mona Waibel, Coordinator.

The Lincoln County Center is located at 169 S.W. Coast Highway in Newport in the former Central Elementary School. The Lincoln County Center serves the areas of Lincoln City, Newport, Siletz, Toledo, Eddyville, Waldport, Fisher, and Yachats. LBCC classes in Lincoln County are made possible by state funding and support of the Lincoln County School Listrict. For more information contact the Lincoln County Center by phone 265-2283. Harry R. Earles, Coordinator.

An office is located in Lincoln City to serve residents of the north end of Lincoln County. Mary Arman, Coordinator.

Self-supporting Classes

Many of the non-credit Community Education classes, particularly those that are primarily hobby or recreation oriented are expected to be self-supporting through student tuitions. In order to meet the costs of holding a class, the college may require twelve (12) enrolled students. When a class is cancelled due to under-enrollment, a full refund will be issued to students who pre-registered.

Adult General Education

Linn-Benton Community College has several programs designed to meet the needs of persons over 16 years of age who have not finished high school. These programs are:

ADULT BASIC EDUCATION

To provide for students 16 years of age or older who have not had the opportunity to complete their education through the eighth grade, LBCC offers free classes in Adult Basic Education. These classes offer instruction in the basic skills of reading, writing, English, vocabulary, spelling and mathematics.

GENERAL EDUCATION DEVELOPMENT (GED)

GED Tests Preparation classes are offered free to the student over the age of 16 who has not completed high school and who desires to prepare for the high school equivalency exams (English Expression, Mathematics, Reading and Comprehension of Literature, Social Studies, and Natural Sciences).

Instruction in adult basic education and GED classes includes such information as getting a job, consumer buying practices, health habits, relationships with other members of the family and community, homemaking and citizenship responsibilities. Free classes are held in many locations throughout the area and are offered both during the day and at night. A student may start at any time.

ADULT HIGH SCHOOL DIPLOMA

This is for the student over 18 who wishes to obtain his/her high school diploma. There are two options: (1) diploma granted by the high school or (2) diploma granted by the college. See the Director of Admissions and Registrar for admission requirements.

HIGH SCHOOL CONTINUATION

This program is offered in cooperation with the high schools located in the LBCC district and is designed for presently enrolled high school students who need to make up deficiencies in high school credits. Instruction is offered at night and is based on individual requirements and on individual study. Only students officially referred by their high schools may participate in this program. There is a tuition charge for this program.

Vocational Training for the Handicapped

This is a special program containing two broad areas. One area is designed to offer vocational and related training to those disadvantaged and handicapped people who are being aided by public and private agencies such as Vocational Rehabilitation and the Associations for Retarded Citizens, and who, because of their disadvantagement or handicap, are unable to benefit from the regular college curriculum. The training programs are developed to help each individual reach his or her training potential with the eventual goal of self-support and employement. The second area is a training program for work supervisors of disadvantaged and handicapped persons.

Contact the Coordinator of Special Programs for further information. 928-2361, ext. 414.

Retired Senior Volunteer (RSVP)

The Retired Senior Volunteer Program attempts to provide a meaningful role in retirement for those over sixty.

There are openings for tutors and teacher aides on all school levels; office workers; and instructors in crafts, knitting, crocheting and other skills. Visitors for the elderly in homes and nursing homes are needed. A wide variety of other community activities are also available. RSVP can provide transportation for volunteers and a meal if they work through the meal period. On the job insurance is also provided. Contact the Coordinator of RSVP, 928-4141.

Golden Age Program

Residents of the college district who are sixty-five years of age and older are entitled to take classes sponsored by LBCC on a tuition-free space available basis. A Golden Age card may be obtained on the main LBCC campus in Albany or at any one of the community education centers. If the class selected requires a special 'lab fee' for materials, this amount must be paid by all students, including those with Golden Age Cards.

Farrier Program

The Farrier School formerly operated by Oregon State University will be conducted by Linn-Benton Community College during 1978-79 through the Benton Center in facilities located on the OSU campus.

The program provides training in all phases of horseshoeing and basic blacksmithing skills. Training may be sought by those engaged in farming or related occupations or by those who wish to operate a part-time or full-time horseshoeing business.

This is a 14-week course offered fall, winter and spring. Class sessions last from 8 a.m. to 5 p.m. daily Monday through Friday. Special tuition for the program is $700, with cost of tools an additional $250. Admission is on a first-come first-served basis and early application is advised.

Parent Education

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

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

A Parent Education Community Education Certificate of Completion is available to individuals who complete the following 15 credit requirements: 6 credits of classes involving participation with children: Living & Learning with your Baby; Living & Learning with your Toddler; Living with your Preschooler, or Living with your Kindergartener.

6 credits from the following list of classes: Growing with your Preschooler; P.E.T.; Parenting & Family Communications; Single Again; I'm OK, You're OK; Applied Transactional Analysis; Foster Parent Training.

3 credits from the following list: Living & Learning with your Baby; Living & Learning with your Toddler; Living & Learning with your Preschooler, or Living & Learning with your Kindergartener; Children's Books & Materials; Arts and Crafts for Adults who work with Preschoolers; Creative Ways of Teaching Children Music; Making Educational Games and Materials.

For further information about the parent education program contact the Parent Education Coordinator at 928-2361. The following are a partial list of Parent Education classes.

0.884 P.E.T. PARENT EFFECTIVENESS TRAINING

☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand

A skill-training program particularly for parents, equipping them for staying in relationship with their children. Education for parenting which values the uniqueness of every child. Treats ways of responding to messages of others. A system of effective human relationships. The P.E.T. system applies also to other relationships: husband-wife, boss-subordinate, or friend to friend.

0.890 UNDERSTANDING CHILDREN I

☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand

To help adults understand and alter children's behavior, utilize new ways of dealing with conflict, and gain ideas for nurturing responsible children.

0.890 UNDERSTANDING CHILDREN II

☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand

Expands upon concepts taught in the first term; emphasis on the child's emotional growth, effective communication skills, approaches to problems at school, and the family meeting as aids to raising a responsible child.

0.891 LIVING WITH YOUR PRESCHOOLER OR KINDERGARTENER I, II, III

☐ 20-50 hrs/term ☐ 1-3 cr. ☐ On Demand

Helps parents of pre-school children develop greater awareness of factors affecting the child's physical, emotional, and intellectual development; participation in cooperative preschool lab and seminars.

0.891 LIVING & LEARNING WITH YOUR TODDLER

☐ 26 hrs/term ☐ 2 cr. ☐ On Demand

A course designed for parents of children walking to 2 ½ years. The parents observe and begin to participate with their children in various activities suited to the age group. Discussion of topics such as negative behavior, toilet training and guidance techniques are included.

0.892 LIVING & LEARNING WITH YOUR BABY

☐ 2 class hrs/wk ☐ 1 cr. ☐ On Demand

A course for parents of infants from birth to beginning walkers. Parents bring their child to the class. Activities with the baby are included along with learning practical skills, meeting the needs of the total family, making toys, and understanding the development of infants.

0.894 HOME/SCHOOL COOPERATION--1ST GRADE I, II, III

☐ 5 wks, 3 class hrs/wk ☐ 1 cr. ☐ On Demand

This class deals with parent-child interaction and how the parent may participate fully in his child's education. The class will focus on specific areas such as reading, language, behavior, etc. Current teaching techniques will be reviewed.

0.894 CHILDREN'S LITERATURE

☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand

A study of the history, styles and many uses of children's books, poems, stories and their authors.

0.894 MAKING EDUCATIONAL GAMES AND MATERIALS
☐ **5 wks, 3 class hrs/wk** ☐ **1 cr.** ☐ **On Demand**
A five week course to show parents, teachers, or aides how to make learning games for school age children. The course will teach methods of i—volving children in heightened learning situations as they play.

0.896 ARTS AND CRAFTS FOR ADULTS WHO WORK WITH PRESCHOOLERS
☐ **5 wks, 3 class hrs/wk** ☐ **1 cr.** ☐ **On Demand**
Processes used in this class will be appropriate for children from 2 to 5 years of age. Teaching adults to work with preschoolers and to develop processes which help children develop. The importance of understanding small children and their development will be stressed.

0.900 PARENTS & FAMILY COMMUNICATIONS
☐ **6 wks, 2 class hrs/wk** ☐ **1 cr.** ☐ **On Demand**
The course will deal with such areas as ego needs, communication principles and skills, family discipline, responsibility, handling conflict and other subjects that relate to personality and family development.

0.902 FOSTER PARENT SEMINAR
☐ **15 class hrs** ☐ **1 cr.** ☐ **On Demand**
Discussions for existing foster parents on topics related to working with foster children, natural parents and CSD workers, legal rights and responsibilities of foster parents, and communication skills.

9.004 TEACHER EFFECTIVENESS TRAINING
☐ **5 wks, 3 class hrs/wk** ☐ **1 cr.** ☐ **On Demand**
Laboratory type course in which helping professionals and technicians learn specific skills by which they can enrich the teaching/learning situation. Emphasis is on skill training rather than a discussion of educational philosophies.

9.005 CREATIVE WAYS OF TEACHING CHILDREN MUSIC
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Rhythm, voice, chants, games, sounds, movements, art songs, drama, instrumental sound composition in teaching concepts to children.

9.030 STORYTELLING
☐ **5 wks, 3 class hrs/wk** ☐ **1 cr.** ☐ **On Demand**
Modern and traditional methods of telling stories for parents and teachers of young children.

9.044 CLASSROOM AIDE
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
The class is designed to increase the effectiveness of the classroom instructional aide by providing new and diverse skills which enable the aide to function in a variety of classroom settings while working as a member of the teaching team.

9.831 CHILDREN'S LITERATURE
☐ **3 class hrs/wk** ☐ **2 cr.** ☐ **On Demand**
A study of the history, styles, and many uses of children's books, poems, stories and their authors.

Human Services

The Human Services curriculum and program is being redesigned to emphasize supplementary education for agency personnel. The college intends to meet the education needs of human service employees with existing college courses and the development of new courses, workshops, symposiums and contracted training.

Included within the scope of Human Services instruction will be the competency-based Child Development Associate (CDA) program. CDA is a system of combining an individual's work and academic experiences and relating them to competencies needed by persons employed in child-caring occupations. Individual instructional plans are developed to enable persons to attain the competencies required for certification.

The preparatory course offerings listed below will be scheduled only on a demand basis as needed by students who have previously completed course-work in either the Child Care or Adult Services certification program. The Human Services program will attempt to schedule classes at times and places which will provide those individuals opportunity to complete Certification requirements.

SUPERVISED FIELD EXPERIENCE

Students may, upon the recommendation of the program coordinator, receive transfer or non-transfer college credit by participating in Supervised Field Experience (SFE). Further information may be found in the Cooperative Work Experience section of this catalog.

1.200/WE 201 SUPERVISED FIELD EXPERIENCE
☐ **3-48 class hrs/wk** ☐ **1-16 cr.** ☐ **F/W/Sp**
Supervised Field Experience is designed to give the student actual work experience which closely parallels his field of study. Further information is available in the Cooperative Work Experience section of this catalog.

1.201/WE 202 FIELD EXPERIENCE SEMINAR
☐ **1 class hr/wk** ☐ **1 cr.** ☐ **F/W/Sp**
Refer to the Cooperative Work Experience section of this catalog.

7.130 HUMAN SERVICE SYSTEMS AND PERSONNEL
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Survey of current systems of service provision. Particular emphasis on trends applicable to Oregon. Review of historical perspective of social welfare organizations. Identification of manpower trends and task description analysis. Career opportunities.

7.135 AGES AND STAGES: INTRODUCTION
☐ **2 class hrs/wk** ☐ **2 cr.** ☐ **On Demand**
Multidisciplinary introduction to the study of human growth and development. Includes historical, philosophical, anthropological, sociological, psychological and biological perspectives.

7.137 AGES AND STAGES OF HUMAN DEVELOPMENT: ADOLESCENCE
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Continuation of Ages and Stages sequence. Focus attention on adolescent behaviors, life styles and self-determination factors.

7.140 TECHNIQUES OF OBSERVING BEHAVIOR
☐ **1 class hr/wk** ☐ **1 cr.** ☐ **On Demand**
Introduction to behavioral observation techniques.

7.141 TECHNIQUES OF RECORDING BEHAVIOR
☐ **1 lec/1 lab hr/wk** ☐ **1 cr.** ☐ **On Demand**
Factual recording, use of terminology, expressing quality of interrelatedness with people and materials.

7.142 AGES AND STAGES: EARLY ADULT
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Multidisciplinary approach to the early adult development phase. Includes contemporary problem review and life style impact. Continues Ages and Stages perspective study of human growth and development.

7.143 AGES AND STAGES: MIDDLE YEARS
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Continuation of Ages and Stages adult sequence. Includes practical recognition of the conflicts between youthful expectations and maturity limitations. Emphasis focuses attention on satisfactions of accepting mature self-concepts and relationships.

7.144 AGES AND STAGES: LATER YEARS
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Continuation of Ages and Stages adult sequence. Includes practical considerations of the aging process from various perspectives. Pleasures and joys of the retirement years. Acceptance of closures.

7.145 HEALTH OF YOUNG CHILDREN
☐ **3 class hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Components of healthful environment. Child care agency personnel responsibility for developing procedures of screening, prevention, diagnosis and referrals. Teaching techniques of nutrition, self care and general health.

7.148 INTERVIEWING PROCEDURES
☐ **2 lec/2 lab hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Introduction to the role of interviewer. Practical skill training and opportunities to develop professional attitudes toward interviewee-interviewer relationship.

7.150 CHILD CARE PRACTICE I
☐ **2 lec/2 lab hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Analysis of alternatives to parental care. Examination of standards, methods and programs related to the formation and maintenance of child care, foster care and institutions. Emphasis on family need and feasibility of maintaining specific programs.

7.151 CHILD CARE PRACTICE II
☐ **2 lec/2 lab hrs/wk** ☐ **3 cr.** ☐ **On Demand**
Methods of establishing environment for learning, physical development and emotional growth. Guidance techniques appropriate for teaching language, social and manipulative skills within group setting.

7.153 BEHAVIORAL OBJECTIVES
☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand
Identification of behavioral goals and preparation of plan for behavioral change.

7.180 SUPERVISED PLACEMENT
☐ 2 lec/4 lab hrs/wk ☐ 4 cr. ☐ On Demand
Work in child development laboratory setting under the direction of teacher. Assignment may include material preparation, skill training, and specific care tasks. Weekly class session will permit students from various placements to share learning experiences with peers and to tie placement activity to training objectives. Prerequisite: Instructor's consent.

Credit Classes and Occupational Supplementary Courses

9.006 CALLIGRAPHY, INTERMEDIATE
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Experience in exploration, application and analysis of old and new calligraphic forms to suit commercial and individual needs including design for advertising, offset lithography, promotional and decorative uses. Prerequisite: employment in field.

9.007 CALLIGRAPHY III
☐ 1 lec/2 lab hrs/wk ☐ 2-3 cr. ☐ On Demand
A merger of calligraphy or design with an emphasis on the design elements in relation to calligraphic forms and their use. Work will be done with line, shape, texture, form, value, color and space with emphasis on the 2-dimensional surface.

9.010 CAREER AWARENESS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Theory and practice in human dynamics. Relating learning to interpersonal relations in family, with friends, and on the job.

9.011 ATTITUDE, APPEARANCE AND ABILITY FOR WAITRESSES
☐ 30 hrs/term ☐ 2 cr. ☐ On Demand
The basics of coffee shop waitressing, as well as beginning fundamentals for dining room and cocktail waitressing. The class will cover personal courtesy in food service, techniques of good customer relations and interaction with co-workers.

9.022 FCC LICENSE PREPARATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
To prepare students to take the FCC exams for third class, second class, and first class commercial licenses through study of FCC regulations and typical exam questions.

9.045 AUDIO-VISUAL AIDS
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Planning and production of educational media materials: graphic arts, slides, super 8 and movies, video tape, transparancies, and operation of equipment.

9.050 INDUSTRIAL ORIENTATION
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Materials and tools used in modern industry. Terminology, math, construction details, tools, equipment, and processes as related to manufacturing industries.

9.058 UNIFORM PLUMBING CODE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A comprehen'ive study of the uniform plumbing code and related state amendments. Approved by state plumbing advisory board.

9.100 LAND SURVEYORS' REVIEW
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Review of materials covered on the Oregon State Board of Engineering Examiners Professional Land Surveyors Exam. Topics include: Basic math, errors in surveying traverse and level computations, curve and earth work, topographic mapping and coordinate systems, Oregon land survey law, photogrammetry, field astronomy, US Public Land Survey, introduction to Geodesy, and principles of the profession.

9.105 ENGINEERING TECHNICIAN/CIVIL DRAFTING
☐ 6 class hrs/wk ☐ 3 cr. ☐ On Demand
Accepted drafting practices as applied in civil engineering. An upgrading course for draftsmen who wish to enhance civil engineering skills.

9.110 INDUSTRIAL ESTIMATING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
To familiarize students with industrial drawings, estimating, bidding, and job management.

9.120 AUTOMOTIVE PARTS COUNTERMAN
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Skills and knowledge needed for employment in parts replacement business. For those desiring employment in parts departments of automotive wholesalers, car dealers, farm implement dealers, tires, batteries, and accessories suppliers, warehouse distributors and other positions where parts descriptions, inventory control, methods of purchasing and related knowledge is necessary.

9.130 UNIFORM BUILDING CODE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A comprehensive study of uniform building code emphasizing requirements of Oregon codes. Open to building inspectors and persons employed in construction or building trades.

9.135 FREIGHT LOSS AND DAMAGE I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A thoroughly practical course in every essential aspect of loss and damage, geared to the needs of both shippers and carriers. Problems are drawn from actual cases, ranging from sources of carrier liability to modern claim prevention.

9.136 FREIGHT LOSS AND DAMAGE II
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A more advanced course in the aspects of loss and damage geared to the shippers and carriers. Legal rights in freight loss and damage will be covered.

9.142 LINEAR INTEGRATED CIRCUITS
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
The operation of integrated circuits, particularly operation amplifiers, and their use in upgrading and interconnecting electronic transducers and instruments.

9.143 INTEGRATED CIRCUITS FOR SCIENTISTS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A course in micro electronics and instrumentation for chemists, physicists and other scientists.

9.144 INDUSTRIAL ELECTRONIC INSTRUMENTATION (ART OF PHYSICAL MEASURE)
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Broad course covering the various methods of sensing and transmitting pressure, temperature, flow and humidity.

9.145 INSTRUMENTATION FOR INDUSTRIAL MEASUREMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
The operation of industrial instruments, including indicators, recorders, transducers.

9.146 SHEETMETAL FABRICATION
☐ 6 class hrs/wk ☐ 4 cr. ☐ On Demand
Principles of sheet metal design, layout and fabrication. Intended as upgrading course for personnel employed in heating, refrigeration and air-conditioning fields.

9.155 REFRIGERATION AND AIR CONDITIONING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
The theory, operation and repair of domestic refrigeration and air conditioning systems.

9.163 SMALL ENGINE REPAIR
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
An introductory course covering care and maintenance of 2 and 4 cycle engines and processes of carburetion, ignition, overhaul trouble shooting and estimation of cost of repairs and/or a new engine.

9.180 STATIONARY ENGINEERS I (CORRESPONDENCE COURSE)
☐ 3 class hrs/month ☐ 4 cr. ☐ On Demand
Correspondence course covering the basics of boiler operation and associated equipment, mathematics and applied science.

9.181 STATIONARY ENGINEERS II (CORRESPONDENCE COURSE)
☐ 3 class hrs/month ☐ 4 cr. ☐ On Demand
Continuation of Stationary Engineers I. Covers mathematics and applied science.

9.182 STATIONARY ENGINEERS III (CORRESPONDENCE COURSE)
☐ 3 class hrs/month ☐ 4 cr. ☐ On Demand
Expands the knowledge gained in Stationary Engineers I and II into more technical aspects of operating steam generating plants.

9.210 SCHOOL BUS DRIVING
☐ 9 class hrs/wk ☐ 1 cr. ☐ On Demand
State approved course for school bus drivers, taught from the manual for training Oregon school bus drivers.

9.211 DEFENSIVE DRIVING
☐ 9 class hrs/wk ☐ 1 cr. ☐ On Demand
The practice of defensive driving to avoid all types of collisions with other vehicles.

9.212 FIRST AID FOR SCHOOL BUS DRIVERS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Why and how of first aid, artificial respiration, effects of heat and cold, common emergencies (related to school problems).

9.252 SMALL BUSINESS MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
The fundamentals in selecting, starting and operating a small business, including governmental restrictions and requirements and the need for proper and careful planning and record-keeping.

9.256 LAND USE PLANNING
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Introduction to the principles and practice of land use and comprehensive planning including Oregon planning requirements, planning process, plan elements, zoning and subdivision ordinances.

9.259 INTRODUCTION TO THE ECONOMICS OF LABOR
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
An introduction to the workings of the labor market including an overview of the labor movement, the status of the worker, deployment of the labor force, determination of the rate of pay and collective bargaining.

9.264 INTERSTATE COMMERCE LAW I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Study of transportation regulations covering the Interstate Commerce Act and related acts.

9.267 CALCULATORS IN REAL ESTATE MATH
☐ 2.5 class hrs/wk ☐ 1 cr. ☐ On Demand
An introduction to the use of small, handheld calculators. Emphasis is on special purpose financial calculator suitable to the real estate field. (Calculator required)

9.268 REAL ESTATE LICENSE PREPARATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Basic course in real estate for salesmen interested in preparing for the state Real Estate Examination.

9.271 TRANSPORTATION PRINCIPLES I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Basic traffic and transportation management for all modes of transportation; basic principles of transportation economics and traffic management; transportation and its relationship to our economy.

9.272 TRANSPORTATION PRINCIPLES II
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Intermediate course on transportation fundamentals, study of domestic transportation, carrier services in domestic transportation, and transportation aspects of physical distribution. Of particular benefit to persons presently working in the transportation field, business and economics students.

9.273-5 TRANSPORTATION & TRAFFIC MANAGEMENT I, II, III
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A three-term sequence course covering basic through advanced aspects of transportation and traffic management. Emphasis on freight rates and management of rail and motor traffic.

9.277 REAL ESTATE APPRAISAL
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Theories, functions, and purpose of real estate appraisal. Principles of land evaluations covering cost, market, and income for determining insurance, purchase, and sales.

9.278 MODERN TRENDS IN REAL ESTATE
☐ 9 class hrs ☐ 1 cr. ☐ On Demand
Specialized knowledge of real estate industry. Emphasis on financing, zoning and ordinances and taxation of real property.

9.279 REAL ESTATE SECRETARIES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
To provide the secretary with skills and knowledge needed to meet and interact successfully with the public and others in the real estate field.

9.280 REAL ESTATE INVESTMENTS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Such topics as real estate investment concepts, capital gains and losses, depreciation and amortization and types of financing available.

9.281 COMMERCIAL AND INVESTMENT PROPERTIES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Emphasis on the traditional analysis commonly employed by most investors; leverage, cash flow, real estate investment trusts, syndication, subordination, and annual constants.

9.282 SUBDIVIDING AND COMMUNITY PLANNING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Current methods in subdivision used today throughout the U.S.; local trends in subdivision; local Council of Government brochures on land development.

9.283 REAL ESTATE FINANCE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Policies, problems, and risks involved in financing and investing in various types of real property. Analysis of taxation, exchanges, sources of loan funds, institutional and governmental policies and instruments and methods of lien processing.

9.284 REAL ESTATE PRACTICES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A preparation for entry into real estate. A basic approach to brokerage and licensing as applied to the State of Oregon; operating an office, selling and advertising; accepted standards of ethical conduct, property management, title valuation, planning, zoning, urban renewal, public housing, and development.

9.285 APPLIED MATHEMATICS IN REAL ESTATE
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Preparation for entry into real estate. Fundamental mathematics necessary to compute taxation, real property assessments, percentage relationships and ratios of values, finance, coverage, and appreciation, depreciation, and equity ownership.

9.286 REAL ESTATE TAXATION
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Comprehensive study of current federal legislation, ownership, operation and disposition of real property with emphasis on tax planning and integration of tax concepts with real estate decision making.

9.287 REAL ESTATE SALESMANSHIP
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Characteristics and qualifications of successful real estate salesmen. Includes prospecting for sales and public relations for salesmen.

9.288 REAL ESTATE TRENDS AND DEVELOPMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Economic aspects of real estate land use and patterns of growth. Dynamic zoning, and governmental control factors that influence development of real estate in Oregon.

9.291 REAL ESTATE LAW
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Study of Oregon Real Estate Law emphasizing more complex aspects of ownership, use and transferability of real estate as encountered by brokers and others who deal with real property. Contracts, titles, deeds, leases, liens, covenants, conditions, restriction, easements, estates, probate and landlord-tenant relationships.

9.292 ESCROW PROCEDURES I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
An introduction to the world of escrow prorations, computations of interest, various charges to parties to an escrow, study of title insurance, legal documents, estates in land, public relations.

9.293 ESCROW PROCEDURES II
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A continuation of Escrow Procedures I, more depth, conventional, federal VA, state DVA, conventional loans.

9.295,9.296 TRANSPORTATION & TRAFFIC MANAGEMENT IV, V
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Advanced transportation and traffic management involving further study in water carrier freight rates, export and import rates and application of arbitraries, Interstate Commerce Act, long and short clause, transit privileges, warehousing, technical tariff interpretation, other topics dealing with traffic management competencies.

9.297 TRANSPORTATION AND TRAFFIC MANAGEMENT VI
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Advanced transportation and traffic management involving study of the history of transportation regulation, regulatory control, structure of Interstate Commerce Act in motor, water, and freight forwarders, statutory basis for ICC complaint and other topics.

9.298 TRANSPORTATION AND TRAFFIC MANAGEMENT VII
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Advanced transportation and traffic management involving further study in remedies before ICC, civil liability, operating authority, penalties, ICC rules of practice, and various other meaningful topics.

9.305 SUPERVISORY SAFETY MANAGEMENT
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Practical approach to safety codes, program development, committees, codes, communications and special problem areas; guarding, hearing, eyes, shoes, hats, etc.

9.310 FIREFIGHTING SKILLS A
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Emphasis on development of individual skills, using small tools, minor equipment, practice in forcible entry, use of masks, and breathing equipment. Team skills used in ground operations including hose and ladder evolutions, salvage, overhaul, rescue and fire attack.

9.311 FIREFIGHTING SKILLS B
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Review of concepts, such as ventilation, breathing equipment, ropes and knots. Rescue problems and procedures encountered by the volunteer fire department.

9.440 EYE CARE PROFESSIONAL ASSISTANT I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Lecture and participation of assistants presently employed in basic aspects of working in office of an optometrist or opthamologist.

9.441 EYE CARE PROFESSIONAL ASSISTANT II
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Lecture and participation of assistants presently employed in the field with more advanced aspects of working in the office of an optometrist or opthamologist.

9.460 RADIATION PROTECTION
☐ 13 wks, 3 class hrs/wk ☐ 4 cr. ☐ On Demand
An introductory course designed to adequately prepare persons who work or will work in X-ray in any medical facility. Not designed for X-ray technicians. This course will meet the minimum requirement of the Radiation Control Section of the Department of Human Resources.

9.546 BASIC SALES METHODOLOGY
☐ 6 week class ☐ 2 cr. ☐ On Demand
Introduction to sales techniques with emphasis on technique rather than motivation of sales force.

9.620 FUNDAMENTALS OF RADIO AND ELECTRONICS I
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Fundamentals of electricity and electronics applicable to beginning students with vocational or avocational interests.

9.621 RADIO AND ELECTRONICS II
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Fundamentals of electricity and electronics of value to intermediate students with either vocational or avocational interest. Includes operation of tubes and transistors, circuitry, audio amplifiers and equipment, power supplies and related areas.

9.622 RADIO AND ELECTRONICS III
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Advanced theory in electronics circuitry applicable to students with either vocational or avocational interests.

9.640 PRINCIPLES OF ROAD DESIGN
☐ 2 lec/4 lab hrs/wk ☐ 4 cr. ☐ On Demand
A study of road design principles including project analysis, specifications, economics, plan-in-hand inspection and final drafting of design project.

9.645 SCIENTIFIC GLASS BLOWING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Introduction to scientific glass blowing. Properties of glasses, working with glass tubing and making glass-metal seals.

9.664 SANITARY MICROBIOLOGY
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A basic course in sanitary microbiology for water and wastewater personnel. Emphasis is on microorganisms and the laboratory procedures for identifying and differentiating organisms peculiar to water and wastewater treatment.

9.670 COLLECTION SYSTEM I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Upgrading course for personnel in wastewater collection system work. Operation and maintenance of sewers and lift stations. Safety, cleaning, grouting. Administration and organization of systems.

9.671 COLLECTION SYSTEM II
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Continuation of Collection Systems I.

9.739 OFFICE PROCEDURES
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Fundamentals of office procedures, including mail processing, payroll, purchasing supplies, filing, shorthand review, boss/secretary relationship, office machines, and telephone techniques.

9.742 SWITCHBOARD--RECEPTION TECHNIQUES
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Operation and function of switchboards. (770 Electronic, Call Director, Multiple line hand sets) Techniques of answering telephones for offices with switchboards in a variety of employment situations. Fullest use of budgeted telephone dollars.

9.745 GENERAL PRINCIPLES OF INSURANCE I
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
General knowledge of the insurance field. Types of insurance contracts, risk and loss concepts, rating, marketing of insurance, organization of insurers, underwriting, re-insurance and reserves.

9.746 PROPERTY INSURANCE PRINCIPLES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Continuation of Insurance Principles I. The course will cover fire insurance policies, forms, clauses and rate making; business insurance; F.C. and S; ocean and inland marine, cargo policy; bailees; personal floater; burglary, multiple line-mercantile and flood insurance.

9.748 PRINCIPLES OF INSURANCE III
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Study in depth of various casualty coverages and forms, including general liability, automobile coverages, workers compensation, fidelity and surety bonding. The course is intended to prepare students to sit for the Insurance Institute of America Study Course (IIA) National Examination.

9.758 INTRODUCTION TO BUSINESS RECORDS MANAGEMENT
☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand
Application of systematic analysis and scientific control of business records from their creation through processing, maintenance, protection, and final disposition or archival retention. Controlling the quantity, quality, and cost of paperwork and information.

9.817 LIVESTOCK CARE AND MANAGEMENT
☐ 1-2 class hrs/wk ☐ 1-2 cr. ☐ On Demand
General practices related to feeding, care, selection, and management of livestock.

9.818 HORSEMANSHIP & HORSE HUSBANDRY
☐ 2 lec/1.5 lab hrs/wk ☐ 3 cr. ☐ On Demand
The proper care and use of the animal for new horse owners or those interested in further instruction. Health characteristics, nutrition, reproduction and housing will be covered, as well as safety, training procedures, performance and equipment. Tips on horse selection and a review of literature.

9.824 ADVANCED HORSEMANSHIP & HORSE HUSBANDRY
☐ 2 lec/1.5 lab hrs/wk ☐ 3 cr. ☐ On Demand
An advanced course covering selection and care of the horse including anatomy, judging, nutrition, foot care, unsoundness and disease, reproduction, and genetics; management and utilization of the horse, including training and showing, horse production management; review of literature.

9.828 TRACTOR SAFETY
☐ 12 class hrs/term ☐ 1 cr. ☐ On Demand
Tractor safety and operation in accordance with federal regulations for under age farm workers. Class developed and operated with the cooperation and assistance of the Agriculture Extension Program.

9.829 VERMICULTURE: WORM FARMING
☐ 3 class hrs/wk ☐ 1 cr. ☐ On Demand
This course is to help present and prospective worm farmers become successful. Course will cover care and feeding of worms, preparation of bedding boxes, and the study of the purchase of stock and sale of offspring.

9.832 FARM MACHINE SAFETY
☐ 12 class hrs/term ☐ 1 cr. ☐ On Demand
Farm Machinery safety in accordance with federal regulations for under age farm workers. Class is developed and operated with the cooperation and assistance of the Agriculture Extension program.

9.842 LABORATORY ANIMAL TECHNOLOGY
☐ 1.5 class hrs/wk ☐ 2 cr. ☐ On Demand
Basic duties of a laboratory animal technician, including husbandry and management of laboratory animals.

0.519 BASIC PHOTOGRAPHY I
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Basic black and white photography covering cameras, film developing and printing negatives, enlarging, lighting subjects and other basic skills.

0.519 BASIC PHOTOGRAPHY II
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Zone system method of film exposure and development will be taught. Further printing techniques and different types of photographic paper will be used. Bleaching and toning of photo prints will also be covered.

0.595 BOOKKEEPING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Operation of an accounting system, including its use in making management decisions. Active participation through projects involving flow of data through the accounting system.

0.685 CAREER DECISION MAKING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Students will determine their occupational abilities, examine alternative careers and develop individual plans to fulfill their job goals.

0.685 LIFE PLANNING FOR ADULT WOMEN
☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand
Women seeking new direction in their lives can explore their values, interests and abilities through this course, with professional guidance and testing that will help look at alternative careers or roles in society.

0.686 YOUR ATTITUDE IS SHOWING
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Reading, studying, and discussing 'Your Attitude is Showing' to give confidence in dealing with many human relations problems.

0.686 I'M OK, YOU'RE OK
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Concepts of Transactional Analysis. Students learn to be aware of how they respond to stimuli so they may have a choice to change unproductive or inappropriate behavior.

0.686 APPLIED TRANSACTIONAL ANALYSIS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
A laboratory experience in human relationships in which the concepts of Transactional Analysis are practically applied to the life situation of the students. Training in accurate, therapeutic listening; congruent communication and no-loss conflict resolution are an integral part of the course.

0.688 PASSAGES
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
Adult development and the predictable crises of adult life with special emphasis on differences between masculine and feminine principles and the resulting life patterns. Drawn from Gail Sheehy's 'Passages' and the work of Swiss psychiatrist Carl Guston Jung.

0.688 SHIFTING GEARS
☐ 3 class hrs/wk ☐ 3 cr. ☐ On Demand
The course is a lecture/laboratory experience in coping constructively with change, i.e. vocational, aging, marital crisis, divorce, adolescence, etc. Students will be helped to develop a strategy for intentionally changing their lives instead of simply responding to the rapid changes in society.

0.695 APPLIED ASSERTION
☐ 2.5 class hrs/wk ☐ 1 cr. ☐ On Demand
A class to facilitate the application of assertive concepts to the life style of each individual. Limited to students who have completed Assertiveness Training.

0.695 ASSERTIVENESS TRAINING
☐ 2.5 class hrs/wk ☐ 1 cr. ☐ On Demand
A class to facilitate the learning of a package of communication skills termed assertive behavior. Students will learn productive self-confidence through understanding of assertive, acquiescent and aggression principles.

0.695 PERSONAL DEVELOPMENT
☐ 2 class hrs/wk ☐ 2 cr. ☐ On Demand
An experience in interpersonal communications with the use of Gestalt Theory and Group Dynamics. The discussions and exercise in a small group setting are intended to increase self understanding, self support, self responsibility and awareness of choice.

0.841 GET YOUR MONEY'S WORTH
☐ 5 wks, 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Helps student evaluate and plan to become more skillful in managing money.

0.844 STRETCHING YOUR DOLLAR
☐ 5 wks, 3 class hrs/wk ☐ 1 cr. ☐ On Demand
Live better and spend less by using all your resources, time, skill and good planning to ease the pressure on the dollar. Become a bargain hunter and knowledgeable consumer.

0.853 MANAGING YOUR LIFE VS LIFE MANAGING YOU
☐ 5 wks, 3 class hrs/wk ☐ 1 cr. ☐ On Demand
For students who seek to add organization to the problem solving process we call LIFE. It is for those who desire to take charge of the multitude of daily situations in more creative ways.

9.802 BEEKEEPING I
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
The course is designed for anyone who has an interest in honeybees and particularly for those who would like an opportunity to learn what is necessary to successfully manage a few colonies.

9.803 BEEKEEPING--INTERMEDIATE
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Designed for the amateur beekeeper with some knowledge of honey bees. Gives a summary of the terminology, biology, marketing management, swarming, pollination, pesticides, diseases, parasites, and predators of the honey bee and/or its products.

9.901 TAILORING
☐ 3 class hrs/wk ☐ 2 cr. ☐ On Demand
Designed for people working in tailoring. Will include approximately one hour of lecture and demonstration by the instructor with the rest of the class period left for sewing by the students. The course is designed to promote construction of a well-fitting tailored garment using a combination of techniques as found in retail and home custom finished clothing.

College Personnel

College Personnel

The faculty and staff of Linn-Benton Community College represent a wide background of education, training and experience.

They are chosen not only for their skills but for their belief in the college philosophy of readily-available education opportunities for men and women of the district.

Because of the college's size and the nature of its programs, the relationship between students, faculty and staff is close and informal. Students should not hesitate to seek advice or help with their career goals and college programs from instructors or other members of the college staff.

LBCC Faculty and Staff

Adams, O. Robert, Vice President. B.A., Oregon State University; M.A., D.Ed., University of Oregon. At Linn-Benton since 1968.

Alvin, John, Welding Instructor. B.S., Oregon State University; State of Oregon Welding Certification; 7 years Journeyman welding experience. At Linn-Benton since 1968.

Arasmith, Everett, Water/Wastewater Technology Instructor. A.A., Oregon Institute of Technology. At Linn-Benton since 1974.

Archibald, A. Lee, Dean of Students. B.A., M.Ed., Oregon state University. At Linn-Benton since 1967.

Arman, Mary, Community Education, Lincoln Center Coordinator. B.A., Colorado College. At Linn-Benton since 1977.

Armstrong, Harry, Construction Technology Instructor. B.S., Oregon State University; related construction experience. At Linn-Benton since 1975.

Atwood, Illa, Business Skills Instructor. B.S., M.Ed., Oregon State University. At Linn-Benton since 1971.

Ayers, Martha, Language Arts Instructor. B.A., M.A., Western Michigan University. At Linn-Benton since 1970.

Bakley, David, Health & Physical Education Instructor. B.S., Westmar College; M.Ed., Oregon State University. At Linn-Benton since 1972.

Benjaminson, Al, Electricity/Electronics Instructor. B.E., University of Adelaide, Australia; B.E.E., Polytechnic Institute of Brooklyn. At Linn-Benton since 1976.

Benoff, Judith, Associate Degree Nursing Instructor. AASN, Marshall University; B.S.N., Old Dominion University. At Linn-Benton since 1977.

Benson, David, Biology Instructor. B.S., University of the Pacific, Stockton. At Linn-Benton since 1978.

Bergeman, Richard, Assistant to Coordinator of Public Information. B.S., Bowling Green State University. At Linn-Benton since 1976.

Bervin, Arthur, Language Arts Instructor. B.A., Portland State University; M.A., University of Redlands. At Linn-Benton since 1970.

Bible, Laurel, Community Education, ABE/GED/ESL Instructor. B.A., University of Oregon. At Linn-Benton since 1975.

Black, Margaret, Associate Degree Nursing Instructor. B.S.N., M.S.N., University of Oregon School of Nursing. At Linn-Benton since 1978.

Boyse, Peter, Coordinator of Student Development. B.A., Albion College; M.S., University of Michigan; M.S., Oregon State University. At Linn-Benton since 1976.

Bowler, Virginia, Acquisitions/Reference Librarian. Ed.B., University of California at Los Angeles; M.L.S., University of Oregon. At Linn-Benton since 1969.

Brem, Janet, Guidance Counselor. B.S., M.Ed., Oregon State University. At Linn-Benton since 1969.

Brick, Walter J., Art and Art History Instructor. B.A., University of Washington; M.S., University of Oregon. At Linn-Benton since 1969.

Brooks, Jay, Business Management Instructor. A.A., San Jose City College; B.S., M.Ed., Oregon State University. At Linn-Benton since 1968.

Brown, Brian H., Guidance Counselor. B.S., University of Oregon; M.A., San Jose State University; Ph.D., Oregon State University. At Linn-Benton since 1976

Brown, Marc, Food Services Manager. B.S., Oregon State University. At Linn-Benton since 1973.

Burke, Michael, Machine Tool Technology Instructor. A.A., Santa Ana College; 16 years field experience. At Linn-Benton since 1975.

Butler, J. Michael, Heating, Refrigeration & Air Conditioning Instructor. B.S., Utah State University; M.Ed., Oregon State University; 13 years industrial experience. At Linn-Benton since 1977.

Call, Shirley, Language Arts Instructor. B.A., Goshen College; M.A. University of Oregon. At Linn-Benton since 1967.

Carnhan, Jon, Director of Admissions and Registrar. B.A.Ed., M.Ed., Central Washington University. At Linn-Benton since 1973.

Carnegie, John W., Water/Wastewater Technology Instructor. B.S., M.S., Ph.D., Oregon State University. At Linn-Benton 1971-75 and since 1977.

Carter, David, Automotive Technology Instructor. Eugene Technical Vocational School; General Motors Training School; Toyota Training School; IGOA Master Technician Certificate; Colorado State University Vehicle Emission Certificate. At Linn-Benton since 1969.

Chambers, Maynard, Business Management Instructor. B.S., M.B.A., Oregon State University. At Linn-Benton since 1970.

Chase, Thomas, Language Arts Instructor. B.A., University of Colorado, Boulder; M.A., California State University, Hayward. At Linn-Benton since 1971.

Cheney, Kenneth, Director of Humanities and Social Services Division. B.A., M.A., Northern Colorado University. At Linn-Benton since 1969.

Chester, Patsy, Business Skills Instructor. B.S., Idaho State University; M.Ed., Oregon State University. At Linn-Benton since 1967.

Clark, Douglas, Political Science Instructor. B.A., M.A., University of Oregon. At Linn-Benton since 1972.

Clark, Katherine, Developmental Studies Instructor. B.A., University of California, Santa Cruz; M.A., Stanford University. At Linn-Benton since 1975.

Clark, Philip V., Director of Business Division. B.S., M.B.A., San Jose State College. At Linn-Benton since 1969.

Clemons, Marvin, Cooperative Work Experience Instructor. B.S., University of Wisconsin at Stout; M.S., University of Oregon. At Linn-Benton since 1973.

Collins, Edward, Auto Technology Instructor. Attended Oregon Institute of Technology, Portland Community College; related experience. At Linn-Benton since 1978.

Conner, Gerald H., Business Management and Economics Instructor. B.A., Park College; M.B.A., University of Oregon. At Linn-Benton since 1974.

Cooper, Violet, Placement Officer. B.S., M.S., California State University, Hayward. At Linn-Benton since 1975.

Cope, Marian, Study Skills Instructor. A.A., B.S., Montana State University. At Linn-Benton since 1973.

Cripe, Sue, Assistant Registrar. Attended University of California, Berkeley. At Linn-Benton since 1968.

Crisp, Ann C., Community Education, Albany Center Director. B.S., Ball State University; Master of Home Economics, Oregon State University. At Linn-Benton since 1975.

Crosman, Arlene, Physical Education Instructor. B.S., M.Ed., Oregon State University. At Linn-Benton since 1972.

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Gregory, Russell, Study Skills Instructor. B.A., M.Ed., Colorado State University. At Linn-Benton since 1975.

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Grigsby, Paula, Community Education, ABE Living Skills Instructor. B.S., Portland State University; M.S., Oregon College of Education. At Linn-Benton since 1973.

Hankey, Richard, Criminal Justice Administration Instructor. A.B., University of California; M.A., Fresno State College; D.P.A., University of Southern California; Advanced Certificate California Peace Officers Standards Training Commission. At Linn-Benton since 1972.

Hansen, Kent, Electricity/Electronics Technology Instructor. A.S., Oregon Institute of Technology; B.S., M.Ed., Oregon State University. At Linn-Benton since 1974.

Harris, William M., Construction Technology Instructor. Related construction experience. At Linn-Benton since 1977.

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Hedberg-Duff,Judith=, Graphic Communications Instructor. B.S., M.A., Oregon State University At Linn-Benton since 1976.

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Jean, Raymond A., Director of Facilities. Certification, Journeyman's Carpenters and Joiners, Plant and Field Concrete Supervisors; construction experience. At Linn-Benton since 1971.

Johnson, Hal, Community Education, Benton Center Director. B.S., M.S., Washington State University. At Linn-Benton since 1971.

Johnson, Jerome A., Director of Developmental Center. B.A., Western Washington State College; M.A., University of Puget Sound; D.Ed., Oregon State University. At Linn-Benton since 1977.

Johnson, Lyndall, Associate Degree Nursing Instructor. D.N., Emanuel Hospital; B.S., Pacific Lutheran University; M.Ed., Oregon State University. At Linn-Benton since 1976.

Jordan, Wilfred A., Community Education, Lebanon Center Director. Attended University of Washington; personnel management and industrial relations experience. At Linn-Benton since 1969.

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Kraft, John R., Chemistry Instructor. B.A., Willamette University. At Linn-Benton since 1973.

Lambert, Rita, Director of Financial Aids & Placement. B.S., Mt. Angel College; M.S., Oregon State University. At Linn-Benton since 1971.

Lamberton, Bobbie, Health Occupations Instructor/Coordinator of Continuing Education. R.N., B.S., Walla Walla College. At Linn-Benton since 1976.

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Lawrence, Dorothy, Business Skills Instructor. Certified Professional Secretary; B.S., M.S., Oregon State University. At Linn-Benton since 1972.

Ledbetter, Ward, Business Management Instructor. B.S., University of Tulsa; M.B.Ed., Indiana University. At Linn-Benton since 1967.

Lee, Yvonne, Cataloging/Reference Librarian. B.A., Ewha Women's University, Korea; B.A., Oregon State University; M.L.S., University of Oregon, At Linn-Benton since 1968.

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Morgan, Jerry, Dental Assistant Instructor. Certificate, USAF; Certificate, University of North Carolina; CDA, American Dental Assistants Association; Radiological Proficiency and Expanded Duties Certificate, State of Oregon. At Linn-Benton since 1972.

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Scott, Peter, Director of Science and Technology Division. B.S., Oregon State University; Ph.D., Purdue University. At Linn-Benton since 1968.

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Shelton, Stephen M., Director of Information Processing. Attended University of Arizona; professional training in data processing, DEC and IBM. At Linn-Benton since 1970.

Siebler, William A., Director of Resource Development. B.A., Western Washington State College; M.A., San Francisco State University. At Linn-Benton since 1968.

Snyder, Paul K., Media Specialist. B.S., Portland State University; M.S., Oregon College of Education. At Linn-Benton since 1974.

Spiker, Jennifer, Journalism and Photography Instructor. B.A., Hastings College; M.S., Kansas State University. At Linn-Benton since 1975.

Stearns, Rolfe, Culinary Arts and Restaurant Management Instructor; Philosophy & Religion Instructor. A.B., Oberlin College; Cooking Certificate, Lane Community College. At Linn-Benton since 1976.

Stewart, Elwyn D., Welding Instructor. Experience as industrial welder and fabricator; Industrial Welder Apprentice 4 Year Certificate; upgrading at Eugene Vocational School and LBCC; State of Oregon Pipe Certification. At Linn-Benton since 1969.

Swearingen, Dell, Mathematics Instructor. B.S., Oregon College of Education M.S., University of Oregon; Ph.D. Oregon State University. At Linn-Benton since 1971.

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Thornton, Larry, Auto Body Repair Instructor. Associate Degree, University of Oregon; Training School certificated from General Motors, and Ford Motor Division; DeVilbiss Paint School; Martin-Senour Paint School. At Linn-Benton since 1971.

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Tolbert, James A., Graphic Communications Instructor. B.S., M.A., California Polytechnic State University. At Linn-Benton since 1976.

Trautman, Dale, Electricity/Electronics Instructor. B.S., M.ED., Oregon State University. At Linn-Benton since 1978.

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Tsukamaki, Diane, Financial Aids Officer. B.S., M.S., Oregon State University. At Linn-Benton since 1976.

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Vee, Gina, Sociology and Psychology Instructor. B.A., Northern Illinois University. At Linn-Benton since 1973.

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Weaver, Milton L., Coordinator of Veterans Affairs and Admissions Officer. A.A., Linn-Benton Community College; B.S., M.S., University of Oregon. At Linn-Benton since 1977.

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West, Richard, Performing Arts Instructor. B.S., Oregon State University; M.M., University of Oregon. At Linn-Benton since 1971.

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Wood, Dennis, Welding Instructor. Engineering studies at San Jose City College, Peralta Junior College, Chabot College, University of California, Berkeley; Journeyman Welder and steel construction inspector. At Linn-Benton since 1976.

Woodworth, Mary Lynda, Business Management Instructor. B.A., Oregon State University; M.B.A., Portland State University. At Linn-Benton since 1976.

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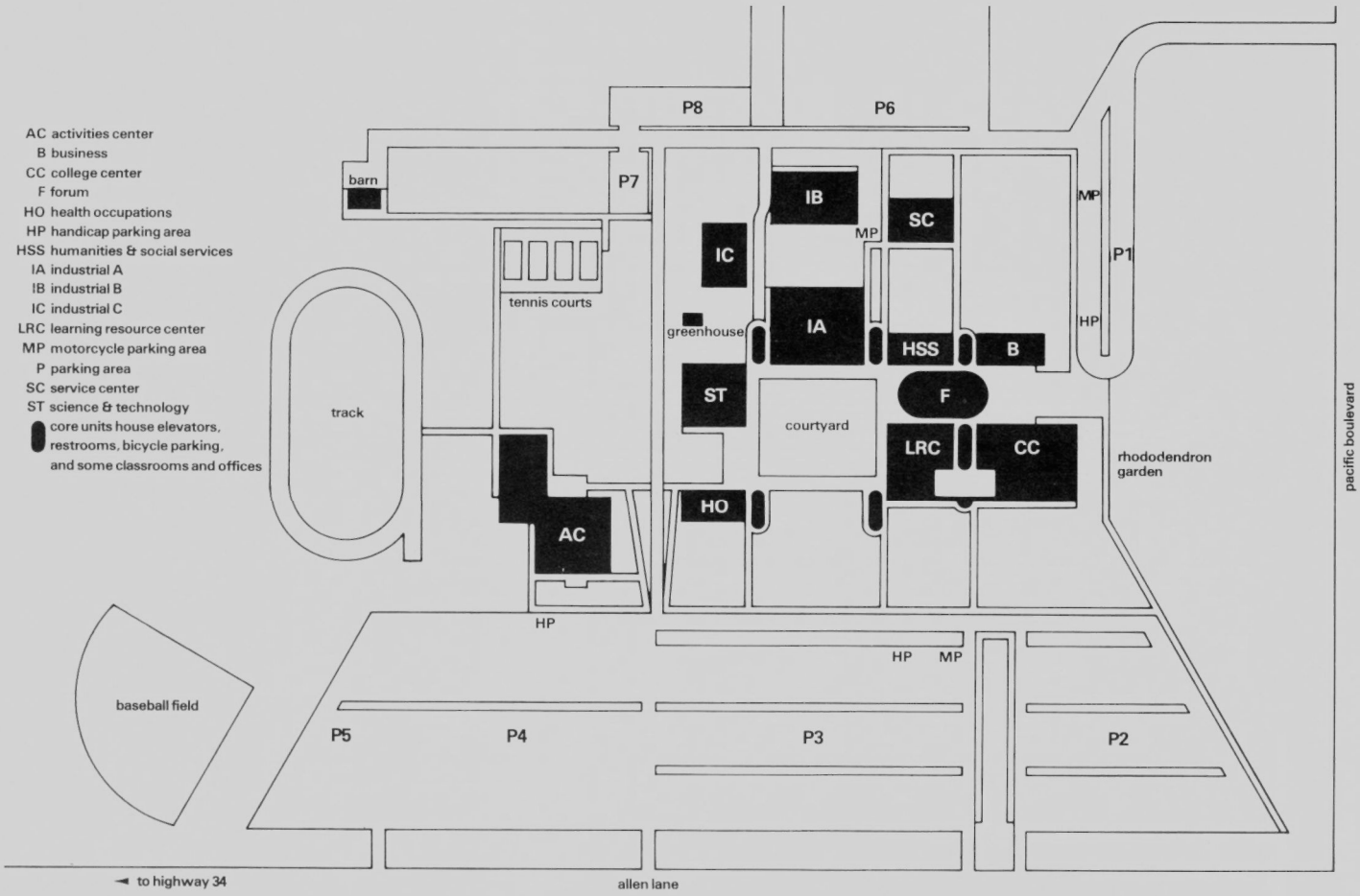
Map


AC activities center
B business
CC college center
F forum
HO health occupations
HP handicap parking area
HSS humanities & social services
IA industrial A
IB industrial B
IC industrial C
LRC learning resource center
MP motorcycle parking area
P parking area
SC service center
ST science & technology
core units house elevators, restrooms, bicycle parking, and some classrooms and offices
P8
P6
barn
P7
IB
SC
MP
IC
P1
tennis courts
greenhouse
IA
HP
HSS
B
track
ST
F
courtyard
LRC
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