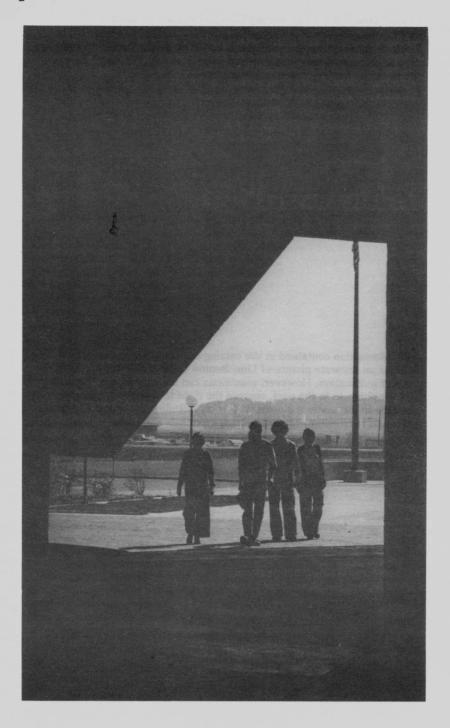


In 1977 Linn-Benton Community College begins its second decade of operation.

The pioneer families who settled the mid-Willamette Valley were engaged primarily in agriculture, logging and small business. Through the years the economy has expanded to include major industries.

Linn-Benton Community College is proud to serve the growing educational needs of its community.

The information contained in the catalog and/or schedule of classes reflects an accurate picture of Linn-Benton Community College as of 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 1977-1978

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# calendar

### fall term, 1977

Registration begins August 29 September 26 Classes Begin Last day to register Students registering for September 30 10 or more credits Students registering for October 14 9 or less credits Last day to drop without a "W" October 7 October 14 Last day to add October 28 Last day for refunds Veteran's Day holiday November 11 Thanksgiving holiday November 23-25 Lasy day to request P/NP option December 9 Last day to officially withdraw December 9 December 12, 13, 14 Final exams Last day of Fall Term December 16 December 19-31 Christmas recess

### spring term, 1978

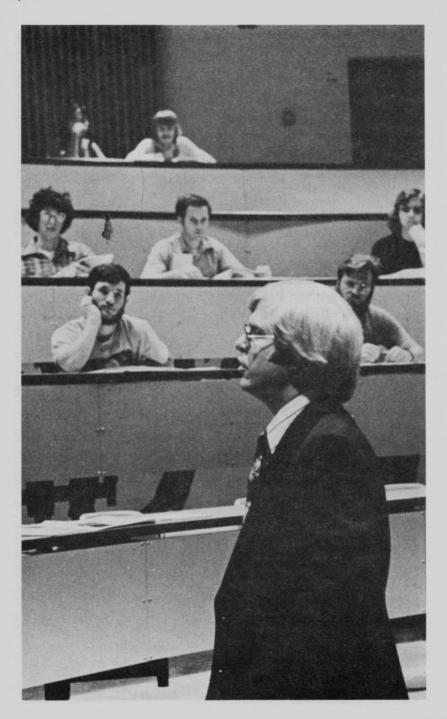
Registration begins	March 6
Classes begin	March 27
Last day to register	
Students registering for	
10 or more credits	March 31
Students registering for	
9 or less credits	April 14
Last day to drop without a "W"	April 7
Last day to add	April 14
Last day for refunds	April 28
Memorial Day holiday	May 29
Last day to request P/NP option	June 2
Last day to officially withdraw	June 2
Final exams	June 5, 6, 7
Graduation	June 9
Last day of Spring Term	June 9

### winter term, 1978

Registration begins	December 5
Classes begin	January 3
Last day to register	
Students registering for	
10 or more credits	January 6
Students registering for	
9 or less credits	January 20
Last day to drop without a "W"	January 13
Last day to add	January 20
Last day for refunds	February 3
Last day to request P/NP option	March 10
Last day to officially withdraw	March 10
Final exams	March 13, 14, 15
Last day of Winter Term	March 17
Spring recess	March 20-24

### summer term, 1978

Registration begins	May 29
Classes begin	June 19
Last day to register	8
Students registering for	,
10 or more credits	June 23
Students registering for	
9 or less credits	July 7
Last day to drop without a "W"	June 30
Independence Day holiday	July 4
Last day to add	July 7
Last day for refunds	July 21
Last day to request P/NP option	August 18
Last day to officially withdraw	August 18
Final exams—ten week session	August 24-25
Last day of Summer Term	August 25



# history and philosophy

Linn-Benton Community College is a two-year public institution offering general education, occupational-technical training, lower division college transfer courses and community adult education to men and women of Linn and Benton counties.

Its 104-acre campus is located in the mid-Willamette Valley just south of Albany, Oregon, with four centers for Community Education serving outlying areas.

It is one of 13 comprehensive community colleges in Oregon, with admission open to any district resident beyond high school age.

Besides its instructional and cooperative education programs LBCC provides facilities for educational community services, and offers a well-rounded student activities program, 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.

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

### oregon board of education

W. Warren Maxwell, Chairman, Lakeview
Sedley N. Stuart, Vice Chairman, Gresham
Kenneth L. Smith, Warm Springs
Frank M. Warren, Portland
Wanda Silverman, Portland
Joyce Benjamin, Eugene
Ellis H. Casson, Portland
Verne A. Duncan, State Superintendent of Public Instruction

#### lbcc board of education

Ethel Yocum, Chairperson; Albany Virgil H. Freed, Corvallis Kenneth H. Haevernick, M.D., Lebanon H.L. Hammond, Jr., Corvallis Robert Jordan, Brownsville Joe Malcom, Philomath Russell W. Tripp, Albany

#### lbcc administration

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

#### 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 and development

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 the University of Oregon's Bureau of Educational Research prepared a study on the need for a community college in the area, and on December 6, 1966 the Linn-Benton Community College Area Education District was established with the approval of voters in the two counties.

The college assumed the assets of the former Capital Business College in Albany in 1967 and in September of that year offered its first classes in temporary quarters throughout the district, with headquarters at 203 W. First Avenue, Albany.

Construction of a permanent campus got underway on February 25, 1970 with voter approval of a \$6.1 million bond issue. Classes were first held in modular buildings on the permanent college site at 6500 S.W. Pacific Boulevard in Albany in September 1970. Ground-breaking ceremonies for the first college buildings were held on September 17 of that year.

The first ten buildings were completed and occupied in the spring of 1973 and the first phase of construction was completed in the fall of 1974.

Voters approved the establishment of a tax base for the college district in November 1976.

#### accreditation

Linn-Benton Community College is fully accredited by the Oregon State System of Higher Education and the Oregon State Board of Education, and offers a variety of programs approved by the Veterans Administration. Linn-Benton Community College is accredited by the Northeest Association of Schools and Colleges. Accreditation by this association indicates that the college's programs meet standards and performance levels equal to other accredited institutions.

#### nondiscrimination

Linn-Benton Community 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.



# student personnel services

Student Personnel Services provides students with supportive services and activities 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 and Career Information Center 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.

#### **Dean of Students**

Lee Archibald

#### **Admissions and Registration**

Jon Carnahan, Director Sue Cripe, Assistant Registrar Dennis Creighton, Veterans Coordinator

#### **Financial Aids**

Rita Lambert, Coordinator Diane Tsukamaki, Assistant to the Coordinator

#### Placement

Violet Cooper, Coordinator

#### **Guidance Services**

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

#### **College Center**

Robert Miller, Director Marc Brown, Evening Manager Food Services Peter Boyse, Coordinator Clubs and Organizations Doug Hurst, Manager Food Services

#### Supportive Staff:

Irene Allen, College Center Bookkeeper Rosemary Bennett, Career Information Assistant Verla Benson, Admissions & Career Information Assistant Carolyn Delair, Food Service Aide Susan Evenson, Food Service Aide Jan Fryer, Registration Clerk Sue Jimmerson, Registrar's Secretary Elsie Knabe, Food Services Baker Shirley Loe, Financial Aids Accounting Clerk JoAnn Perry, Health Services Secretary Mel Pfel, Food Services Cook Carol Reid, Registration Coordinator Wanda Rodgers, Transcript Clerk Clenda Seiders, College Center Secretary Georgia Selfridge, Admissions Clerk Marlene Seth, Placement Secretary Connie Smith, Guidance Secretary Sue St. Clair, Financial Aids Secretary Cherie Yasami, Activities Clerk

# admissions and career information

#### **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 completed application 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 and Career Information Center was designed to be the "front door" of Linn-Benton Community College, and is available to all prospective and enrolled students. Information concerning admissions procedures, programs and career exploring are among the services provided in this center.

#### Full-Time Admissions [10 or more credits]

**New Students:** 

- 1. Application for Admissions.
- 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 vill be exempt. Also transfer students who have passed 15 college credits will 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 two weeks 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 attendance for 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 and Vocational 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 by March in order to have a good chance of being admitted fall term.

\*Associate Degree Nursing

Auto Body Technology

Automotive Technology

Construction Technology

- \*Dental Assistant
- \*Nursing Assistant

Welding

In addition to the general college requirements for admission, each individual applying for health occupations programs must satisfy program admission requirements.

#### \*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 and Counseling 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 and Career Information Center. 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. For further information regarding the admission of Associate Degree Nursing applicants, students should contact the Admissions and Career Information Center.

#### \*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 and Career Information Center.

#### \*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 quarters. 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 and Career Information Center.

\*See General Policy, page 7.

#### 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) that place where a person has his or her permanent home and principal establishment, and 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 and family, 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. If any applicant has questions concerning the policies, he should consult the Director of Admissions at Linn-Benton Community College.

# registration procedures

#### **Credit Classes**

- 1. Complete all admission requirements (see page 7).
- 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 are required to register prior to the last day of the preceding term. Students returning Fall Term must register three weeks prior to the first day of class.

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 Numer is required to positively identify your records. An

Social Security Numer 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

(Service Fee included—see below)

Regular		Out-of	Out-of
Classes	District	District	State
Per credit	\$ 9.25	\$ 17.00	\$ 43.00
Minimum			
Charge	\$ 18.50	\$ 34.00	\$ 43.00
*Maximum	* 1915		ninda samul
Charge	\$111.00	\$204.00	\$516.00
**Per Credit			
over 18 Cred	its\$ 9.25	\$ 17.00	\$ 43.00

<sup>\*12</sup> to 18 Credits

Tuition for Community Education classes which are non-credit will be charged on a per hour basis. (See Community Education schedule for individual class tuition.) Community Education classes which are credit will be charged at a rate of \$9.25 per credit hour.

The college reserves the right to change tuition and fees for the 1977-78 school year.

#### **Special Fees and Expenses**

Add fee per quarter
First add
All others (each transaction)\$2.00
Drop fee
Credit by Examination (per credit)\$3.00
Career Guidance and Placement Examination\$5.00
*Student Medical Insurance
(12 months starting Fall Term)\$57.75
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

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

\*Rates shown are subject to change for 1977-78 school year. Please check with Registrar's Office for current expenses.

\*Rates shown are subject to change for 1977-78 school year. Please check with Registrar's Office for current expenses.

#### LBCC Service Fee

A student who enrolls for 12 credits pays a \$13.80 fee. Of the \$13.80, \$3.80 is returned to the General Fund for instructional supplies. The remaining \$10.00 is allocated to the Activities and Co-Curricular Fund (ACCF) to provide services and activities for the students of LBCC.

#### **Student Services**

Included are college center and food services, sports programs, student publications and student activities. The budget for the ACCF is a product of the Student-Faculty ACCF Committee and has received approval from the Administration and the Board. A copy of the ACCF budget is available for review in the College Center Office.

#### **Unique Programs**

Students in the Chemeketa Area Education District are allowed to enroll in LBCC unique programs (Agriculture Technology; Construction Technology; Environmental Studies; Heating, Air Conditioning and Refrigeration; Metallurgical Technology; and Recreational Vehicle Repair) at resident tuition rates. Priority in these programs may be given to resident students when applications exceed available openings.

<sup>\*\*</sup>Non-refundable

#### **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 \$18.50 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 50 to 299. It should be emphasized that there may be exceptions. Those courses which are generally non-transferable have course numbers below 50. Some technical courses are acceptable for transfer to selected four-year institutions.

Questions regarding transferability of courses should be referred to the Director 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. 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 paying \$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. 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.

Advanced Placement Scores should 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

#### **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

N-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

N-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.

#### 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 are 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.

#### Transcripts and Records

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

#### 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.

#### 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, page 11.

# 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 In 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 In Arts: This degree is awarded to students who complete the requirements of the lower division Liberal Arts program.

Associate in Arts: This degree is awarded to students who complete the requirements of the lower division Liberal Arts program.

Associate in 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 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:

1.101 Basic English or WR 120 Basic Writing and 3 credits 1.102 Occupational Writing or 1.103 Occupational Oral Communications or 1.112 Technical Report Writing or 2.651 Business Report Writing or SP 111 Oral Communications 3 credits Health or First Aid 3 credits PE Activity 1 credit PE Activity 1 credit PE Activity 1 credit

\*Additional credits selected from Humanities, Social Science, Science/Math. Three credits in each of two areas.

6 credits

#### 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:

WR 121 Writing	3 credits
WR 122 or	
WR 123 Writing	3 credits
Health	3 credits
PE Activity	1 credit
PE Activity	1 credit
PE Activity	1 credit
(Need only meet requirements of transfer college)	
*Credits selected from Humanities, Social	
Science, Science/Math. A minimum of nine credits in each of two areas with the	
remainder among the three areas.	36 credits

#### 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:

1.101 Basic English or	
WR 120 Basic Writing and	3 credits
1.102 Occupational Writing or	
1.103 Occupational Oral Communications or	
1.112 Technical Report Writing or	
2.651 Business Report Writing or	
SP 111 Oral Communications	3 credits
Health or First Aid	3 credits
PE Activity	1 credit
PE Activity	1 credit
PE Activity	1 credit
*Humanities	9 credits
Social Science	9 credits
Science/Math	9 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

The Dean of Students Office, in cooperation with the Dean of Instruction, processes waivers and exceptions to degree, diploma and certificate requirements.

Waivers of the Physical Education requirements will be allowed under the following conditions:

- 1. Health—a physician may recommend a student be exempt from the physical education requirement. It is suggested, where possible, that the physician recommend some form of adapted or corrective physical activity.
- 2. Full-time students who are age 30 at the time of matriculation are not required to take physical education.
- 3. All P.E. requirements will be waived for veterans with two or more years of service.

Petition for waiver forms are available in the Admission and Career Information Center.

#### **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 assistants, welding, dental assistants and sewage treatment plant operators are commonly awarded certificates.

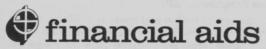
Generally, students must complete a minimum of 36 credits to qualify for the one year certificate. Individuals should refer to specific sections of the catalog to determine requirements.

#### **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 agee 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 requirments 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. 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 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.



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. Use of this service assures every student equal treatment. College Scholarship Service requires six weeks to process applications. A minimum \$4 fee is charged.

#### **Application Procedures for 1977-78**

Applications for aid are available from the Financial Aid Office or from your High School Counselor.

- 1. File the Financial Aid Form with College Scholarship Service. If you wish to be considered for a State Need Grant, request on the form that one copy of the statement be sent to the State Scholarship Commission in Eugene.
- 2. Complete and return the Linn-Benton Financial Aid Application.
- 3. File a Basic Grant Application, (graduates of four year institutions are not eligible for this grant).

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, you should 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 *Books &	\$333	\$333	\$333
Supplies	200	200	200
Rent & Food Personal	800	1700	4400
Expenses	450	450	900
Transportation	600	600	600
Day Care			1200

\*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.

# 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. A separate application is required for this program. 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, averaging \$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 \$2.30 an hour for work performed. Higher wages will be paid to returning student workers and for jobs requiring specialization. Employment during the school term my 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 ten 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 ten 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 may be denied to students who have failed to pay previous emergency loans or deferred payments on due dates. Emergency loan checks are normally ready the day following receipt of the student application.

#### Law Enforcement Education Program [LEEP]

Financial assistance to pay the cost of tuition and books is available to 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 Coordinator 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 Coordinator of Financial Aids or Veterans Coordinator 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.

### veterans' assistance

#### **Veterans' Assistance Office**

The staff of the VAO helps veterans and their dependents in making application for most veterans' benefits, and will follow up on their applications 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.

#### G.I. Bill [Veterans' Benefits]

Prospective students who are eligible for veterans' benefits should contact the college Veterans' Affairs Office for information on V.A. approved programs of instruction, prior to making application for benefits. Upon receipt of the veterans' 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.

# 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 Service**

A full-time job placement service is available to the graduates and alumni of LBCC. Available service includes referral to job openings, assisting students in preparing resumes and job search techniques. Students who desire to use this service may also establish a permanent credentials file in the Placement Service Office. For further information on the LBCC Placement Center, contact the Coordinator of Placement.

#### Alumni

LBCC publishes an alumni newsletter to keep its former students informed about campus activities. Students who wish to participate in an alumni organization should contact the Coordinator of Placement.

# **E**guidance services

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 government offers assistance to new students through information booths, maps and programs.

#### Advising

All new matriculated 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 matriculated students throughout the school year through the cooperation of counselors and teachers. When students need help in planning their class schedule they should contact their major instructor or the Division Office for their particular majors. The following list indicates which division each major is in and the Division Office number.

#### Business: B 111 - Office

5002 - 0502 Accounting Technology/Accounting

5005 Administrative Secretary

5003 Banking and Finance

0506 Business Administration

5001 Business Management

5096 Marketing

5097 Legal Secretary

5099 Medical Office Receptionist

5214 Medical Office Assistant

5213 Medical Transcriptionist

5004 Supervisory Training

5101 Data Processing

5404 Culinary Arts - Food Service

5095 General Business

5093 Secretarial Sciences

5098 Educational Secretary

#### Counseling: CC 110 - Office

5630 - 4950 Undecided/Undecided

0803 Secondary Education

0802 Elementary Education

1301 Home Economics

#### Health Occupations: HO 121 - Office

5208 Associate Degree Nursing

5202 Dental Assistant

5209 Nursing Assistant

#### **Humanities & Social Sciences: SS 101 - Office**

5598 Child Development

5505 Criminal Justice - Corrections

5597 Criminal Justice - Law Enforcement

5012 Graphic Communications - Graphic Design

315 Graphic Communications - Production Tech.

5599 Human Services

1002 Art

2202 Anthropology

1507 Creative Writing

2209 Criminal Justice Administration

1007 Drama

1501 English

1101 Foreign Languages

2205 History

0602 Journalism

1509 Philosophy & Religion

2207 Political

2207 Political Science

2001 Psychology

1506 Speech

2206 Geography

1005 Music

2204 Economics



#### Industrial: HSS 121 - Office

- 5380 Auto Body Repair
- 5306 Automotive Technology
- 5318 Construction Technology (carpentry)
- 5303 Machine Tool Technology
- 5399 Metallurgical Technology
- 5381 Recreational Vehicle & Small Engine Repair
- 5308 Welding

#### Physical Education: AC 102 - Office

0835 Physical Education & Health

#### Science & Technologoy: ST 121 - Office

- 5402 0101 Agriculture/Agriculture
  - 5206 Animal Technology
- 5301 0901 Engineering Technology/Engineering
  - 5304 Drafting Technology
  - 5310 Electricity/Electronics Technology
  - 5507 Fire Science
  - 5317 Regrigeration, Heating & Air Conditioning
  - 5205 Science Lab Technology
  - 5408 Wastewater
  - 1902 Physics
  - 0418 Fisheries Biology
  - 0114 Forestry
  - 1901 General Science
  - 1701 Mathematics
  - 0401 Biology
  - 1905 Chemistry
  - 1206 Pre-Medicine
  - 1204 Pre-Dental
  - 1203 Pre-Nursing
  - 1218 Pre-Veterinary

#### 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.

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.

# 0.685 - 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.

#### ED 209 - Leadership Practicum

#### 1 cr. F/W/Sp

Credit assigned for involvement and responsibility in ASLBCC Senate.

# student activities

Through the combined efforts of students, faculty, and administration, student 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 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 experimental 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 by ASLBCC in the coming year are convocation speeches, film series, dances, performing artists, automotive events, art exhibits, symposiums, special seminars, recreational activities, etc.

#### **ASLBCC Senate**

The voice of students organized to participate in campus government is the Associated Students of Linn-Benton Community College (ASLBCC). Its function is to coordinate all student activities, ideas, and legislation; to represent the students of LBCC; and to act as liaison with the faculty and administration. In addition, ASLBCC represents the students of LBCC on a state and national level.

The ASLBCC Programming Council serves as a body which plans and implements special convocations, performing artists, and film series which are held at LBCC.

The participation of the students of LBCC is essential in the Student Senate and Programming Council if they and the College are to act in the best interests of the students of LBCC. Students desiring to become involved in ASLBCC activities should contact the Student Senate office in the College Center.

#### 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 College Center Office.

#### **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 1977-78 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, among them the well known Tomorrow's People. Individuals interested in participation should contact the Music 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 College Center Office.

#### **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.

# learning services developmental center

The Developmental Center offers a program of classes and individualized instruction to help assure successful achievement in college courses through the improvement of mathematics, reading, writing, listening, spelling, and study techniques. The college places special emphasis on the learning of these basic skills, and students needing assistance are generally able to sign up for instruction any time during the quarter.

#### Director:

Position Vacant, to be filled July 1

#### Faculty:

Marian Cope Russell Gregory Charles Mann

#### Supportive Staff:

Simonya Brown, Secretary Kathy Clark, Instructional Assistant Corilee Heinis, Testing Assistant Bonnie Orr, Instructional Assistant Helen Singer, Center Assistant

Students from all areas of the campus are encouraged to take advantage of the services offered by the Developmental Center. In addition, the counseling staff and many faculty members may refer students to the Developmental Center when there is a need for improvement in various skills areas.

Students whose work in class or on diagnostic tests indicates a need for instructional assistance in skills development will find the opportunity for improvement in the Developmental Center. Students may register for regular classes, or may sign up on an individualized basis for whatever amount of time is needed.

Many regularly scheduled mathematics, reading, language arts and study skills courses are individualized so that students can progress at their own rate. Staff, materials and equipment are provided to help students complete entire courses or take mini-courses in specialized areas.

#### **Tutorial Program**

A tutorial program is also administered through the Developmental Center. The tutorial program at Linn-Benton was established to provide assistance to students at the college in meeting the objectives of their classes.

#### **Testing**

LBCC requires the Comparative Guidance and Placement Test (CGP) for all students taking 10 or more credits. This test battery is administered by the Developmental Center and costs the student \$5.00. The CGP takes between  $3\frac{1}{2}$  to 4 hours and the results are used for counseling and placement purposes. Call or visit the Developmental Center for further information including test dates.

The Developmental Center also administers the high school equivalency test (GED) and the College Level Examination Program (CLEP). For further information and testing fees, contact the Developmental Center.

#### 1.125 - Study Skills

#### 1-3 credits

Instruction in methods of study, including how to budget time, how to study for a test, test-taking tips (essay, multiple choice, etc.), note-taking, outlining, effective listening and use of the library. Emphasis is on application of skills using the student's own textbooks.

#### 1.126 - Language Arts Skills [Individualized]

#### 1-3 credits

Individualized instruction in English fundamentals, writing, and vocabulary development. Remedial, developmental or supplemental to other courses. Diagnosis, placement, and flexible scheduling maximize effectiveness.

### 1.128 - Reading Skills [Individualized] 1-3 credits

Individualized instruction in most reading skills, study techniques and listening skills. Remedial, developmental, or supplemental to other courses. Diagnosis of deficiencies and interests of student determine placement.

#### 1.130 - Basic Grammar

#### 3 class hrs/wk 3 credits

Basic rules and practices in grammar, sentence structure, punctuation and general writing usage. Special attention to individual differences and difficulties. Prepares students who lack satisfactory background for enrollment in English Composition or Communication Skills 1.

#### 1.131 - Spelling

#### 3 class hrs/wk 3 credits

Spelling skill is developed through the use of phonetic principles, structural generalizations, work attack skills and pronunciation. Instruction will also be provided in the skill of proofreading and dictionary usage.

#### 1.132 - Spelling [Individualized]

#### 1-3 credits

Spelling skill is learned through phonetic and spelling principles in an individualized and independent approach. Instruction is based on diagnosis of the student's existing spelling skills. Primary emphasis in this course is placed on phonics as preparatory skill for more advanced spelling techniques.

#### 1.134 - Study Skills—Vocational 20-60 lab 0-3 credits

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.

#### 1.135 - Developmental Reading

3 class hrs/wk 3 credits

Instruction in reading skills necessary to meet academic reading requirements. Meets individual needs in reading comprehension, rate, and vocabulary development. Many other reading skills are presented as group activities. May be taken three times for non-transfer credit.

#### 1.150 - Techniques of Reading and Studying

3 class hrs/wk 3 credits

Study skills and reading skills necessary to meet academic requirements. Basic study techniques with emphasis on needs of the class. Reading skills of comprehension, rate, and vocabulary development individualized to meet needs of each student.

#### 1.156 - English as a Second Language

6 class hrs/wk 3 credits

For students whose native language is not English. Work in listening and reading comprehension, speaking and writing skills with attention to individual problems and assistance to students who have encountered difficulties with the English language in other classes.

# EN 115 - Effective Reading 3 class hrs/wk 3 credits

For the student who wishes to increase reading efficiency and improve study skills with regard to speed, comprehension, and vocabulary. Counselor or instructor approval needed.

#### 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 acquisition and processing of educational materials which support the college programs. Staff and facilities are provided for the production of many locally developed materials.

#### Director:

William A. Siebler

#### Faculty:

Virginia Bowler, Librarian Yvonne Lee, Librarian Stan Ruckman, Head Librarian Paul Snyder, Media Specialist

#### Supportive Staff:

Cheryll Anglin, Secretary Patty Baaske, Graphics Technician Barbara Beauregard, Press Operator Carol Boock, Cataloging Technician Lu Brummett, Press Operator Tim Favtinger, Graphic Artist Marena Hiner, Library Clerk Evelyn Leslie, Phototypesetter Irma McDonald, Library Clerk Cathy McKaig, Media Clerk Tom Mills, Equipment Technician Rich Paull, Graphic Artist Terri Pease, Graphics Clerk Nancy Ramp, Media Equipment Coordinator Jane Ross, Library Circulation Coordinator Elaine Stahn, Library Clerk John Subert, Graphic Artist Chris Thompson, Graphics Production Coordinator Joan White, Photographer

#### 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.

#### **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 material for student clubs and activities with permission from the Coordinator of Student Activities.

# campus services

#### **College Center**

The College Center serves as the gathering place for all members of the college community—students, faculty, administrators, alumni and guests. The College 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. Among the services presently provided in the College Center are: snack bar, food and drink dispensaries, lost and found, ticket sales and distribution, recreational and game equipment, meeting rooms, bulletin boards, public telephones, housing listings, lockers for the handicapped and a fireside lounge. The College Center is open from 7:30 a.m. until 10 p.m. Monday through Thursday, and from 7:30 a.m. until 5 p.m. on Fridays.

#### **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, 7:30 AM until 3:00 PM on Friday, and 8:30 to 11:30 AM on Saturday, 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; the Santiam Room, which provides table service for breakfast and lunch; and "The Sprout," a natural foods cafe, open for 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 mimimum delay.

#### **Bookstore**

The Bookstore provides all the required textbooks and miscellaneous supplies and materials needed by students attending LBCC. Profits from the Bookstores 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 4 p.m. Monday through Thursday; 8 a.m. to 4:30 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 and buy-back of books is available at the Bookstore.

#### **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

#### **Health Services**

A Health Center staffed by a registered nurse is located in the College Center to provide emergency first aid and counseling on health problems. The Health Center is open from 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.



# 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 200-299 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 program 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 keeps 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.

### WE203/1.202 - 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. & 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—General Botany or			
BI 101-3—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

#### 26 Programs of Study

Sophomore Year			
Course No. & 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. & Title	F	W	Sp
WR 121 or WR 121-3—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. & 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. & Title	F	W	Sp
BA 101—Introduction to Business (OSU, SOSC) WR 121 (OSU), WR 121-2 (PSU, SOSC),	4		4100
WR 121-3 (EOSC)—English Composition	3	(3)	(3)
Speech Mathematics*	4	4	4
	1	1	1
Physical Education*		3	3
SS 111-3—Stenography	3 2	2	3 2 3
SS 121-3—Typewriting Data Processing (if available) (OSU, SOSC)*	Transfer and	d Think	3
Electives*		3-7	0-4
Electives	17	16-17	16-17
Sophomore Year			
Course No. & Title	F	W	Sp
EC 201-3—Principles of Economics	3	3	3
BA 211-3—Principles of Accounting	3 3 3	3 3 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 BA 214—Business Communications (SOSC, PSU)	)		2-3
Data Processing (if available) (SOSC)			3
BA 226—Business Law (OSU, PSU) BA 219—Office Machines (if available) (SOSC)			
BA 232—Introduction to Business	3	3	(3)
Statistics (OSU, PSU) HS 201-3—History of the United States or			(0)
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 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.

F	W	Sp
3	3	3
3	3	
3	3	3
3		
	3	
3	3	3
1	1	1
		6
16	16	16
	3	3 3

#### Sophomore Year

Course No. & 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. & 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. & 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.

eshr		

Course No. & Title	r	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, 101-3, 107-9, 201-3, or			
253-5—English Sequence	3	3	3
GE 105 and 106 or			
GE 107—Geography		3	3
PE Activity**	1	1	1
BI 101-3—General Biology	4	4	4
	17	17	17

#### Sophomore Year

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

\*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 Yea

rreshman Tear			
Course No. & 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, 101-3, 107-9, 201-3, or			
253-5—English Sequence	3	3	3
Electives from major/minor area***	3	3	6
	16	16	16
Sophomore Year			
Course No. & Title	F	W	Sp

population rem			
Course No. & Title	F	W	Sp
SO 204-6—Sociology Sequence	3	3	3
HS 101-3, or 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. & Title	F	W	Sp
MT 101-2—College Algebra, Trigonometry	4	4	
MT 110—Analytic Geometry CH 201-3—General Chemistry	4	4	4
WR 121—English Composition 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. & 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 AR 291		3	3
AR 281-2		3	3
	12-17	12-17	12-17

#### Sophomore Year

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

<sup>\*</sup>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. & 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 Algebra, Trigonometry	4	4	4
MT 110—Analytic Geometry 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. & 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. & Title	F	W	Sp

# Course No. & Title F W Sp SO 204-6—Sociology or PY 201-3—Psycology Sequence 3 3 3 3 HS 101-3, or 201-3—History Sequence 3 3 3 3 Electives\* 9 9 9 15 15 15

#### **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. & Title	F	W	Sp
PE 180/190—P.E. Activity	1	1	1
WR 121, and WR 122 or			
WR 123—English Composition	3	3	
EN 104-6, 101-3, 107-9			
201-3, or 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

<sup>\*</sup>Prior to taking these courses, contact Counseling.

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20	pnom	ore i	car

Course No. & 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 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. & 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. & 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.

Fres	hman	Year

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

#### Sophomore Year

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

Maximum acceptable credits: 108 hours.

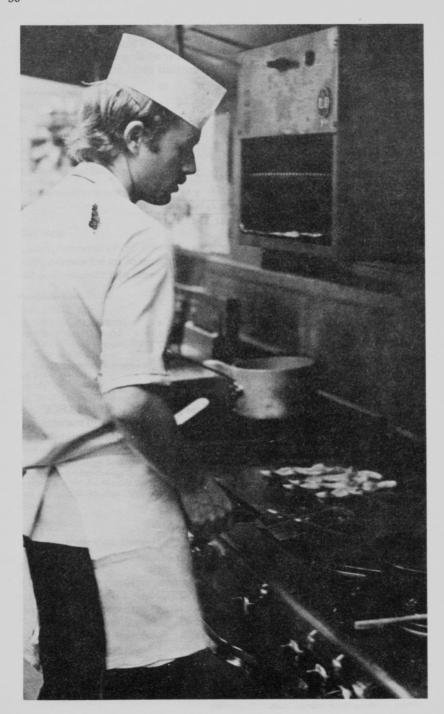
#### **Social Science**

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. & Title	F	w	Sp
PE 180/190—PE Activity	1	1	1
HE 250—Personal Health			3
WR 121, 122 or 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, 101-3, 107-9 201-3, or			
253-5—Literature Sequence	3	3	3
Electives	6	6	6
	17	17	17
Sophomore Year			
Course No. & 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

<sup>\*</sup>Prior to taking these courses, contact Counseling.



# business division

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.

#### Director:

Philip V. Clark

#### Faculty:

Illa Atwood, Business Skills
Jay Brooks, Business Skills
Sherry Brubaker, Business Skills
Maynard Chambers, Business Management Department Chairperson
Patsy Chester, Business Skills Department Chairperson
Gerry Conner, Business Management
Charles Dallmann, Culinary Arts Department Chairperson
Dorothy Hazel, Business Skills
Dorothy Lawrence, Business Skills
Ward Ledbetter, Business Management
James E. Moran, Jr., Data Processing Department Chairperson
Joyce Moreira, Business Skills
Rolfe Stearns, Culinary Arts
Al Walczak, Business Skills

#### Supportive Staff:

Jean Heins, Secretary
Barbara Wyman, Director's Secretary
Wanda Davies, Instructional Assistant Business Skills
Carol Engstrom, Instructional Assistant Business Skills
Lila Hoard, Instructional Assistant Business Skills

Mary Lynda Woodworth, Business Management

Business

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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 (proposed) 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.
- 16. A two-year program in Advanced Professional Cooking leading to an Associate of Science degree or a two-year certificate.

#### **One-Year Programs**

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

#### **Special Programs**

- 24. A short program in Supervisory Training leading to a Supervisory Certificate:
- 25. Courses offered through the joint effort of the College and the American Institute of Banking designed as a program specifically for bank employees:
- 26. Courses to fit the personal or vocational needs of part-time students in the day or evening programs;
- 27. Varied general business courses for students majoring in other fields who desire some background and specific knowledge in business;
- 28. 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] 3-16 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 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.

#### Freshman Year

Course No. & Title	F	W	Sp
BA 101—Introduction to Business	4		
2.530-2-Practical Accounting I, II, III*	3	3	3
2.515—Business Math	3		
2.501—Typing I	3		
1.101-2—Communication Skills I, II*		3	3
2.119—Introduction to Management*		3	
2.121—Applied Economics*		3	
2.130—Business Quantitative Methods		3	
PE 180/190—Physical Education		1	1
2.131—Marketing			3
2.521—Office Machines			2
2.516—Business Statistics			3
	13	16	15

Sopnomore Tear			
Course No. & Title	F	W	Sp
2.595-7—Intermediate Accounting I, II, III	3	3	3
9.743—Income Tax Preparation	3		
2.645—Business Conference Techniques*	3		
2.518—Business Law*	3		
PE 180/190—Physical Education	1		
HE 252—First Aid or			
HE 250—Health	3		
2.534—Cost Accounting		3	
2.415—Human Relations in Business		3	
Business Electives		6	6
2.222—Financial Management			3
2.510—Introduction to Data Processing			4
	16	15	16

<sup>\*</sup>Courses in column two may be substituted for courses in column one.

#### Column One

- 1.101-2-Communication Skills I, II
- 2.530-2-Practical Accounting I, II, III
- 2.121—Applied Economics
- 2.518—Business Law
- 2.645—Business Conference
  - **Techniques**
- 2.119—Introduction to Management

#### Column Two

WR 121-2-English Composition BA 211-3-Principles of

Accounting I, II, III

EC 115—Outline of Economics

BA 226-Business Law

SP 111-Beginning Oral

Communication

BA 210-Principles of Management or

9.500—Elements of Supervision

# banking and finance

This two-year proposed 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 only be offered during the evenings during the 1977-78 school year.

#### Freshman Year

Freshman Tear			
Course No. & Title	F	w	Sp
9.768—Principles of Bank Operations	3		
2.530-2—Practical Accounting I, II, III*	3 1	3	3
2.501—Typing I	3		
PE 180/190—Physical Education		1	1
2.515—Business Math	3		
1.101—Communication Skills I, II*		3	3
2.121—Applied Economics*		3	
BA 101—Introduction to Business		4	
2.130—Business Quantitative Methods		3	
2.131—Marketing			3
2.521—Office Machines			3 2 3
2.516—Business Statistics			3
	13	17	15
Sophomore Year			
Course No. & Title	F	W	Sp
9.773-Money and Banking	3		
2.518—Business Law*	3 3 4		
2.119—Introduction to Management*	3		
2.510—Introduction to Data Processing	4		
Banking & Finance Electives	3	3	6
Business Electives		6	3
9.770—Bank Management		3	
HE 252—First Aid or			
HE 250—Personal Health		3	
2.645—Business Conference Techniques*			3
2.415—Human Relations in Business			3
	16	15	15

<sup>\*</sup>Courses in column two may substituted for courses in column one.

#### Column One

1.101-2—Communications Skills I, II 2.530-2—Practical Accounting I, II, III 2.121—Applied Economics 2.518—Business Law 2.645—Business Conference Techniques

#### Column Two

WR 121-2—English Composition BA 211-3IPrinciples of Accounting I, II, III EC 115—Outline of Economics BA 226—Business Law SP 111—Beginning Oral Communication



# 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 a better 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 Chairman of the Business Management Department. Specific variations in the curriculum are available for students interested in Small Business Management.

#### Freshman Year

Course No. & Title	F	w	Sp
BA 101—Introduction to Business	4		
2.530-2-Practical Accounting I, II, III*	3	3	3
2.515—Business Math	3		
2.501—Typing I	3		
1.101-2—Communication Skills I, II		3	3
2.119—Introduction to Management*		3	
2.121—Applied Economics*		3	
2.130—Business Quantitative Methods		3	
PE 180/190—Physical Education		1	1
2.131—Marketing			3
2.521—Office Machines			2
2.516—Business Statistics			3
	13	16	15



#### Sophomore Year

Course No. & Title	F	W	Sp
2.645—Business Conference Techniques	3		
2.518—Business Law*	3		
2.113—Personnel Management	3		
PE 180/190—Physical Education	1		
2.510—Introduction to Data Processing	4		
9.520—Wage Administration		3	
2.415—Human Relations in Business		3	
HE 252—First Aid or			
HE 250—Personal Health		3	
Business Electives	3	6	9
2.222—Financial Management			3
2.111—Labor-Management Relations			3
	17	15	15

\*Courses in column two may be substituted for courses in column one.

#### Column One

1.101-2—Communication Skills I, II

2.530-2-Practical Accounting I, II, III

2.121—Applied Economics

2.518—Business Law

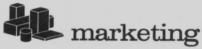
2.645—Business Conference

Techniques

2.119—Introduction to Management

#### Column Two

WR 121-2—English Composition
BA 211-3—Principles of
Accounting I, II, III
EC 115—Outline of Economics
BA 226—Business Law
SP 111—Beginning Oral
Communication
BA 210—Principles of Management or
9.500—Elements of Supervision



The proposed 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 Chairman of the Business Management Department.

#### Freshman Year

F	W	Sp
4		
3		
3		
3		
	3	
	3	
	3	
	3	
	1	1
		3
		2
		3
13	16	15
	4 3 3 3 3	4 3 3 3 3 3 3 3 1

#### Sophomore Year

•			
Course No. & Title	F	W	Sp
2.110—Salesmanship	3		
2.645—Business Conference Techniques*	3		
2.415—Human Relations in Business	3		
2.518—Business Law*	3		
PE 180/190—Physical Education	1		
2.510—Introduction to Data Processing	4		
2.134—Retail Merchandising		3	
HE 252—First Aid or			
HE 250—Personal Health		3	
2.139—Market Research		3	
Business Electives		6	6
2.308—Advertising			3
2.140—Promotional Strategy			3
2.222—Financial Management			3
	17	15	15

<sup>\*</sup>Courses in column two may be substituted for courses in column one.

#### Column One

1.101-2—Communication Skills I, II

2.530-2-Practical Accounting I, II, III

2.121—Applied Economics

2.518—Business Law

2.645—Business Conference

Techniques

2.119—Introduction to Management

#### Column Two

WR 121-2-English Composition

BA 211-3—Principles of

Accounting I, II, III

EC 115—Outline of Economics

BA 226-Business Law

SP 111—Beginning Oral

Communication

BA 210-Principles of Management or

9.500—Elements of Supervision

# 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. & Title	Credits
BA 101—Introduction to Business	4
9.500—Elements of Supervision	3
9.502—Psychology for Supervisors	3
9.506—Human Relations	3
Business Electives, or credit for approved prior work experience	5
	18

#### Certificate in Industrial Safety [18 credits]

Course No. & 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. & Title	Credits
BA 101—Introduction to Business	4
9.500—Elements of Supervision	3
9.502—Psychology for Supervisors	3
9.506—Human Relations	3
1.101—Communication Skills I	3
9.508—Labor-Management Relations	3
SP 111—Beginning Oral Communication	3
9.555—Industrial Safety I	3
Business Electives	8
Credit for approved	
prior work experience	12
	45

#### Associate of Science Degree [90 quarter hours]

Course No. & Title	Credits
BA 101—Introduction to Business	4
9.500—Elements of Supervision	3
9.502—Psychology for Supervisors	3
9.506—Human Relations	3
1.101-2—Communication Skills I, II	6
9.508—Labor-Management Relations	3
9.555—Industrial Safety I	3
SP 111—Beginning Oral Communication	3
9.509—Applied Economics	3
2.518—Business Law	3
2.530—Practical Accounting I	3
9.514—Cost Accounting/Supervisors	3
PE 180/190—Physical Education	1
PE 180/190—Physical Education	1
PE 180/190—Physical Education	1
HE 252—First Aid or	
HE 250—Health	3
Business Electives	9
Non-Business Electives	12
On-The-Job Training, or credit for	
approved prior work experience	24
	91

#### **General Business**

This is a one-year program for students not wishing to spend two full years before entering the job market.

Career opportunities include employment as accounting clerks, inventory clerks, retail sales, and customer service representatives.

The following schedule of courses will lead to the awarding of the Certificate of Completion. Students wishing to take individual courses to qualify for specific employment opportunities may do so with the consent of the Director of the Business Divison.

#### Freshman Year

Course No. & Title	F	W	Sp
BA 101—Introduction to Business	4		
2.530-2—Practical Accounting I, II, III*	3	3	3
2.515—Business Math	3		
2.501—Typing I	3		
1.101—Communication Skills I, II*		3	3
2.119—Introduction to Management*		3	
2.121—Applied Economics*		3	
2.130—Business Quantitative Methods		3	
PE 180/190—Physical Education		1	1
2.131—Marketing			3
2.521—Office Machines			2
2.516—Business Statistics			3
	13	16	15

<sup>\*</sup>Courses in column two may be substituted for courses in column one.

#### Column One

1.101-2—Communication Skills I, II 2.530-2—Practical Accounting I, II, III

2.121—Applied Economics

2.518—Business Law

#### Column Two

WR 121-2—English Composition BA 211-3—Principles of Accounting I, II, III EC 115—Outline of Economics BA 226—Business Law

#### **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, provide 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 20 of this catalog. Prior to beginning business transfer curriculum, students should obtain permission from the applicable department chairman.

#### 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 Chairman. 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 Chairmen will make their 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 Mangement 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 probelms 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/S

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 data, statistical description, probability, sampling, 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 prospective businessmen to fundamental considerations before embarking on a business 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. S

General survey of the nature, significance, and 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 hrs/wk-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 store in the community.

#### 2.138 - Purchasing

#### 3 clss 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. Consumer 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 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 in 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 in 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 rapid success in their chosen field. Prerequisite: Recommendation by the applicable Department Chairman. Five each from Business Skills and Business Management Departments and two each from Data Processing will be allowed. Department Chairmen will make their decision based on student perfomance, experience and attitude. Instructor input will be solicited.

#### 2.516 - Introduction to Business Statistics

#### 3 class hrs/wk 3 cr. S

Emphasis on understanding methods and terminology used is 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 cash receipts and payments, payroll accounting, purchases, sales, promissory notes, and inventories.

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#### 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. S/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-remunerative. 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 with 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 Chairman.

#### **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 responsibilties 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 supervisors' 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 hrs/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, contractural relations and conduct of schools in general.

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#### 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 philsophy 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 processing and servicing, and obligations of the mortgage loan officer in overall portfolio management.

#### 9.777 - International Banking

#### 3 class hrs/wk 3 cr. On Demand

Introduction for those working 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 trasferred 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 in 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 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 class hrs/wk for 5 weeks 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 class hrs/wk for 5 weeks 1 cr. On Demand

Focuses on check cashing, check swindling, bank hold-ups, and security procedures.

#### 9.792 - Selling Bank Services

#### 3 class hrs/wk for 5 weeks 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 class hrs/wk for 5 weeks 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.

### 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 an Associate of Science Degree and will be in a strong position to enter a rapidly-growing job market.

Course No. & Title	F	W	S
2.571-3—Data Processing I, II, III	10	10	10
1.101—Basic English or			
WR 120—Basic Writing Skills	3		
1.102—Occupational Writing		3	
2.518—Business Law			3
2.415—Human Relations in Business	3		
2.516—Introduction to Business Statistics			3
HE 250—Personal Health or			
4.108—Industrial Safety		3	
PE 180/190—Physical Education	1	1	1
	17	17	17
Sophomore Year			
Course No. & Title	F	W	Sp
2.581—Data Processing IV, V, VI	10	10	10
Business Elective		3	-

Freshman Year

#### 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.

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#### 2.509 - Introduction to Computers 5 class hrs/wk 3 cr. F

2.530-2-Practical Accounting I, II, III or

BA 211-3—Principles of

Accounting I, II, III

General Education Electives

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.

#### 2.510 - Introduction to Data Processing 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 is used to explain data flow, and several problems will be solved utilizing a procedure-oriented language.

#### 2.556 - Advanced Keypunch Operation 7½ 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 currently in use is FORTRAN. The topics covered are: input/output, arithmetic statements, transfer and control statements, arrays, and subprograms.

#### 2.571 - Data Processing I 20 class hrs/wk 10 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; and 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. The third phase consists of 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, algorithms, truth tables, and basic algebraic concepts.

#### 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.

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#### 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 business 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.

#### 5.583 - 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 Operation 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, tape librarian, I/O receptionist, scheduler, and control clerk.

#### 9.604 - Computer Center Operation II 7 class hrs/wk 5 cr. W

An introduction to the operator of computer center equipment, computer operator commands, computer recovery procedures, computer center standards and procedures, and scheduling considerations. Prerequisite: 9.603.

#### 9.605 - Computer Center Operator III 7 class hrs/wk 5 cr. Sp

A study of backup and restore procedures, maintenance of system libraries, teleprocessing, multiprogramming, time-sharing, machine maintenance and an introduction to a programming language—BASIC. 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 his 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 [FORTRAN] 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 currently in use is FORTRAN. The topics covered are: input/output, arithmetic statements, transfer and control statements, arrays, and subprograms.

## 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.

#### Freshman Year

Option A			
Course No. & Title	F	W	Sp
1.101—Basic English or			
WR 120—Basic Writing Skills	3		
1.102—Occupational Writing		3	
2.501-3—Typing I, II, III	3	3 3	3
2.541-3—Stenography I, II, III	3	3	3
2.515—Business Math	3		
2.500—Business Orientation	1		
2.652—Filing	1		
2.551—Business Correspondence			3
2.521—Office Machines		2 3	
2.530—Practical Accounting I			
2.526—Duplicating Equipment		1	
2.527—Transcribing Machines I			3
2.610—Clerical Office Procedures			3
	14	15	15
Option B			
Course No. & Title	F	W	Sp
1.101—Basic English or			•
WR 120—Basic Writing Skills	3		
1.102—Occupational Writing		3	
2.501-3—Typing I, II, III	3	3	3
2.537—Alphabetic Shorthand		3	
2.538—Applied Alphabetic Shorthand			3
2.500—Business Orientation	1		
2.652—Filing	1		
2.521—Office Machines		2	
2.551—Business Correspondence		3	
2.530—Practical Accounting I	3		
2.526—Duplicating Equipment		1	
2.527—Transcribing Machines I			3
2.610—Clerical Office Procedures			3
2.515—Business Math	3		
Elective	1		3
	15	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.

#### Freshman Year [Option A]

The requirements are the same as those listed for the one-year Secretarial Sciences Certificates, Option A.

#### Freshman Year [Option B]

The requirements are the same as those listed for the one-year Secretarial Sciences Certificates, Option B.

#### Sophomore Year [Option A]

Course No. & Title	F	W	Sp
2.613-4—On-The-Job Training		4	4
2.545-7—Applied Stenography I, II, III	3	3	3
2.415—Human Relations in Business	3		
2.510—Introduction to Data Processing			4
HE 250—Health			3
PE 180/190—Physical Education	1	1	1
2.653—Word Processing	3		
2.528—Transcribing Machines II	3		
2.647—Administrative Management	3		
2.651—Business Report Writing		3	
2.645—Business Conference Techniques		3	
	16	14	15

#### Sophomore Year [Option B]

Course No. & Title	F	W	Sp
2.613-4—On-The-Job Training		4	4
2.415—Human Relations in Business	3		
2.510—Introduction to Data Processing			4
HE 250—Health			3
PE 180/190—Physical Education	1	1	1
2.653—Word Processing		3	
2.528—Transcribing Machines II	3		
2.647—Administrative Managment	3		
2.651—Business Report Writing		3	
2.645—Business Conference Techniques		3	
2.518—Business Law			3
Electives	5	2	
	15	16	15

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.

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.

Freshman Year			
Course No. & Title	F	W	Sp
2.501-3—Typing I, II, III	3	3	3
2.541—Stenography I, II, III or			
2.530-2—Practical Accounting I, II, III	3	3	3
1.101—Basic English or			
WR 120—Basic Writing Skills	3		
1.102—Occupational Writing		3	
HE 250—Personal Health	3		
2.551—Business Correspondence		3	2
2.415—Human Relations in Business			3
2.610—Clerical Office Procedures			3
2.521—Office Machines		1	3 2 1
PE 180/190—Physical Education 2.650—Records Management		1	1
for Educational Secretaries		3	
Electives	3	3	
Liectives	-		
	15	16	15
Sophomore Year			
Course No. & Title	F	W	Sp
2.509—Introduction to Data Processing	4		
PY 201-3—General Psychology	3	3	3
9.764—Oregon School Law			
HE 252—First Aid	3		
SP 111—Beginning Oral Communication		3	
2.651—Business Report Writing		3	
2.220—Personal Finance			3
9.500—Elements of Supervision			3
PE 180/190—Physical Education	-	1	
Electives*	2	5	6
	15	15	15

<sup>\*</sup>A suggested elective, especially for students with no previous work experience, would be On-The-Job Training.

#### **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.

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15

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Freshman Year			
Course No. & Title	F	W	Sp
1.101—Basic English or			
WR 120-Basic Writing Skills	3		
1.102—Occupational Writing		3	
2.501-2—Typing I, II	3	3 3 3	
2.541-2—Stenography I, II, III	3 3 1 3	3	3
2.515—Business Math	3		
2.500—Business Orientation	1		
2.518—Business Law	3		
2.660—Legal Terminology		3 2	
2.521—Office Machines			
2.652—Filing		1	
2.551—Business Correspondence			3
2.530—Practical Accounting I			3
2.661—Legal Typing			3 3 3 3
2.663—Legal Procedures & Ethics			3
	16	15	15
Carleman Voca			
Sophomore Year			
Course No. & Title	F	W	Sp
2.545-7—Applied Stenography I, II, III	3	3	3
2.527—Transcribing Machines I	3		
2.415—Human Relations	3 3 3		
2.647—Administrative Management			
PE 180/190—Physical Education	1	1	1
2.662—Legal Transcribing		3	
2.645—Business Conference Techniques			
2.613-4—On-The-Job Training		4	4
HE 250—Health			3
2.653—Word Processing	_		3
Electives	2	1	

#### **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.

#### Freshman Year

Course No. & Title	F	w	Sp
2.500—Business Orientation	1		
2.501-2—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	
Medical Law & Ethics		2	
2.670—Medical Office Procedures			3
2.527—Transcribing Machines I			3
2.537—Alphabetic Shorthand		3	
2.538—Applied Alphabetic Shorthand			3
2.652—Filing	1		
1.101—Basic English or			
WR 120—Basic Writing Skills	3		
1.102—Occupational Writing		3	
2.515—Business Math	3		
2.526—Duplicating Equipment		1	
2.521—Office Machines*	1		
	15	19	15

#### Sophomore Year

Course No. & Title	F	w	Sp
2.524-5—Medical Transcription I, II	3	3	
2.530—Practical Accounting I	3		
2.415—Human Relations in Business	3		
2.645—Business Conference Techniques		3	
HE 252—First Aid			3
2.613-4—On-the-Job Training		4	4
2.510—Introduction to Data Processing			4
5.631—Pharmaceutical Terminology			2
1.102—Occupational Writing	3		
PE 180/190—Physical Education	1	1	1
2.551—Business Correspondence		3	
	13	14	14

<sup>\*</sup>Ten-key Adding Machine

#### **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.

#### Freshman Year

2	2	
	2	
		2
3		
		3
3		
	3	
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3		
•	3	3
1		3
3	3	3
2	2	- P
F	w	Sp
	3 1 3	3 3 1 3 3 3 3 3 3 3 3 3



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 skills 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/Sp

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.

SS 212 - Applied Stenography II 6 class hrs/wk 3 cr. F/W/Sp

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 213 - Applied Stenography III 6 class hrs/wk 3 cr. F/W/Sp

A continuation of SS 212 with emphasis on speed, accuracy and secretarial standards. Included in this course will be legal dictation and transcription. Prerequisite: SS 212 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.

2.501 - Typewriting I

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

Beginning typing for those with no previous typing instruction or for 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.

2.502 - Typewriting II

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

Continued practice in mastery of the keyboard with emphasis on speed, accuracy, and secretarial standards. Review and advanced work in manuscripts, tabulation, correspondence and similar typing techniques. Individualized instruction. Students may advance at their own rate. Prerequisite: 2.501 or equivalent.

2.503 - 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. Indivdualized instruction. Students may advance at their own rate. Prerequisite: 2.502 or equivalent.

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#### 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: 2.503 or equivalent.

#### 2.505 - Typing V—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. Permission of Business Division required for enrollment. Prerequisite: 2.501 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: 2.502 or equivalent.

#### 2.507 - Executive Typewriter

#### 2 class hrs/wk 1 cr. Sm/F/W/Sp

Opportunity to develop skill using the executive typewriter. Students are responsible for scheduling their time to develop the necessary skill. Prerequisite: 2.502 or equivalent.

#### 2.515 - Business Mathematics

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

Mathematical background needed for general business application. Review of the fundamental processes including decimals and fractions, followed by percentages, discounts, commission, markup, depreciation, and interest. Students may advance at their own rate.

#### 2.520 - Automated Typing

#### 4 class hrs/wk 2 cr. On Demand

Technical instruction in the use of IBM magnetic card selectric typing equipment, which will afford the student the expertise required to work as a typing specialist in the Word Processing Center. Prerequisite: Typing speed of 60 WPM.

#### 2.521 - Office Machines

#### 4 class hrs/wk 1-2 cr. Sm/F/W/Sp

Instruction and operating experience on the ten-key adding machine and electronic calculator.

#### 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.

#### 2.523 - Dictation Techniques

#### 3 class hrs/wk 1 cr. On Demand

Features and proper operation of dictation equipment as well as good dictation techniques. Includes voice development, message organization and planning, proper machine operation, and actual dictation problems.

#### 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: 2.501 and 5.633.

#### 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: 2.502 and 5.634.

#### 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: 2.501 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: 2.502 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: 2.501 and 5.633.

#### 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 2.501.

#### 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.

#### 2.541 - Stenography I [Gregg]

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

Introduction to Gregg shorthand theory, including the alphabet, brief forms, phrasing, and abbreviating principles.

#### 2.542 - Stenography II [Gregg]

#### 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 solid foundations for further development of dictation and transcription skill. Prerequisite: 2.541 or equivalent.

#### 2.543 - Stenography III [Gregg]

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

Emphasis on further development of speed and accuracy in dictation and transcription. Litensive practice in refining shorthand skills and in producing mailable letters. Prerequisite: 2.542 or equivalent.

### 2.545 - Applied Stenography I 6 class hrs/wk 3 cr. F/W/Sp

Extensive review of shorthand, advanced principles, phrases and short cuts, dicatation covering vocabularies representative of various types of business. Basic skills of office work are stressed. Prerequisite: 2.543 or equivalent.

### 2.546 - Applied Stenography II 6 class hrs/wk 3 cr. F/W/Sp

## Continuation of 2.545 with emphasis on speed, accuracy and secretarial standards. Included are medical and technical dictation and transcription. Prerequisite: 2.545 or equivalent.

### 2.547 - Applied Stenography III 6 class hrs/wk 3 cr. F/W/Sp

## Continuation of 2.546 with emphasis on speed, accuracy and secretarial standards. Included are legal, medical, and technical dictation and transcription. Prerequisite: 2.546 or equivalent.

#### 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: Communication Skills I and 2.501 or equivalent.

#### 2.590 - Readings & 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.

#### 2.610 - 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: 2.502, 1.101.

### 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.

#### 2.651 - Business Report Writing

#### 3 class hrs/wk 3 cr. W

Provides the business student with experience in preparing minutes of meetings, inter-office reports, and formal business reports. Prerequisite: Communication Skills I or equivalent.

#### 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 IMB Memory Typewriter. Includes concepts of word processing, equipment available, field trips, and guest speakers. Prerequisite: 2.503.

#### 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: 2.503.

#### 2.655 - IBM Memory Typewriter Operation

#### 2 class hrs/wk 1 cr. Sm/F/W/Sp

Operation of the IMB Memory Typewriter, Course includes procedures for recording, reading, duplicating, skipping and revising information. Prerequisite: 2.503.

#### 2.660 - Legal Terminology 3 class hrs/wk 3 cr. W

Individualized course offering basic knowledge of terminology in the following areas: general legal, real property, pleadings, medical, corporate, probate, and Latin expressions.

#### 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: 2.502 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 other attorneys and the courthouse, the law library, etc. Prerequisites: 2.660, 2.661, 2.662, 1.101.

#### 2.670 - Medical Procedures and Ethics

#### 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: 2.503, 5.633, 5.634, 1.101.

#### 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.



## culinary arts and restaurant management

The Culinary Arts and Restaurant Management curriculum offers courses in all phases of the food industry; food preparation, catering, dining room service and management.

All students, including management students, develop a strong foundation of theory and skill in food preparation, from which they may advance to more specialized training in cooking or management. Students who have a major interest in cooking continue to advance their understanding and performance in the preparation of soups, salads, sauces, vegetables, entrees, and baked goods. Advanced Cooking students and Chef trainees assume responsible kitchen positions such as second chef, sous chef and student chef.

#### **Culinary Arts**

Students wishing to enter the job market as pantry cooks, short order cooks, or baker's helpers may complete the one-year certificate requirements, while those wishing to advance their understanding and skills may elect to complete a two-year program in Advanced Cooking or Chef Training.

Culinary Arts students may receive:

- 1. A special certificate for competency in a limited area,
- 2. A one- or two-year certificate for completion of basic curriculum in food preparation and related subjects,
- 3. A two-year Associate of Science degree in Advanced Professional Cooking, or
- 4. A two-year Associate of Science degree in Chef Training for those who combine advanced cooking with menu planning, food, controls, and kitchen management.

#### Restaurant Management

The Restaurant Management program emphasizes line management of restaurants, catering firms, resorts, and clubs. The combined management, service, and catering curriculum prepares students through theory and hands-on training for entry level dining room, kitchen and supervisory jobs.

Restaurant Management students may receive:

- 1. A Busboy/Busgirl certificate for completion of one quarter of dining room training at competency level.
- 2. A Waiter/Waitress certificate for completion of two quarters of dining room training at competency level.
- 3. A Dining Room Supervisor certificate for three quarters of training at competency level.
- 4. A Restaurant Management certificate for successful competion of the second year of the management program after meeting prerequisites for previous industry experience and skill level.
- 5. An Associate of Science degree in Restaurant Management for successful completion of the two-year degree curriculum.

Culinary Arts and Restaurant Management graduates are in a good position to enter industry as a cook's helper, fry cook, waiter/waitress, or management trainee, depending on their interests and competency level. Persons completing the comprehensive two-year Associate of Science program are in greater demand and go to industry with a chance for rapid advancement to sous chef, dining room supervisor or assistant managers.

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.

During the first two weeks of class the student will be required to purchase a French knife and at least one chef's coat. Students must launder their own jackets but fresh aprons, towels, and hats will be supplied weekly.

Entering the Program:

Entering students should see the Department Chairman or the Restaurant Management instructor before registering in order to avoid any confusion.

Freshman Year			
Course No. & Title	F	W	Sp
8.310—Introduction to Professional Service	4		
8.311-2—Intermediate Professional			
Cooking I, II		7	7
8.324-6—Practical Menu Planning A, B, C	1	1	1
8.336—Orientation, Sanitation,			
Safety and First Aid	2		
8.337—Kitchen and Dining Room			
Stations, Tools and Equipment	2		
8.338—International Food and			
Beverage Vocabulary	3		
8.339—M&P: Garde Manger		2	
8.340—M&P: Vegetables and Entrees			2
8.344—Principles of Table Service	1		
8.345—Techniques of Table Service	1		
1.150—Techniques of			
Reading and Studying	3		
8.350—Banquet & Catering Management			1
3.153—Basic Design		3	
8.300—Food Microbiology		3	2
1.109—Pre-Business Math			3
SP 111—Beginning Oral Communications			3
PE 180/190—Physical Education	1	1	1
	18	17	18
Sophomore Year			
Advanced Professional Cooking			
Course No. and Title	F	W	Sp
8.313-5—Advanced Professional			
Cooking I, II, III	7	7	7
8.325-7—Advanced Practical			
Menu Planning A, B, C	1	1	1
8.341—M & P: Stocks, Soups, & Sauces	2		
8.342—M & P: The Butcher Shop	100000000	2	
8.343—M & P: The Bake Shop			2
8.351-3—Basic Management			
Skills Lab I, II, III	4	3	4
	14	13	14

Chef Training			
Course No. & Title	F	W	Sp
8.316—Introduction to Commercial Kitchen Production & Management	7		
8.317—Intermediate Commercial Kitchen Production & Management		7	
8.318—Advanced Commercial Kitchen Production & Management			7
8.327-9—Advanced Practical Menu Planning A, B, C 8.341—M & P:Stocks, Soups, & Sauces	1 2	1	1
8.342—M & P: The Butcher Shop 8.343—M & P: The Bake Shop		2	2
8.351-3—Basic Mangement Skills Lab I, II, III	4	3	4
8.354-5—Intermediate Management Skills Lab I, II 2.530—Practical Accounting I	2	3	1
2.550—Fractical Accounting 1			
	16	16	15
Restaurant Management			
Freshman Year			
Course No. & Title	F	W	Sp
8.310—Introduction to Professional Food Service	4		
8.319-20—Intermediate Cooking for			
Restaurant Management I, II		4	4
8.324-6—Practical Menu Planning A, B, C 8.330-1—Dining Room Lab I, II		2	2
8.336—Orientation, Sanitation, Safety and		_	
First Aid	2		
8.337—Kitchen and Dining Room Stations, Tools and Equipment	2		
8.338—International Food and	3		
Beverage Vocabulary and History 8.339—M&P: Garde Manger	3	2	
8.340—M&P: Vegetables and Entrees		-	2
8.344—Principles of Table Service	1		
8.345—Techniques of Table Service	1		
8.347—Wine Service		1	
8.348—Beverage Management		1	
8.346—Dining Room Management			1
8.350—Banquet and Catering Management 1.150—Techniques of			1
Reading and Studying	3		
Basic Design		3	
Food Microbiology		3	2
2.515—Business Math 2.521—Office Machines			1
SP 111—Beginning Oral Communications			3
PE 180/190—Physical Education	1	1	1
	18	18	18

Sopnomore rear			
Course No. & Title	F	W	Sp
8.321-3—Advanced Cooking for			
Restaurant Managers I, II, III	3	3	3
8.327-9—Advanced Practical			
Menu Planning A, B, C	1	1	1
8.341—M&P: Stocks, Soups, and Sauces	2		
8.342—M&P: The Butcher Shop		2	
8.343—M&P: The Bake Shop			2
8.332-4—Management Lab A, B, C	3	3	3
8.351-3—Basic Management			
Skills Lab I, II, III	4	3	4
8.354-5—Intermediate Management			
Skills Lab I, II	2		1
8.357-9—Advanced Management			
Skills Lab I, II, III	2	2	3
2.530—Practical Accounting I		3	
	17	17	17

#### **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 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 - 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

#### 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

### 8.310 - Introduction to Professional Food Service 20 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 and stock, bakery, storeroom, warewashing and dining room. The instructor will demonstrate safe use of machines and hand tools, sanitation and hygiene procedures, basic cooking processes, and proper station set-up and clean-up.

#### 8.311 - Intermediate Professional Cooking I 20 lab hrs/wk 7 cr. F/W/Sp

A second laboratory course in food preparation, with emphasis on mastery of the basic salads and dressings. Students will continue to otate stations on a two-week basis but will begin to take on more responsibility in producing a saleable product for the cafeteria customers.

#### 8.312 - Intermediate Professional Cooking II 20 lab hrs/wk 7 cr. F/W/Sp

This laboratory section focuses on vegetable and entree preparation. Students will cook vegetables, starches and main dishes for service in the college cafeteria. Student cooks 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 rotates duties every two weeks.

#### 8.313 - Advanced Professional Cooking I 20 lab hrs/wk 7 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 20 lab hrs/wk 7 cr. F/W/Sp

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

#### 8.315 - Advanced Professional Cooking III 20 lab hrs/wk 7 cr. F/W/Sp

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

#### **CHEF TRAINING**

#### 8.316 - Introduction to Commercial Kitchen Production and Management 20 lab hrs/wk 7 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 20 lab hrs/wk 7 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 20 lab hrs/wk 7 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**

#### 8.319 - Intermediate Cooking for Restaurant Managers I 12 lab hrs/wk 4 cr. F/W/Sp

A second laboratory course in food preparation, with emphasis on mastery of the basic salads and dressings. Student cook/managers rotate stations on a two-week basis. Portion and cost controls are stressed. Management majors cost and price salads and other menu items for sale.

#### 8.320 - Intermediate Cooking for Restaurant Managers II 12 lab hrs/wk 4 cr. F/W/Sp

This laboratory class focuses on vegetable and entree preparation. Students will cook vegetables, starches, and main dishes for service in the college facilities. Student cooks prepare foods according to the various styles of service: institutional, hotel, and restaurant. The student will begin this term to assume responsibility for operating a station as he or she rotates every two weeks. Management students will cost and price some menu items for sale.

#### 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.

#### 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 sudent 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 - Practical Menu Planning A 3 lab hrs/wk 1 cr. F/W/Sp

Complements the first-year cooking labs and 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.

#### 8.325 - Practical Menu Planning B 3 lab hrs/wk 1 cr. F/W/Sp

Complements the first-year cooking labs and 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.

#### 8.326 - Practical Menu Planning C 3 lab hrs/wk 1 cr. F/W/Sp

Complements the first-year cooking labs and 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.

### 8.327 - Advanced Practical Menu Planning A 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.

#### 8.328 - Advanced Practical Menu Planning 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.

#### 8.329 - Advanced Practical Menu Planning 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.

#### 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, train student employees, handle grievances, write job descriptions and make 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.

#### 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.

#### FOOD SERVICE FUNDAMENTALS

### $8.336\,$ - Food Service I - Orientation, Sanitation, Safety and First Aid 4 lab hrs/wk $\,$ 2 cr. $\,$ F/W/Sp

Orientation to restaurant industry. Food service, safety, and accident and fire prevention. Foodborne diseases, safe food handling, sanitary storage and personal hygiene. Warewashing and environmental sanitation.

### 8.337 - Food Service II - Kitchen and Dining Room 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.

### $8.338\,$ - Food Service III - International Food and Beverage Vocabulary and History

#### 2 lab hrs/wk 3 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 Intermediate Professional Cooking I.

#### 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**

#### 8.344 - Dining Room I: Principles of Table Service

2 lab hrs /wk 1 cr. F/W/Sp

Types of service and staffing, selling the menu, appearance and attitude, dealing with the public.

#### 8.345 - Dining Room II: Techniques of Table Service 2 lab hrs/wk 1 cr. F/W/Sp

Taking orders, timing, and serving the guest; hand and tray skills; table setting; how to carve, flambe and cook at the table.

#### 8.346 - Dining Room III: Dining Room Management 2 lab hrs/wk 1 cr. Sp

Captain and maitre d'hotel functions; scheduling and supervising the dining room staff; merchandising; cash register; cash controls and theft prevention.

#### BEVERAGES

#### 8.347 - Beverages I: 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 - Beverages II: Beverage Management

2 lab hrs/wk 1 cr. W

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.

#### **BANQUETS AND CATERING**

#### 8.350 - Banquet and Catering Management

2 lab hrs/wk 1 cr. Sp

Banquet and catering sales and contracts; menu and production planning; costing, package deals and billing.

#### MANAGEMENT SKILLS LABS

#### 8.351 - Basic Management Skills Lab I

8 lab hrs /wk 4 cr. F

Hiring and Training Employees - Weeks I and II Recruiting, interviewing techniques, testing and selecting, writing job instructions, methods of training, supervised on-the-job training experience.

Principles of Menu Planning - Weeks III, IV, and V 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 menu planning process.

Planning and Organizing the Restaurant - Weeks VI, VII, and VIII Types of ownership and management, management function areas, the budget, break even analysis, feasibility study: market, site, and financial.

Purchasing and Inventory Controls - Weeks IX, X, and XI Purchasing and receiving and issuing procedures and controls; dry and cold storage facilities; security; kitchen tests; physical and perpetual inventory procedures.

#### 8.352 - Basic Management Skills Lab II

6 lab hrs/wk 3 cr. W

Pricing and Evaluating the Menu - Weeks I, II, III, AND IV Yield tests, standardized recipes, precosting food and labor costs; pricing based on prime costs and on market; measuring relative popularity of menu items and profitable sales mix.

Food Purchasing I - Weeks V, VI, and VII Quality standards for dairy products, poultry, fish, beef, veal, lamb, pork and variety meats. Food Cost Controls - Weeks VIII, IX and X Analysis of sales mix, determining food costs by sales area, various cost control systems, food cost worksheets and reports.

#### 8.353 - Basic Management Skills Lab III

8 lab hrs/wk 4 cr. Sp

Forecasting Sales and Scheduling Production - Weeks I, II, and III Sales history, forecasting techniques, production sheet, and scheduling production labor, scheduling utilities, using convenience foods, portioning and presentation.

Food Purchasing II - Weeks III, IV, and V Fresh and processed fruits and vegetables; herbs, spices, and condiments; staples, grains and cereals; non-alcoholic beverages and convenience foods.

Supervising Restaurant Personnel - Weeks VI, VII and VIII Communication techniques, styles of management, supervisory techniques, evaluating and promoting employees, handling grievances, employee safety and fringe benefits.

Facilities Sanitation and Maintenance - Weeks VIII, IX and X Safety, fire and sanitation codes and regulations. Sanitation, safety and maintenance schedule for warewashing, storage, general cleaning, general maintenance, structural maintenance and the repair and replacement of equipment.

#### 8.354 - Intermediate Management Skills Lab I 4 lab hrs/wk 2 cr. F

Equipment Layout: Analyzing menu, production and service requirements; layout analysis, space and equipment requirements for receiving and storage, warewashing, cooking, service and dining room areas.

Equipment and Supplies Purchasing: Refrigeration; warewashing, preparation, and cooking equipment; utensils, flatware and tableware; furnishing and carpets; detergents and supplies; linen and service contracts.

#### 8.355 - Intermediate Management Skills Lab II

2 lab hrs/wk 1 cr. Sp

Labor Cost Controls: Analyzing labor costs, bar charts and scheduling, daily payroll reports, payroll procedures, government regulations, and employee benefits.

#### 8.357 - Advanced Management Skills Lab I

2 cr. F

Job Analysis and Work Simplification: Job analysis, job descriptions, employee specifications and job pricing; flow charting work and simplifying tasks.

**Restaurant Design:** Preparing rough plans; building and health codes; the design theme, lighting, furnishing, and appointments.

#### 8.358 - Advanced Management Skills Lab II

4 lab hrs/wk 2 cr. W

**Restaurant Promotion:** The sales function, restaurant marketing strategy, advertising budget, public relations, selling conventions;

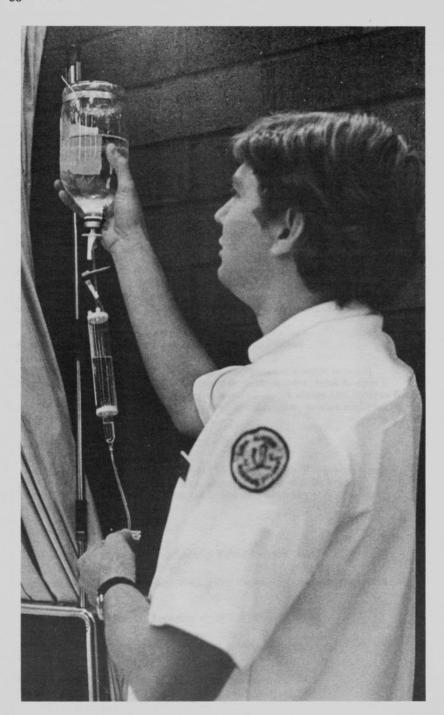
Opening the Restaurant; leasing and buying; tax and legal aspects; credit instruments, financing and insurance; project scheduling.

#### 8.359 - Advanced Management Skills Lab III 6 lab hrs/wk 3 cr. Sp

Advertising Media: copy, layout and illustration; using newspaper, direct mail, radio and television media for restaurant advertising.

Merchandising the Menu: menu layout, illustration and copy; costing artwork and printing, internal selling techniques; coordinating the menu with the dining room atmosphere.

**Restaurant Finance:** budgets and budget controls; analyzing balance sheets and P & L statements, managing working capital, purchasing new equipment, expansion, and long-term financing.



## health occupations division

The Health Occupations Division provides career preparation programs for students in a variety of health occupations. Programs 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 or doctors' offices.

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.

#### Director:

Vacant position to be filled July 1, 1977

#### Faculty

Dr. Jack Arthur, Dental Assistant Program Coordinator
Lyndall Johnson, Associate Degree Nursing
Bobbie Lamberton, Nursing Home Assistant Program Coordinator
Anne Mills, Nursing Assistant Program Coordinator
Gerald Morgan, Dental Assistant
Jacqueline Paulson, Associate Degree Nursing
Sharon Vaughn, Associate Degree Nursing
Adella Wood, Associate Degree Nursing Chairperson

## Tassociate degree nursing

This 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 from the college and are eligible to take the Oregon State Board Test Pool Examination for Registered Nurse Licensure. Clinical facilities utilized are: Albany General Hospital; Good Samaritan Hospital, Corvallis; Lebanon Community Hospital; Corvallis Manor; Linn Care Center, Albany; and Villa Cascade, Lebanon; Heart of the Valley, Corvallis; and Oregon State Hospital, Salem.

See page 8 for the Admission Procedure to the Associate Degree Nursing Program.

#### Accreditation

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

#### **Standards of Performance**

Following acceptance into the nursing program, the student shall achieve an overall grade point average of 2.00 ("C") in all courses attempted. In addition, the student shall make a satisfactory grade ("C" or above) in all courses required by the Nursing Department (see Program of Study for required courses). Courses must be taken and completed in sequence. A student's enrollment in the nursing program may be recommended for

discontinuance at any time, if in the judgement of the nursing faculty the student's performance demonstrates that he or she is unable to cope with the seriousness of nursing situations. A student who is dropped from the program shall not be readmitted to the program except in rare cases, and then only by special permission.

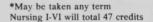
The nursing faculty reserves the right to recommend to the Dean of Students to drop from its rolls any student who has been absent from class more than three hours or absent from laboratory more than twice. A student fails in a nursing course ("F") if he cannot perform satisfactorily in the clinical laboratory regardless of academic performance.

All nursing courses shall be completed at Linn-Benton Community College, unless special permission for transfer credit is arranged with the coordinator of the Nursing Department and Registrar. Permission to continue in the nursing program with an "Incomplete" in any required courses will be determined on an individual basis by the nursing faculty, department chairperson, and/or appropriate administrator.

Students who are admitted to the Nursing Department shall be required to hold student nurse liability insurance. Evening clinicals may be required.

#### Freshman Year

Course No. & Title	F	w	Sp
5.711-3—Nursing I, II, III	6	6	9
5.726-8—Nursing/Contemporary Society	1	1	1
BI 221-3—Human Biology	3	3	4
4.211-2—Nutrition I, II	3	3	
PY 201-2—General Psychology	3	3	
Elective*			3
Micro-Biology	2		
	18	16	17
Sophomore Year			
Course No. & Title	F	W	Sp
5.721-3—Nursing IV, V, VI	10	10	10
5.729—Nursing/Contemporary Society			1
WR 121—Writing*	3		
SP 111—Speech*		3	
PE 180/190—Physical Education*	1	1	1
Humanities Electives*	3	3	
SO 204—General Sociology*			3
	17	17	15



5.711 - Nursing I
9 class hrs lab/wk 6 cr. F
5.712 - Nursing II
9 class hrs lab/wk 6 cr. W
5.713 - Nursing III
14 class hrs lab/wk 9 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 - NursingVI

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.

### 5.726-9 - Nursing in Contemporary Society 1 class hr/wk 1 cr. F/W/Sp

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

#### 10 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 and/or those registered nurses who would like to take the course to meet their own needs for increased knowledge. State requirements consist of 240 hours or equivalent in classroom and clinical

settings under the direction of an LBCC Nursing Instructor. The course is one quarter in length and open to male and female students of all ages. Students who successfully complete the course receive a certificate. The program is approved by the Oregon Board of Education and the Oregon State Board of Nursing. Individual liability insurance is required.

#### 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 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.

#### **Allied Health Related Courses**

The following 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 physician with examination, medical and surgical aseptic procedures, obtaining vital signs, care of equipment and supplies as well as drugs and solution. 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.

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. F

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. W

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. Sp

Continuation of Division I. 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

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

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.



### **≝**Odental 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 become familiar with principles, procedures, problem solving and professional standards of the technologies. The course is accredited by the 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.

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 page 8 for admission procedures.

#### First Quarter

Course No. & Title	Credit
1.101—Communication Skills I	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. & Title	Credit
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

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

#### Fourth Quarter

Course No. & 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

#### 5.445 - Intro. to Dental Assisting

#### 3 class hrs/wk 3 cr. W

Introduction to the practice of dentistry, dental terminology and the various aspects concerned with the profession and the Dental Assistant.

#### 5.453 - Dental Pathology

#### 2 class hrs/wk 2 cr. W

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. F/Sp

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. F/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 periaspical and bitewing film.

#### 5.462 - Dental Radiology II

#### 3 class hrs/wk 2 cr. W

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 1 cr. F/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 Lab I

#### 4 class hrs/wk 2 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 2 cr. W

Continuation of dental materials and dental lab procedures and experiences. Prerequisite: Dental Materials I.



#### 5.491 - Dental Office Records 3 class hrs/wk 3 cr. F/Sp

Dental office records, patient reception, appointment scheduling, record maintenance, financial arrangements and coordination and supply control.

#### 5.494 - Clinical Practice I 8 class hrs/wk 4 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 include patient slating and dismissal, charting, anesthesia, instrumentation, and restorative procedures. Prerequisite: Introduction to Dental Assisting.

#### 5.495 - Clincial Practice II 8 class hrs/wk 4 cr. W

Continuation of Clincial Practice I in general chairside assisting. Practical applications of dental procedures. Prerequisite: Clinical Practice I.

#### 5.505 - Dental Specialties 1 class hr/wk 1 cr. W

Specialist in the dental profession acquaints the student with all types of dental specialization. Prerequisite: Integrated Basic Science II 4.202.

#### 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 proceding 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 Assistance Program.

\*Note: Attaining second, third, and fourth term status requires completion of every course during each preceding term. Requests for exceptions will be considered on an individual basis.

### nursing assistant

The Nursing Assistants program is an 11-12 week course which prepares men and women, ages 17-62, for positions as nurses aides and orderlies in hospitals, nursing homes and with health services.

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

Course work includes both class and clinical experience.

While many of the graduates of the program are placed in positions with hospitals, nursing homes or with the health services, others use this training as a starting point toward related health careers such as physical therapist and licensed practical nurse.

It is expected by the Health Occupations Division that when there is adequate need for enrollment for a particular specialized class for nursing home aides that a course will be designed to meet this specific need. One example of this has been a dietitian course which has been offered in the past.

### 5.400 - Nursing Home Nursing Assistant 60 hour course 2 weeks 3 cr.

Prepares individuals for employment as nurses aides in nursing homes. Basic skills for patient care, safety measures, and psychological aspects of aging and 15 hours of supervised clinical experience in local nursing homes.

#### 5.406 and 5.407 - Nursing Assistant Lecture and Lab 300 class hrs/term 12 cr. F/W/Sp

The combined lecture and lab coursework includes instruction and clinical experience in the following areas: physical environment, social environment; daily living activities; therapeutic health measures; nursing care planning; and job application procedures.



## humanities and social services division

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, graphic communications, human services, and legal assistants.

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.

#### Director:

Kenneth Cheney

Regina Andreasen, Social Science

#### Faculty

Martha Ayers, Speech Arthur Bervin, English W.J. Brick, Art Shirley Call, English Thomas Chase, English Douglas Clark, Social Science Russell Durham, Social Science Richard Hankey, Criminal Justice, Department Chairperson Judith Hedberg-Duff, Graphic Communications Max Lieberman, Social Science Donald Minnick, English Maribel Montgomery, Social Science Sandra Nelson, Art Stephen Rossberg, Drama-Speech Gary Ruppert, Music Jean Schreiber, Human Services, Department Chairperson Jennifer Spiker, Journalism William Sweet, English Clinton Tobey, Art, Department Chairperson James Tolbert, Graphic Communications, Department Chairperson Richard West, Music, Performing Arts Department Chairperson Barbarajene Williams, English

#### Supportive Staff:

Annie Farrington, Secretary Louise Johnson, Instructional Assistant Parent/Child Laboratory Diane Schmidt, Secretary 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.

#### **One-Year Programs**

A one-year program leading to a certificate may be earned in Human Services (Child Care or Adult Services).



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.

#### AR 101 - Weaving I 2 lec/4 lab hrs/wk 3 cr. F/W/Sp

Introduction to techniques of construction with fiber through weaving, macrame, stitchery. Emphasis on design considerations. \$2.00 take home material charge.

#### AR 102 - Weaving II 2 lec/4 lab 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 2 lec/4 lab hrs/wk 3 cr. F/W/Sp

Emphasis on introduction to basic color theory and systems; their structure and application to design and painting.

#### AR 196 - Design II 2 lec/4 lab hrs/wk 3 cr. F/W/Sp

Emphasis on black-white and value studies in composition and design; traditional and contemporary concepts. Prerequisite: AR 195.

#### AR 197 - Design III

#### 2 lec/4 lab 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. F/W/Sp

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 201 - Survey of Visual Arts

#### 3 class hrs/wk 3 cr. F

To introduce the student to architecture, not only as a functional living or working setting, but as a well designed art form similar to three-dimensional sculpture. Emphasis on the relationship of elements of architecture.

#### AR 202 - Survey of Visual Arts

#### 3 class hrs/wk 3 cr. W

An analysis of the motion picture as one of our most influential art forms. Emphasis on photography and photographic effects as they relate to "setting the mood" for overall dramatic impact on a film. \$5.00 film fee.

#### AR 203 - Survey of Visual Arts—History of Art

#### 3 class hrs/wk 3 cr. Sp

Survey of the visual arts; historical development of illustration, printmaking, easel and mural painting.

#### 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 - Textile Design

#### 2 lec/4 lab hrs/wk 3 cr. F/W/Sp

Articulation of design concepts in textile. Original design production using dying processes. Studio experience in batik, dye painting, tie dye, and other dye techniques, with exploration of combined techniques. \$5 take-home material charge.

#### AR 235 - Jewelry and Metalsmithing I 2 lec/4 lab 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 2 lec/4 lab 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

#### 2 lec/4 lab 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

#### 2 lec/4 lab 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

#### 2 lec/4 lab 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

#### 2 lec/4 lab 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

#### 2 lec/4 lab 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

#### 2 lec/4 lab 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 - Watercolor Painting

#### 2 lec/4 lab 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

#### 2 lec/4 lab 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 2 lec/4 lab hrs/wk 3 cr. W

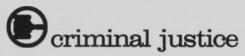
Concentrated study in clay of the surface and structural anatomy of the human figure. Aiming at a greater understanding and use of the figure in three-dimensional art.

#### AR 295 - Welded Sculpture 2 lec/4 lab 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-acetelene and arc welders to increase technical skills.

#### AR 296 - Painting II 2 lec/4 lab 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.



#### **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.

#### **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 Emorcement			
Freshman Year			
Course No. & Title	F	W	Sp
CJ 111-3—Introduction to Criminal Justice 5.230—Fundamentals of	3	3	3
Crime & Delinquency	3		
WR 121 or Basic English	3		
PE Activity	1	1	1
Math and/or Science	3		
Electives or SFE	3	3	3
CJ 211-2—Criminal Law I, II		3	3
WR 122 or Occupational Writing		3	
Humanities or Social Science Elective		3	2
HE 252—First Aid			3
	16	16	13
Sophomore Year			
Course No. & Title	F	W	Sp
CJ 219—Community Relations	3		
5.220—Concepts of Enforcement Ser.	3		
Electives or SFE	6	12	
CJ 214—Criminal Investigation		3	3
CJ 213—Legal Aspects of Evidence	3		
5.236—Introduction to Juvenile Del.			3
Electives or SFE			9
	15	15	15
Corrections			
Freshman Year			
Course No. & Title	F	W	Sp
CJ 111-3—Introduction to	•		2
Criminal Justice	3	3	3
5.231—Civil Procedures WR 121-2 or	3		
Basic English	3		
PE Activity	1	1	1
Math and/or Science	3	•	•
Electives or SFE	3	3	6
WR 122 or Occupational Writing		3	
CJ 211—Criminal Law I		3	
Humanities or Social Service Elective		3	
HE 252—First Aid			3

Law Enforcement

Humanities or Social Service Elective HE 252—First Aid	3		
	16	16	1
Sophomore Year			
Course No. & Title	F	W	S
5.230—Fund. of Crime & Delinquency	3		
CJ 219—Community Relations	3		
Electives or SFE	6	12	
5.233—Institutions and Agencies		3	
CJ 213—Legal Aspects of Evidence	3		
5.229—Intro. to Interviewing			
Electives or SFE			1
	15	15	1

#### **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.

### CJ 111 - Introduction to Criminal Justice—Survey 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 112 - Introduction to Criminal Justice—Courts

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 111 or consent of instructor.

#### CJ 113 - Introduction to Criminal Justice—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. Prerequisite: CJ 111 or consent of instructor.

#### CJ 211 - Introduction to Criminal Law I

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 111 or consent of instructor.

#### CJ 212 - Introduction to Criminal Law II

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 111 or consent of instructor.

#### CJ 213 - Legal Aspects of Evidence

3 class hrs/wk 3 cr. F

Origin, development, philosophy and consitutional 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 111 or consent of instructor.

#### CJ 214 - 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 111 or consent of instructor.

#### CJ 219 - 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 111 or consent of instructor.

#### 5.220 - Concepts of Enforcement Services

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 111 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 111, or consent of instructor.

#### 5.230 - Fundamentals of Crime and Delinquency

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.

#### 5.231 - Civil Procedures

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 111 or consent of instructor.

#### 5.236 - Introduction to 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 111 or consent of instructor.

### 1.200/WE 201 - Supervised Field Experience

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 - Field Experience Seminar

1 cr. S/F/W/Sp

Refer to the Cooperative Work Experience section of this catalog.



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 the 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 merhanics 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.

#### 1.101 - Basic English 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.

### 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: 1.101 Basic English

### 1.112 - Technical Report Writing 3 class hrs/wk 3 cr. F/W/Sp

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.



# graphic communication/journalism

Graphic Communications is a 90 hour, Associate Degree program in which students have the option of majoring either in Graphic Design or Printing Technology.

### printing technology

The Printing Technology curriculum requires 12 hours of general education, 32 hours of electives, 28 hours of basic graphic arts courses, and 18 hours of specialized production courses. Students electing the Printing Technology option may anticipate vocational opportunities as darkroom technician, process cameraperson, paste-up person, stripper, platemaker, duplicating machine operator, offset press helper, screen printer or bindery worker. Most positions in the industry require persons with skills in several of the above fields.

Candidates for the associate degree in Graphic Communications with a specialization in Printing Technology must complete the following courses:

#### Freshman Year

F	W	Sp
3		
3		
3		
3		
	3	
	3	
	3	
	3	
		3 3 1
		3
		3
	_	
3	3	3
		3
16	16	16
F	w	Sp
3		
2		
	4	4
	2	
		4
9	8	6
14	14	14
	3 3 3 3 3 3 16 F 3 2	3 3 3 3 3 3 3 3 3 16 16 16  F W 3 2 4 2

<sup>\*</sup>Substitute WR 121, 122

#### 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

#### 3 class hrs/wk 3 cr. 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 (may be taken concurrently).

#### 3.152 - Layout and Pasteup Procedures

#### 2 lec/4 lab 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: 3.151 or consent of instructor (may be taken concurrently with 3.150).

#### 3.153 - Survey of Visual Design

#### 2 lec/4 lab hrs/wk 3 cr. F

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 2 lec/4 lab 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 2 lec/4 lab 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.

<sup>\*\*</sup>Students with demonstrated typing proficiency of 45 words per minute may substitute electives.

# 3.162 - Introduction to Photography 2 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. Primarily includes instruction on cameras, lenses, film, filters, lighting, photographic chemistry, composition, and printing techniques. Demonstrations and individual projects. Students must provide own camera. \$5.00 take-home materials charge.

# 3.164 - Process Camera 2 lec/4 lab 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 2 lec/4 lab 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. Prerequisite: 3.150, 3.164.

# 3.167 - Graphic Production I 2 lec/4 lab 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.

# 3.168 - Graphic Production II 2 lec/4 lab 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 should reasonably 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:

Freshman Year			
Course No. & Title	F	W	Sp
3.150—Introduction to			-
Graphic Communications	3		
3.158—Advertising Typography/Lettering			
AR 195—Design I	3 3 3		
AR 291—Drawing Fundamentals	3		
1.101—Basic English*	3		
3.170—Illustration		3	
2.501—Typing I***		3	
3.162—Introduction to Photography		3 3 3 3	
AR 282—Intermediate Drawing		3	
1.102—Occupational Writing*		3	
3.154—Packaging & 3-Dimensional Design	is said		3
3.152—Layout & Pasteup Procedures			3 3 2 3 1
AR 281—Figure Drawing			3
3.180—Publications Lab			2
3.151—Publication Design			3
PE 180/190—PE Activity	1	1	1
	16	16	15
Sophomore Year			
Course No. & Title	F	W	Sp
3.172-3-4—Graphic Design I, II, III	3	3	3
HE 250—Personal Health	3		
3.180—Publication Lab**	2		
2.505—Typing Skill Building***	3		
3.180—Publication Lab**		2	
4.124—Technical Drawing I		2 2 7	
Electives		7	
4.123—Technical Illustration			3
Electives or Supervised Field Experience	3		9
	14	14	15

<sup>\*</sup>Substitute WR 121, 122

#### 3.170 - Illustration

#### 2 lec/4 lab hrs/wk 3 cr. F/W

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 2 lec/4 lab 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.

<sup>\*\*</sup>Substitute Production Lab 3.181

<sup>\*\*\*</sup>Students with demonstrated typing proficiency of 45 words per minute may substitute electives

# 3.173 - Graphic Design II 2 lec/4 lab 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 2 lec/4 lab 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 - Publications Lab 4 lab hrs/wk 2 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.

# 1.201/WE 201 - Supervised Field Experience 1-16 cr. F/W/Sp

Students may, upon the recommendation of the program coordinator, 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 cr. S/F/W/Sp

Refer to the Cooperative Work Experience section of this catalog.

# journalism

Lower-division course work in journalism taken at a community college is not required in the major and, if completed, will not be accepted toward meeting upper-division major requirements in journalism at four-year institutions. However, the courses listed below are highly recommended as elective credit for students planning a career in journalism.

# 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.



# human services

The Human Service curriculum is designed to coordinate pre-professional experience and general educational opportunities for employed human service agency personnel, persons seeking employment in the human service system, and students desiring pre-professional training in human services requiring advanced degrees beyond the lower division transfer level.

The curriculum consists of a basic core of 8 credit hours required of all human service majors. The Human Service Certificate may be achieved upon completion of the basic core in combination with additional course work in either child care or adult services. Forty-five credit hours of course work, lab experience, and supervised work experience are required.

The Child Development Option is designed to prepare child care personnel for employment with public and private child caring agencies, preschools, day care centers, residential treatment facilities and certain positions within the public school system such as teaching assistant and classroom aide.

The Adult Service Option is designed to prepare adult service personnnel for employment with public and private adult caring agencies, activity centers, day programs and residential care facilities and certain positions within the social service system such as intake worker, field caseworker and counseling aide.

#### **Basic Core**

	14	16	15
Electives	3		5
7.180—Supervised Placement or SFE			4
7.137—Ages/Stages: Adolescence			3 4
7.145—Health of Young Children			3
7.180—Supervised Placement		4	
FL 225—Child Development		3	
7.148—Interviewing Procedures		3	
7.130—Human Service Systems/Personnel		3	
7.180—Supervised Placement	4		
7.135—Ages/Stages: Introduction	2		
7.153—Behavioral Objectives	2		
7.150-1—Child Care Practice I, II	3	3	
Course No. & Title	F	w	Sp
Child Care Option			
	8		
7.153—Behavioral Objectives	2		
7.148—Interviewing Procedures	3		
and Personnel	3		
7.130—Human Service Systems			
Course No. & Title	Cred	its	

#### **Adult Services Option**

TAMBLE DOLLINGS OF HOM			
Course No. & Title	F	W	Sp
7.142—Ages/Stages: Early Adult	3		
HE 250—Personal Health	3		
7.140—Techniques of Observing Behavior	1		
7.153—Behavioral Objectives	2		
7.143—Ages/Stages: Middle Years		3	
FL 223—Family Living		3	
HE 252—First Aid		3	
7.130—Human Service Systems/Personnel		3	
7.148—Interviewing Procedures		3	
7.141—Techniques of Recording Behavior		1	
7.144—Ages/Stages: Later Years			3
·1.606—Psychology of Human Relations			3
FL 240—Contemporary American Families			3
Electives	6		5
	15	16	14

## **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.

## 7.130 - Human Services Systems and Personnel 3 class hrs/wk 3 cr. W

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. F

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. Sp

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. F

Introduction to behavioral observation techniques.

# 7.141 - Techniques of Recording Behavior

1 lec/1 lab hr/wk 1 cr. W

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. F

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

# 7.143 - Ages and Stages: Middle Years

## 3 class hrs/wk 3 cr W

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. Sp

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. W

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. W

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. F

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. W

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. F

Identification of behavioral goals and preparation of plan for behavioral change.

# 7.180 - Supervised Placement

# 2 lec/4 lab hrs/wk 4 cr. F/W/Sp

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.

# 1.200/WE 201 - Supervised Field Experience

## 3-16 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 - Field Experience Seminar

## 1 cr. F/W/Sp

Refer to the Cooperative Work Experience section of this catalog.

# legal assistant

Reflecting the expressed intent of the legal profession to make legal services more available to all segments of society, the legal assistant is an emerging para-professional career.

The Oregon State Bar Association has specified curriculum and developed courses for Legal Assistant training. They have also specified certification requirements which include the completion of a prescribed 90 hour associate degree program, two year's experience working in a law office, and a passing score on a comprehensive examination administered by the State Bar.

The Legal Assistant courses listed below will be offered as evening classes designed primarily for (but not restricted to) those presently employed in law offices who wish to qualify themselves for certification as Legal Assistants. (See also the Criminal Justice Administration section of this catalog for additional elective courses).

# 9.544 - Real Property

# 3 class hrs/wk 3 cr. F

A course to give the legal assistant trainee a general understanding of Oregon real property laws and to work with an attorney in drafting and preparing documents necessary for the transfer and securing of real property

# 9.547 - Personal Property

## 3 class hrs/wk 3 cr. W

A course to provide knowledge which will enable the legal assistant trainee to understand basic secured transactions involving personal property.

# 9.548 - Introduction to Insurance Law

#### 3 class hrs/wk 3 cr. Sp

A course to provide the legal assistant trainee knowledge of various types of insurance, claim procedures, the insured's duty to the insurance company, the insurance company's duties to the insured and to third parties, actions on policies of insurance, actions against insured defendants, and the regulation of insurance companies in Oregon.

# 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 in all the performing arts in striving to become a total performer with 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.

# 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 - Beginning Oral Communication 3 class hrs/wk 3 cr. F/W/Sp

Introduction to three areas of speech communication: public address, interpersonal communication, and group discussion. Experience includes public speaking; interpersonal exercises and task-oriented work group session.

# SP 112 - Intermediate Oral Communication

#### 3 class hrs/wk 3 cr. F/W/Sp

Work in persuasion, development of listening skills, structure and operation of formal work groups and development of leadership skills. Prerequisite: SP 111.

# SP 113 - Advanced Oral Communication

## 3 class hrs/wk 3 cr. Sp

Advanced practical work in oral communication, in the specific area of interpersonal communication centering on semantics; group interaction; leadership; defensive and supportive communication and encounters. Taught through lecture-discussion, communication exercises and related readings. Prerequisite: SP 111.

# 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 Oral Communication

#### 3 class hrs/wk 3 cr. F/W/Sp

Emphasizes oral communication skills for vocational/technical students to prepare them in the areas of: telephone usage, interviewing, personnel interaction, 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 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. F/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 or 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 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 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 hrs/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. 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. 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. 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. F/W/Sp

Advanced opportunities in swing choir. Audition required for enrollment. Prerequisite: 6 credits MU 194.

# 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.

# P 201 - Problems of Philosophy

3 class hrs/wk 3 cr. F

Introduction to some of the basic questions of philosophy and a study of the ways in which these problems have been treated. Includes readings from most of the important philosophers.

# P 202 - Elementary Ethics

3 class hrs/wk 3 cr. W

Introduction to the study of morality. Deals with questions of right, free will, duty, good, etc. Some major ethical systems are used.

# P 203 - Elementary Logic

3 class hrs/wk 3 cr. Sp

Introduction to the study of logical understanding. Emphasis on recognizing, analyzing and criticizing various arguments and proofs.

# RE 201 - Religions of the World

3 class hrs/wk 3 cr. F

To become acquainted with some of the difficulties in understanding a religious tradition as an outsider, to acquire an initial, if superficial grasp of the major religious traditions of the world; and to gain a reflective appreciation of the place of religion in human life.

# RE 202 - The Old Testament and Its World

3 class hrs/wk 3 cr. W

Introduction to the major themes of the Old Testament in the context of its original formation, so far as modern scholarship allows, and a sketch of what it has contributed to our cultural heritage.

# RE 203 - The New Testament and Its World

3 class hrs/wk 3 cr. Sp

Introduction to the literature and theology of the New Testament in the context of its original formation, so far as modern scholarship allows, and a sketch of what is has contributed to our cultural heritage.

# 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, the study 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

Recommended for students planning to major in anthropology. Also 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 morphological variation and physical evolution. (Physical Anthropology).

# AN 102 - General Anthropology

3 class hrs/wk 3 cr. W

Examination of man's prehistorical cultural traditions, i.e., those which have no living bearers. (Archeology).

# AN 103 - General Anthropology

3 class hrs/wk 3 cr. Sp

Examination of man's cultural variation throughout the historical world. (Cultural Anthropology).

# AN 207 - Cultural Anthropology

3 class hrs/wk 3 cr. F

Examination of man's cultural traditions 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 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.



# family living

# FL 222 - Marriage Preparation 2 class hrs/wk 2 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

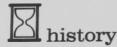
3 class hrs/wk 3 cr. W

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.



# **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.

# HS 103 - History of Western Civilization

3 class hrs/wk 3 cr. F/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 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

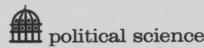
3 class hrs/wk 3 cr. W

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.



# PS 201 - American Government

3 class hrs/wk 3 cr. F

The first course of a three part sequence. Focus is 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

Second course of a three part sequence. Focus is 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

Final course of a three part sequence. Focus on local political institutions and the relationship of citizens to them. 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 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. Sp

Workings of the basic national and local institutions in the United States. The students relate directly to various social, political and economic institutions in the community.



# psychology/education

PY 201 - General Psychology

3 class hrs/wk 3 cr. F/W/Sp
Introduction to the use of objective s

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. F/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 3 class hrs/wk 3 cr. Sp

Primarily for the non-psychology major. Through individual assignments, the student explores the relationships between psychology and his area of interest. Emphasis is placed on the application of psychological principles to practical problems encountered in such fields as medicine, law, business, education. Prerequisite: PY 201-202.

# 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 either PY 201, 202, 203, 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

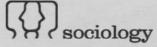
Helps prepare students to solve potential work oriented individual and/or interpersonal behavioral problems. Includes study of fundamental psychological principles of development, personality, motivation, conflict, group behavior and occupational choice.

# 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.



# 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

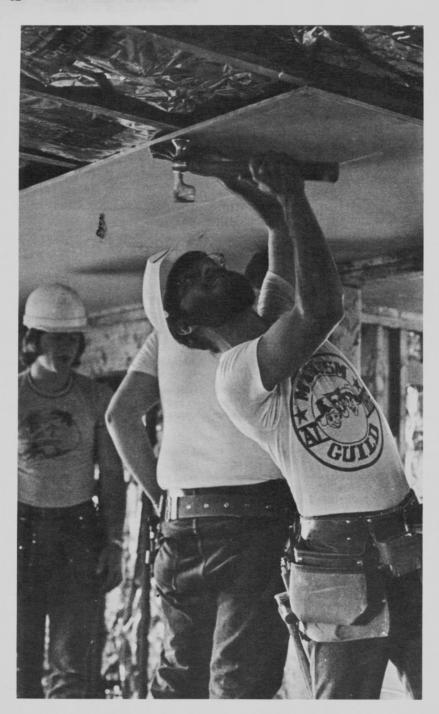
Introduction to the sociological perspective: the components of society and social organization; culture; socialization; stratification.

SO 205 - General Sociology 3 class hrs/wk 3 cr. W/Sp

Analysis of major sociological institutions.

SO 206 - General Sociology 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

Programs in the Industrial Division have been planned to meet the educational needs of many kinds of students, including those already employed full time in industry.

The Division offers one-year and two-year programs leading to certificates and degrees, and serves as the college center for apprenticeship training programs.

It also provides a variety of courses for students with special needs and interests. Many of these are offered in the evenings and on weekends, for the convenience of those who are working full-time, and want to improve their skills and advance their knowledge of new technology and production techniques.

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.

#### Director:

Position vacant, to be filled July 1, 1977

#### Faculty:

John Alvin, Welding Department Chairperson
Harry Armstrong, Wood Technology Department Chairperson
Michael Burke, Machine Tool Technology
David Carter, Automotive Technology
John Griffiths, Machine Tool Technology Department Chairperson
Lee Hansen, Small Engine/Recreational Vehicle Department Chairperson
Gene Hysmith, Auto Body Repair
L. Carl Love, Metallurgy Department Chairperson
William Pere, Automotive Technology
Keith Pond, Automotive Technology
Ed Stewart, Welding
Larry Thornton, Auto Body Repair
Dennis Wood, Welding

#### **Supportive Staff:**

Jean Heins, Secretary Albert Treichler, Instructional Assistant Automotive Technology

#### Industrial

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# apprenticeship

Apprenticeship is a two-fold program; the indentured apprentice is employed as a learner of skills through on-the-job work experience and receives 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 Pipefitter, Industrial Welder, Manufacturing Plant Electrician, Power Lineman, and Industrial Instrumentation. Being an indentured apprentice is a condition for entering related training classes. Information on entrance procedures and requirements for apprenticeship is available from the Oregon State Bureau of Labor, Oregon State Employment Service or Apprentice Coordinator.

Upon completion of the required training program, the apprentice is moved to journeyman status, and is eligible to take a licensing examination if required. Linn-Benton Community College also offers the journeyman an opportunity for an Associate of Science Degree in the Industrial Trades.

Recognized journeyman will be granted 45 credits towards the Industrial Trades degree. An additional 45 credits must be earned.

# 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] 3-16 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 cr. F/W/Sp/Sm

Refer to the Cooperative Work Experience section of this catalog.

# auto body repair

The auto body program was developed to combine daily "open entry/open exit" and individualized instruction. This system places students of all levels within one class thereby creating an industry type environment. Specialized training is offered in body repair and painting. The final test is to rebuild a late model wreck and refinish it.

A battery of packages was developed beginning with the basics and continuing to the advanced repairs. These packages are divided into blocks allowing the student to obtain the training necessary for his/her particular field. After a student has completed the basics, a decision is made as to the field best suited him/her. Any previous experience a student may have is accredited allowing training to commence at the appropriate level. Each day the student is assigned work to coordinate with the packages currently undertaken. The student does as little repetitious work as possible.

Both a Certificate and Associate of Science program are available. Students seeking an Associate of Science Degree must meet college requirements for the degree. The Certificate is issued upon satisfactory completion of the Freshman year for a one year certificate, and two years for a two year certificate.

#### Freshman Year

rresnman lear			
Course No. & Title	F	W	Sp
3.511-3—Auto Body Repair I, II, III	10	10	10
4.151-2—Welding I, II PE 180/190—Physical Education HE 252—First Aid	3	3	1 3
	14	14	14
Sophomore Year			
Course No. & Title	F	W	Sp
3.514-6—Auto Body IV, V, VI 4.108—Industrial Safety	10	10	10
1.101—Basic English or WR 120—Basic Writing Skills 1.102—Occupational Writing	3	3	
	13	13	13

Additional course work as recommended by the Auto Body instructional staff to bring the total number of units to 90 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.

# 3.511 - 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 dis-assembly 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 dust leaks.

# 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.

# automotive technology

The curriculum set forth by the Automotive Technology Department is designed to develop the knowledge and skills necessary to enter the Automotive Industry as an automotive technician. It provides the graduate with the ability to perform mechanical work on any portion of the domestic automobile within the realm of the auto mechanics trade.

The Automotive Technology Department has two programs, the Certificate and Associate of Science Degree programs. The Certificate program provides the student with the qualifications in one or more specific areas related to the Auto Mechanics Trade.

The Associate of Science Degree program provides the student with the qualifications that correspond directly to being a well versed and comprehensive technician with the ability to relate to new concepts and design changes within the automotive industry.

Automotive Mechanics offers broad basic instruction and practice in fundamental service and repair practices and procedures. This training provides the knowledge, skills, habits, and attitudes needed for employement at the job entry level in the automotive service and repair field. An Associate of Science Degree is awarded to those who successfully complete the two-year program.

The Automotive Technology program is designed so that the student may enter at the beginning of any quarter at any point of five blocks. The exception to this is Auto Mechanics V, which has a prerequisite of Auto Mechanics IV.

Students applying for entrance to automotive programs should be in good physical health, be able to lift 75 pounds, and must take a general aptitude test. This test is not used to restrict individual enrollment. Students not meeting the 10th grade level for reading, writing and math (as determined by testing) are required to upgrade these skills prior to, or concurrently with, the automotive block they are registered in.

Course No. & Title	Credits
3.305—Auto Fundamentals	2
3.295—Auto Mechanics I	10
3.296—Auto Mechanics II	10
3.297—Auto Mechanics III	10
3.298—Auto Mechanics IV***	10
3.299—Auto Mechanics V*	10
3.300—Auto Mechanics VI	10
3.301—Auto Mechanics VII**	10
4.151—Welding I	3
4.130—Machine Processes	2
1.101—Basic English or	
WR 120—Basic Writing Skills	3
4.108—Industrial Safety-First Aid or	
HE 250—Personal Health	3
4.202—Math II	4
PE 180/190—Physical Education	3
1.112—Technical Report Writing or	
1.102—Occupational Writing	3
2.415—Human Relations in Business	3
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\*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. F

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. W

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. Sp

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 operate correctly on a test stand.

\*See Auto Fundamentals (3.305) below.

#### 3.298 - Auto Mechanics IV 22 hrs/wk 1-10 cr. F

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 source 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/W/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 20 to 200 hours per term 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.

# 3.305 - Automotive Fundamentals 40 class hrs per term 2 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.



# heavy mechanics/diesel

A program in Heavy Equipment Mechanics has been approved by the State Board of Education and the O.E.C.C. to begin during the 1977-78 school year.

Linn-Benton Community College will offer a one year certificate program and a two year Associate Degree Program. The objective of both programs is to prepare students to go to work as bus, truck, farm equipment, diesel or heavy equipment mechanics.

#### **Proposed Curriculum**

#### Freshman Year

Course No. & Title
Heavy Equipment Mech. I, II, III
Welding I, II
Internal Combust. Engines
Math I
General Elec.
Basic Hydraulics
Basic English

e W Sp

Course numbers, terms and hours to be arranged.

#### Sophomore Year

Heavy Equipment Mech IV, V, VI Beg. Oral Communication Health or First Aid Physical Education Trouble Shooting Elec. Systems Hydraulics Systems Basic Air Conditioning Machine Processes

Course numbers, terms and hours to be arranged.

# 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 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.

Sp

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#### Freshman Year

Course No. & Title F W
3.403-5—Machine Tools I, II, III 10 10
4.100—Blueprint Reading & Sketching 4.202.4—Mathematics 4
PE 180/190—Physical Education 1
4.151—Welding I 3
HE 252—First Aid 3

#### Sophomore Year

Course No. & Title	F	W	Sp
3.406-8-Machine Tools IV, V, VI	10	10	10
6.293—Introduction to Metallurgy	2		
2.651—Business Report Writing			3
1.101—Basic English or			
WR 120—Basic Writing Skills		3	
PE 180/190—Physical Education		1	
4.152—Welding II	3		
4.108—Industrial Safety			3
	15	14	16

# 3.403 - Machine Tools I

# 20 class hrs/wk 10 cr. F/W/Sp

Basic introductory information for the student interested in the machinist trade and/or related fields. Concentrated instruction in the engine lathe and its applications. Other machines of the five basic machining arts are generally discussed and their uses explained. Blueprint reading, simple shop math, and cutting speeds and feeds are explained. Films, slides, tape, field trips and demonstrations.

## 3.404 - Machine Tools II

# 20 class hrs/wk 10 cr. F/W/Sp

Basic introductory information for the student interested in the machinist trade and/or related fields. Concentrates on the operation of the vertical mill. Primary emphasis will be placed on lathe single point machining. Drill presses, milling machines, and grinders used to develop a broader range of skills. Related skills in measuring, blueprint reading and shop math increased through assigned projects.

#### 3.405 - Machine Tools III

## 20 class hrs/wk 10 cr. F/W/Sp

Basic introductory information for the student interested in the machinist trade and/or related fields. Concentrates on the machining arts of milling and grinding. Primary emphasis on relating single point cutting, machine set-up, tool selection and material removal rate skills to the more complicated milling machines and grinders. Drill presses and lathes used in conjunction with the milling and grinding projects. Shop set-up, part lay-out, measuring, blueprint reading and shop math skills increased through assigned projects.

#### 3.406 - Machine Tools IV

#### 20 class hrs/wk 10 cr. F/W/Sp

Advanced training to students generally familiar with the five basic machining arts. Review and update of previously acquired skills. Special attention to increasing depth of knowledge on the lathe. More precision and special set up work involving complex configurations and tracer lathe applications. Turning and boring associated more closely with the supplemental operations. Increased emphasis on industry accepted rates. Roughing and finishing operations studied in depth. Milling machines, drill presses and grinders used extensively in conjunction with lathe projects. Tool and cutter grinding are part of the project requirements.

# 3.407 - Machine Tools V 20 class hrs/wk 10 cr. F/W/Sp

Advanced training to students generally familiar with the five basic machining arts. Review and up-date of previously acquired skills. Special attention to increasing depth of knowledge on the lathe, mill, and drilling machines. Emphasis on precision quality work, complex configurations special set-ups, industry accepted material removal rates and tool and cutter sharpening. Roughing and finishing operations studied in depth. Lathes, mills, and grinders used extensively in conjunction with precision boring projects. Related fields of machining such as tool making, machine repair, numerical control and automation are studied.

# 3.408 - Machine Tools VI

## 20 class hrs/wk 10 cr. F/W/Sp

Advanced training to students generally familiar with the five basic machining arts. Review and up-date of previously acquired skills. Special emphasis is placed on increasing knowledge of milling machines and grinder operation. Concentrated attention on precision quality work, complex configurations, special shop set-ups, industry accepted materials removal rates and proper tool selection. Roughing and finishing operation are studied in depth. Lathes, drills, and jig bores are used in conjunction with the milling and grinding projects. Increased attention is devoted to study of related fields of tool making, equipment repair, numerical control and tool and cutter grinding.

#### 4.130 - Machine Processes

#### 3 class hrs/wk 2 cr. F

A basic machine tool operations course. Introducing the student to the principles involved in the operating of the basic machine tools, engine lathe, drill press, grinder and milling machine.

# Mn Fe 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.

#### Freshman Year

Freshman Tear			
Course No. & Title	F	W	Sp
6.293—Introduction to Metallurgy	4		
6.276—Physical Metallurgy		4	
6.294—Process Metallurgy			4
4.151—Welding I			3
3.444—Welding Metallurgy			4
4.100—Blueprint Reading & Sketching	2		
4.205-6—Basic Chemistry I, II	4	4	
MT 95—Intermediate Algebra, or			
6.551—Technical Math I	4		
MT 101—College Algebra, or			
6.552—Technical Math II		4	
4.300-2—Practical Physics		4	4
PE 180/190—Physical Education	1	1	1
	15	17	16
Suggested Electives			

#### Suggested Electives

2.415—Psychology for Supervisors

2.121—Applied Economics

4.122—Strength of Materials

3.162-Photography

6.288-Vacuum Technology

#### Sophomore Year

Sophomore Tear			
Course No. & Title	F	w	Sp
1.101—Basic English or			
WR 120—Basic Writing Skills		3	
2.645—Business Conference Techniques		3	
2.415—Human Relations in Business			3
6.330—General Electricity	3		
4.108—Industrial Safety			3
4.120—Fundamentals of Specification			3
4.130—Machine Processes		2	
4.161-2—Materials Testing I, II	3	3	
6.281-2-3—Non-Destructive			
Testing I, II, III	3	3	3
6.298-9—Metallography I, II	3	3	
HE 250—Personal Health	3		
Technical Elective			3
	15	17	15

# 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.

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.

# 6.282 - Non-destructive Testing II

#### 5 class hrs/wk 3 cr. W

A continuation of Non-destructive Testing I with a major emphasis upon ultrasonic and radiographic methods of testing and inspection.

#### 6.283 - Non-destructive Testing III

#### 5 class hrs/wk 3 cr. S

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 effect 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.

# 4.122 - Strength of Materials 3 class hrs/wk 3 cr. On Demand

An introduction to the mechanics dealing with forces as they relate to tension, compresssion, 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, small engine 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, rototillers, edgers and motorized lawn sweepers. And 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 and mechanics with more specialized skills are being sought for work in this field. The opportunity for self-employment is also available.

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.

Freshman Year			
Course No. & Title	F	w	Sp
3.560—Small Engine Repair I or 3.562—Small Engine Repair III or			
3.570—Recreational Vehicle Repair I 4.200-2—Math I. II	10	10	10
PE 180/190—Physical Education HE 252—First Aid or	1		
HE 250—Personal Health 1.101—Basic English or			3
WR 120—Basic Writing Skills 1.200—S.R.E. Small Engine Repair or		3	
Elective, Science & Technology			3
	15	17	16
Sophomore Year			
Course No. & Title	F	W	Sp
3.561—Small Engine Repair II or 3.563—Small Engine Repair IV or			
3.571—Recreational Vehicle Repair II	10	10	10
PE 180/190—Physical Education	1	1	
4.151—Welding I	3		
2.651—Business Report Writing or			
1.102—Occupational Writing or			
1.112—Technical Report Writing or 1.200—S.F.E. Small Engine Repair or			
Elective, Humanities & Social Services		3	3
4.108—Industrial Safety		,	3
	14	14	16

# 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 techniques.

# 3.563 - Small Engine Repair IV 20 class hrs/wk 1-10 cr. F/W/Sp

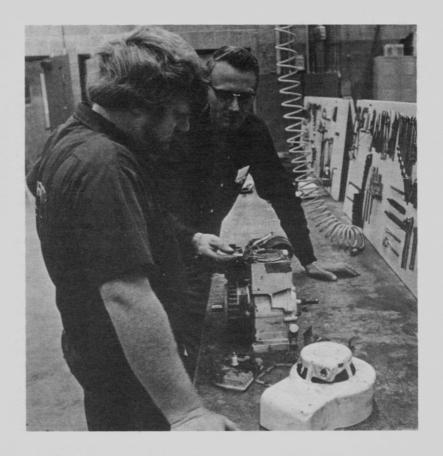
Improves skills and proficiency in service and repair related to chain saw, outboard marine components and industrial equipment. Prerequisite: Small Engine Repair III.

# 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.



# welding

The one-year certificate welding program can be entered at any time during the academic year and be completed in three 12-week quarters. Classes and laboratory periods are provided so that the student can develop the skills, habits, attitudes and knowledge that will prepare him for a wide range of job opportunities. Time is provided to prepare for and undergo certain weldor certification tests. These tests are administered by independent agencies. A one-year Certificate of Completion will be issued upon fulfillment of the program requirement.

A two-year Associate of Science or Certificate of Completion is awarded to those who complete the first and second year curriculums.

The second year is designed to give more experience in specific areas such as layout, fabrication, repair and other related subjects.

,,, <b>.</b>			
Freshman Year			
Course No. & Title	F	W	Sp
3.444—Welding Metallurgy			4
4.100—Blueprint Reading & Sketching	2		
4.108—Industrial Safety			3
4.200-2—Mathematics I, II	4	4	
4.240—Basic Arc Welding	6		
4.241—Intermediate Arc Welding		6	
4.242—Basic Oxyacetylene Welding	4		
4.243—Intermediate Oxyacetylene Weld.		4	
4.245—Layout Procedures for Welding		3	
4.246—Advanced Arc Welding			6
4.250—Advanced Oxyacetylene Welding			4
	16	17	17
Suggested Elective			
4.153—Welding Seminar F/W/Sp 1-4			
Sophomore Year			
Course No. & Title	F	W	Sp
PE 180/190—Physical Education	1	1	1
HE 252—First Aid	3		
4.124—Technical Drawing I	2		
4.130—Machine Processes	2 2		
4.255—Fabrication & Repair Pract. I	6		
1.101—Basic English or			
WR 120—Basic Writing Skills		3	
3.445—Welding Metallurgy II		4	
6.330—General Electricity		3	
4.256—Fabrication & Repair Pract. II		6	
2.651—Business Report Writing			3
2.415—Human Relations in Business			3
3.555—Hydraulics and Pnuematics			3
4.257—Fabication & Repair Pract. III			6
	14	17	16

## 4.151-2 - Welding I, II

## 5 class hrs/wk 3 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 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 6 cr. 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 braze welding of various similar and dis-similar metals.

#### 4.245 - Layout Procedures for Welding

#### 5 class hrs/wk 3 cr. W

Introduces layout principles and applications. Tools and equipment for lay-out 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.

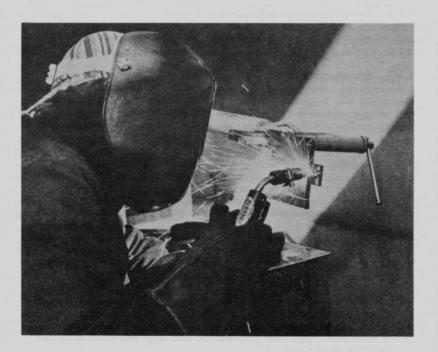
# 9.148 - Preparation for Welder Certification-Pressure Pipe 8 class hrs/wk 4 cr. F/W/Sp

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 - Beginning, Advanced Welding-Occupational Extension 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.



# wood technology

A two year curriculum is the major emphasis of this program. One year students should be at a job entry level of development. Students completing this two year program should have the necessary skills to pursue a variety of employment options in the building trades industry and related occupations. Major subject areas of cabinetry and/or carpentry are available. Students may take either or both subjects in consecutive years.

Carpenters and cabinet makers are employed in almost every type of construction. Most are hired by contractors and home builders to construct new buildings. Others are employed in the alteration, remodeling and repair of buildings and in cabinet specialty shops. Individualized programs are available for student desiring entry into the retail sales area of construction/remodeling trade.

Large numbers of finish carpenters are also hired to maintain and repair facilities within the factories, hotels and office buildings. The opportunity for self employment also exists within both the framing and finish carpentry trades.

The types of work performed by graduates could include erecting framework, building stairs, laying hardwood floors, building forms for concrete, cabinet and furniture making, and retail sales.

Carpenters, particularly those in rural areas, where there is less specialization, may perform work of other craftsmen such as painting or roofing.

Students in the program learn the use of tools, machines, equipment and materials associated with the trade. Related course work in drafting, blueprint reading, and math are also taught. Actual experience is gained through the construction of projects. Major project for the carpentry students is the construction of a residential home. These students are involved in all aspects of the house construction.

Persons completing the comprehensive two year associate of science degree program are in greater demand and have a better chance for advancement to carpenter foremen or general construction foremen positions.

Freshman Year			
Course No. & Title	F	W	Sp
3.200-2—Wood Technology 3.429—Blueprint Reading for	10	10	10
the Construction Trades	2		
4.202—Math II	4		
3.205—Drafting I-Construction		3	
1.101—Basic English or			
WR 120—Basic Writing Skills		3	
3.206—Drafting II-Construction			3
2.651—Business Report Writing			3
	16	16	16
Sophomore Year			
Course No. & Title	F	W	Sp
3.211-3—Wood Technology	10	10	10*
2.530-1—Practical Accounting I, II	3**	3**	
4.108—Industrial Safety	3		
PE 180/190—Physical Education	1	1	1
HE 252—First Aid	3		
3.215—Construction Estimating			4
Codes, Contracts & Specifications		4	- 4
4.300—Practical Physics		4	3**
2.534—Cost Accounting			3**
	17-20	15-18	15-18

<sup>\*1.200</sup> Cooperative Work Experience

# 3.200-2, 3.211-3 - Wood Technology 20 class hrs/wk 1-10 cr. F/W/Sp

Safety practices, methods and techniques in using hand tools, power hand tools and power equipment of the wood technology program. Shop organization and procedures in selection of plans and materials for construction of various projects is taught. The program is designed to give the student theory, fundamentals and practical experience in the process of converting blueprints into a finished product, practical estimating, surveying (if applicable to project), and all aspects of finishing to a finished product. Field trips to suppliers, manufacturers, and special construction sites will be utilized.

# 3.205 - Drafting I—Construction 5 class hrs/wk 3 cr. W

A drafting program to develop the student's spatial progress through geometric construction to the sizes, shapes, and arrangements of the areas of a residence.

# 3.206 - Drafting II—Construction

#### 5 class hrs/wk 3 cr. Sp

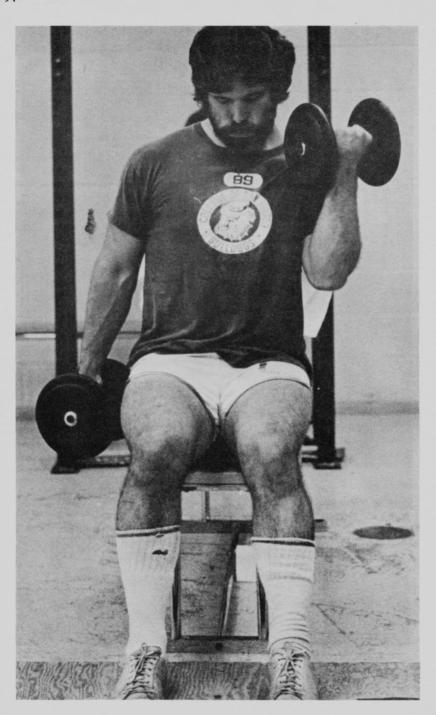
A drafting program to develop the student's ability to draw a set of working plans, with necessary detail drawings, for a residence.

# 3.215 - Construction Estimating, Codes, Contracts, and Specifications 4 class hrs/wk 4 cr. W

Introduction of the importance and legal status of estimates, codes, contracts, and specifications in the construction industry.



<sup>\*\*</sup>Contact Department Chairperson for advising.



# physical education division

The Physical Education Division provides activity classes for students who must take physical education classes to meet graduation requirements and for students 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.

#### Director:

H. Richard McClain

#### Faculty:

David Bakley, Physical Education Arlene Crosman, Physical Education Jean Irvin, Physical Education Verlund Kimpton, Physical Education

# 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.

#### PE 185 - Creative 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.

#### 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 - 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 - Gymnastics

## 3 class hrs/wk 1 cr. W

Gymnastics: Instruction and practice in tumbling, trampoline, unevens, balance beam, floor exercise, vaulting.

#### PE 190 - Gymnastics

# 3 class hrs/wk 1 cr. On Demand

Instruction and practice in tumbling, trampoline, 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 co-educational 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 co-educational 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 co-educational 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 co-educational 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

Instuction 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 or S

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 190 - Beginning Basketball

#### 3 class hrs/wk 1 cr. F/W

Basic basketball skills and concepts for the beginner. Begins with fundamentals and works towards a full court situation.

#### PE 180 - Intermediate Basketball

#### 3 class hrs/wk 1 cr. F/W/Sp

Advances the beginning basketball player's skills toward better success in a game situation.

## PE 190 - Intermediate Basketball

# 3 class hrs/wk 1 cr. F/W/Sp

Advances the beginning basketball player's skills toward better success in a game situation.

# PE 190 - Advanced Basketball

## 3 class hrs/wk 1 cr. W

Intercollegiate basketball level. Emphasis on development of skill for competition among the OCCAA conference colleges.

# PE 190 - Flag Football

# 3 class hrs/wk 1 cr. F

Provides experience to develop various skills fundamental to flag football. Organization of class depend upon skill level of class.

# PE 190 - Wrestling

# 3 class hrs/wk@1 cr. W

Designed to acquaint the student with the fundamentals of collegiate wrestling as set forth by the NCAA. Included will be instruction, demonstration, and practice in all aspects of wrestling.

#### 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 - Intro. 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 Program

# 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

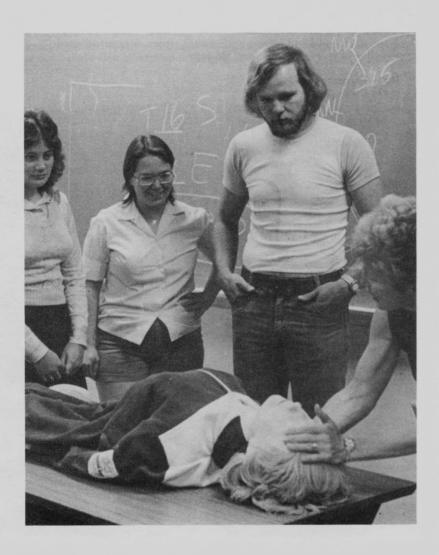
## 3 class hrs/wk 3 cr. F/W/Sp

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

#### 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 and First Aid

# 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.

# 9.313 - Emergency Medical Technician

## 81 hrs 6 cr. On Demand

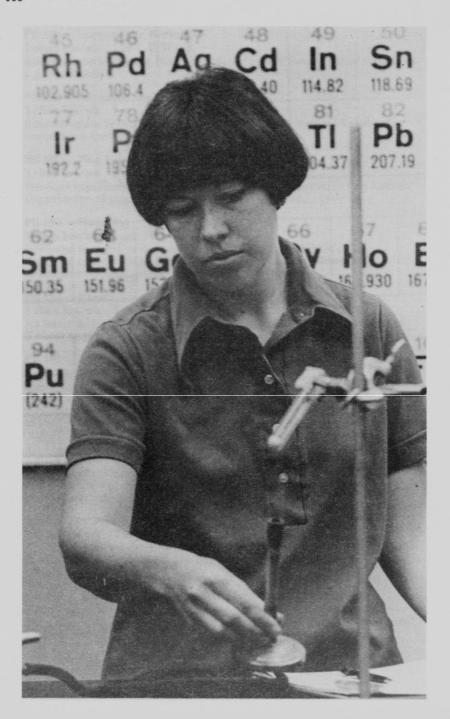
A basic training program includes classroom theory and practice exercises in problems encountered by ambulance personnel that involve: a) the overall role and responsibilities of the emergency medical technician in emergency care and operational aspects of the job b) developing skill in life-saving techniques and all emergency treatment procedures short of those rendered by physicians or by paramedical personnel under the direct supervision of a physician. c) developing skill in the use of and care for all equipment required to accomplish his job.

# 9.314 - Emergency Medical Technician—Cardiovascular 156 hrs 10 cr. On Demand

Trains emergency medical technicians-ambulance who have completed the basic 81 hr. E.M.T. 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.

# 9.315 - Emergency Medical Technician—Intravenous Therapy 20 hrs 2 cr. On Demand

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.



# science and technology division

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, refrigeration/heating/air conditioning, 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.

#### Director:

Peter C. Scott

#### Faculty:

Everett Arasmith, Water/Wastewater Al Benjaminson, Electricity/Electronics Ken Collett, Drafting/Engineering James Cushman, Farm Management James Felton, Water/Wastewater Kent Hansen, Electricity/Electronics, Department Chairperson Fred Kahrs, Refrigeration, Heating and Air Conditioning Paul Klopping, Water/Wastewater John Kraft, Physical Science David Miller, Drafting/Engineering, Department Chairperson Bruce Moos, Agriculture, Department Chairperson Micheal Morgan, Mathematics Carolyn Mullikin, Biology Greg Paulson, Agriculture Raymond Perkins, Physical Science, Mathematics Steve Rasmussen, Physical Science, Department Chairperson Wally Reed. Mathematics James Reynolds, Drafting/Engineering Sharon Rodecap, Mathematics Robert Ross, Biology, Department Chairperson Dell Swearingen, Mathematics John Wooley, Water/Wastewater Edward Wright, Mathematics, Department Chairperson

#### Supportive Staff:

Dale Berggren, Instructional Assistant, Physical Science Karlen Clausen, Secretary
Linda Ebbs, Secretary
LeRoy Heaton, Instructional Assistant
John Jacks, Instructional Assistant, Electricity/Electronics
Sallie Mack, Secretary
Joan Miller, Instructional Assistant, Mathematics
Lann Richardson, Instructional Assistant, Drafting/Engineering
Doris Roth, Instructional Assistant, Biology, Water/Wastewater
Carol Schuh, Purchasing Clerk
Jeanette Stokesbary, Math Lab Clerk

# Two Year Associate of Science Degree Program

Crop Management Program
Turf Management Program
Animal Technology
Civil-Mechanical Engineering Technology
Drafting Technology
Electricity and Electronics Technology
Refrigeration, Heating and Air Conditioning Technology
Science Laboratory Technology
Wastewater Technology
Water/Wastewater Technology
Fire Science

# One Year Programs

Crop Management Certificate
Turf Management Certificate
Refrigeration/Heating/Air Conditioning Certificate
Water/Wastewater Treatment Plant Operation

# supervised field experience

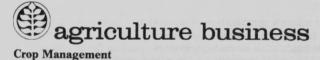
Students may, upon the recommendation of the program coordinator, receive transfer or non-transfer college credit by participating in Supervised Field Experience (SFE). Further information may be found in the Cooperative Work Experience section of this catalog.

# 1.200/WE 201 - Supervised Field Experience [SFE] 3-16 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 cr. F/W/Sp/Sm

Refer to the Cooperative Work Experience section of this catalog



Agriculture is an industry which offers 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 to work towards some 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 with living things and outdoors. 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 Agriculture Department.

#### Freshman Year [Certificate Program]

Course No. & Title	F	W	Sp
1.102—Occupational Writing*		3	
1.200—Work Experience or Electives	3	4	12
4.202—Math II	4		
8.100—Survey of Agriculture	1		
8.125-7—Soil I, II, III	3	3	3
8.165—Plant Science	4		
8.166—Vegetable Technology		3	
8.188—Ag Equipment Maintenance		3	
PE 180/190—Physical Education	1	1	
	16	17	15

<sup>\*</sup>Students requiring Basic English I (1.101) should register for it fall term of their freshman year.

#### Sophomore Year

Sopnomore Tear			
Course No. & Title	F	W	Sp
AE 111—Agriculture Economics		3	
1.200-1—Work Experience			
& Seminar			12
PE 180/190—Physical Education	1		
HE 252—First Aid		3	
Business Electives	6	3	
	17	17	12

### **Turf Management**

Turf Management offers a combination of manual and mental work, much of it out of doors, involving all manners of planning, implementing and maintaining public lands such as parks, freeways, playing fields and golf courses; and it also encompasses allied work in sod production, irrigation, sale of pesticides and equipment and other sales and service functions related to the turf industry such as landscaping.

The Turf Management curriculum is designed to qualify students for the following areas of employment:

Landscape maintenance service; equipment and supply salesman; golf course superintendent; grounds foreman; and landscape construction.

#### Freshman Year [Certificate Program]

Course No. & Title	F	W	Sp
1.102—Occupational Writing		3	
1.200-1—Work Experience & Sem.			12
4.202—Math II	4		
8.100—Survey of Agriculture	1		
8.125-7—Soils I, II, III	3	3	3
8.130—Ag Chemicals		4	
8.135-6-Turf Management I, II		3	3
8.140—Landscape Maintenance	3		
9.165—Plant Science	4		
-8.188—Ag Equipment Maintenance		3	
PE 185—Fundamentals of Golf	1		
PE 180/90—Physical Education		1	
	16	17	18

Students requiring Communication Skills I (1.101) should register for it fall term of their freshman year.

## Sophomore Year

The two-year program leading to an Associate Degree of Science requires the completion of a one-year certificate program and the second year program as outlined below.

Course No. & Title	F	w	Sp
1.606-Intro. to Psy. & Human Relations		3	
1.200-1-Work Experience & Sem.			12
4.205-6—Basic Chemistry I, II	4	4	
8.137—Turf and Plant Establishment	3		
8.138—Irrigation and Drainage	3		
8.141—Landscape Planning		3	
PE 180/190—Physical Education	1		
HE 252—First Aid		3	
Business Electives	4	6	
	15	19	12

# 8.100 - Survey of Agriculture

## 1 class hrs/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. Students become acquainted with their own specific area of interest through individualized study.

#### 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 hr/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.

103

#### 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 devleopment.

# 8.131 - Pest Management

# 4 class hrs/wk 3 cr. F

Includes the classification, anatomy, growth, life history, recognition and control principles of selected weeds, diseases, and insect pests.

# 8.135 - 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. S

Provides students with opportunity to adapt and apply principles and theories taught in Turf Management I. Field trips to observe commom 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 turfgrasses and other ornamentals used in turf areas.

# 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.

## 8.170 - 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. W

Introduction to the application of economics to agriculture. Includes production ecomonics, 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 indentification, 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.

# 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.

#### Freshman Year

	16	17	18
Elective*	3		
1.102—Occupational Writing		3	
1.112—Tech. Report Writing			3
PE 180/190—Physical Education	1	1	1
8.146—Intro. to Livestock Selection			4
8.160—Intro. to Animal Science	4		
8.150—Animal Genetics			4
8.145—Feeds & Feeding			3
8.144—Animal Nutrition		4	
8.143—Anatomy & Phys. of Farm Animals		3	
8.125-6—Soils I, II	3	3	
8.100—Survey of Agriculture	1		
4.202—Math II	4		
Business Electives		3	3
1.200-1-Work Experience & Seminar or			
Course No. & Title	F	W	Sp
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<sup>\*</sup>Use for elective of prerequisites for Occupational Writing or Math II.

Sophomore Year			
Course No. & Title	F	W	Sp
1.200-2-Work Experience & Seminar or			
Elective	3		9
4.205-6—Basic Chemistry I, II	4	4	
8.130—Ag Chemicals		4	
8.152—Beef Production	4		
8.153—Sheep Production		4	
8.154—Swine Production			4
8.158—Artificial Insemination	4		
8.167—Forage Crops			3
8.170—Farm Management or			
AE 111—Agric Economics (Elective,			
offered alternate years)		3	
HE 252—First Aid	3		
	18	15	16

# 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. F

For incoming students who have experience or interest in developing their techniques 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.

## 8.150 - Animal Genetics

# 5 class hrs/wk 4 cr. Sp

Basic concepts fundamental to animal genetics. Includes genetic possibilities, utilzing 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 cycles and pregnancy. Proper methods of collecting, storing and handling semen, along with insemination techniques on other species. Persons concurrently employed should enroll for 9.822 artificial insemination.

# 8.160 - Introduction to Animal Science

#### 5 class hrs/wk 4 cr. F

Introduction to various phases of livestock industry. Various types of livestock enterprises, terminology, marketing, basic production practices and selection techniques. Lab sessions for gaining first-hand experience with people in the production aspect of the livestock industry.

## 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 semen. Necessary breeding and calving records. Proper insemination techniques, using live animals. Those currently employed should enroll in this class.

# 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.

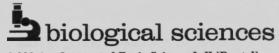
# **Program Prerequisites**

- (1) The family unit is engaged in full-time farm operation and is making the family living from the operaton.
- (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 hrs/month 20 lab hrs/month 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 hrs/month 20 lab hrs/month 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 hrs/month 20 lab hrs/month 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 hrs/month 10 lab hrs/month 4 cr./yr. F/W/Sp/Sm
  Class meeting and instructor visits as needed to keep and analyze records.



4.220-1 - Integrated Basic Science I, II [Dental] 6-4 class hrs/wk 4-3 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 6 class hrs/wk 4 cr. Sm/F/W/Sp

For those needing a lab science or who are interested in the topical subjects—BUT NOT FOR BIOLOGY MAJORS. A variety of alternative courses are offered each term under the heading of General Biology. Alternatives offered under one course number deal with many of the same principles, but differ in point of view. General Biology may not be used to complete a previously begun sequence in Botany or Zoology.

BI 101: The course deals with the cellular level of life. It includes cellular biochemistry, organelle structures and functions, energy manipulation and reproduction. Gene structure and function and inheritance patterns are also included. Alternative courses are Energy and Life, Diseases and Drugs, Sex and Inheritance, and Microbiology.

BI 102: This course deals with the structures and functions of plants and animals, as well as their behavior. Alternative courses are Foods, Human Body, Animal Behavior, and Plants.

BI 103: This course deals with the diversity, evolution and ecology of living things. Alternative courses are Wildflowers, Marine Biology, Ecology, and Gardening. Specific course descriptions for the alternative courses are available from the Biology Department or the Office of Instruction.

# 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. No college level prerequisites upon entering, but it is expected that students have a recent background in and a working knowledge of high school algebra and chemistry 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, will progress 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.

## Z 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. Z 201: Introduction to animal physiology: The study of cell physiology and animal systems with emphasis on vertebrates.

Z 202: Introduction to genetics, evolution and ecology, and embryology. Z 203: Survey of the animal kingdom, with emphasis on environmental relationships.

# 8.300 - Food Micro

# 4 class hrs/wk 3 cr. F

A basic course in general microbiology with emphasis on microoganisms found in foods; causes and effects of food infection and intoxication; transmission of food related pathogens; basic principles in contamination control during processing, preparing and distributing food for consumption; effect of storage conditions in various food substances.

# 4.211 - Nutrition I

# 3 class hrs/wk 3 cr. F

Nutrition I is a course in nutrition at its basic level: the individual nutrients, their functions, sources, effects of deficiency, and recommended daily allowances. Socio-economic as well as some cultural and religious influences of food practices are included. A background in chemistry is recommended, but is not absolutely necessary in order to understand the course material.

## 4.212 - Nutrition II

# 3 class hrs/wk 3 cr. W

Nutrition II is a course dealing with actual modification in meal patterns and foods consumed, according to altered needs of the body in a diseased state. Almost all of the material is presented in terms of a patient-hospital situation. In many areas of diet therapy, there is no one accepted theory, so an effort is made to present arguments favoring all the major theories. In this way, the student is kept up to date and has a better frame of reference in dealing with the patient's special dietary needs. Prerequisite: Nutrition I.

## 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. 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 the latter to determine if their proposals are reasonable for lower division transferable credit. The number of credits given depends upon the nature of the study and the amount of effort needed to accomplish the task.

# 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 Occupational Writing 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 Drafting Department.

Candidates for the Associate Science Degree in Drafting Technology must complete the following courses.

Freshman Year			
Course No. & 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—Pretech Math	4		
6.551-2—Technical Math I, II		4	4
1.101—Basic English &			
1.102—Occupational Writing	3	3	
3.494—Construction Methods & Materials		2	
4.119—Methods & Materials of Manufacturing			2
PE 180/190—Physical Education	1	1	1
1.112—Technical Report Writing			3
	14	15	15
Sophomore Year			
Course No. & Title	F	w	C.,
	r	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	2	3
6.205-6—Civil Drafting I, II		3	3
6.208—Machine Drafting	4		
2.589—Drafting and the Computer	2		
HE 250—Personal Health or			
HE 252—First Aid or	2		
4.108—Industrial Safety & First Aid Technical Electives	3 2	3	2
Technical Electives			
	16	16	16

#### 3.490 - Applied Mechanics

#### 3 class hrs/wk 3 cr. Sp

Study of forces, moments and their effects on materials making up machines or structures. Emphasis on study of forces, free body diagrams, equilibrium conditions and stress analysis of beams, shafts and welded joints. Prerequisite: Tech Math II and 4.300 Practical Physics.

#### 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 and Sketching

#### 4 class hrs/wk 2 cr. F/W/Sp/Sm

Individualized course for students in occupational programs to provide job-related skills in interpreting scale drawings, symbols, and in the preparation of idea-explanation sketches. Blueprint reading areas include: architectural, machine, welding, electrical, metallurgy, air conditioning and refrigeration, etc.

#### 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 variable 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 drawings, 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 variable 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 variable 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 details 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 commerical planning. Architectural styles, orientation, site planning, kitchen planning, elevations, symbols, and specifications. Prerequisite: 3 hrs Drafting Lab or consent of instuctor. 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

#### 2 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.

#### 6.196 - Drafting-Engineering Practices

#### 2 class hrs/wk 2 cr. F

Introduction to industrial practices for students planning a drafting or engineering technology 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 surveying techniques. Fundamentals of chaining and leveling, care and use of surveying instruments, and office procedures. Practical application provided through appropriate field work. Prerequisite: Tech Math II or equivalent.

#### 6.205 - Civil Drafting I 6 class hrs/wk 3 cr. W

Introduction to drafting 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 preparation of working drawings used in manufacture of machinery. Emphasis on speed and accuracy in preparation of layouts, arrangements, and detail drawings incorporating drafting standards, dimensioning, tolerances and symbolic notations required by industry. Prerequisite: 6 hr. Drafting Lab or consent of instructor.

#### 9.634 - 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 mechnical drawing competencies for their work.

# 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 curriculums 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.

#### Freshman Year

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Course No. & Title	F	W	Sp
6.316—Intro./Electricity/Electronics	1		
6.320-2—Electricity/Electronics I, II, III	6	6	8
6.551-3—Technical Math I, II, III or			
MT 101-2-College Algebra, Trig., and			
MT 110—Analytical Geometry	4	4	4
4.100—Blueprint Reading & Sketching			2
6.214-6—Technical Physics	4	4	4
1.102—Occupational Writing or			
WR 121—English Composition		3	
PE 180/190—Physical Education	1	1	
	16	18	18
Sophomore Year			
Course No. & Title	F	W	Sp
6.323-5-Electricity/Electronics IV, V, VI	10	10	10
1.103—Technical Oral Communications			3
1.606-Intro./Psych. of Human Relations		3	
2.558—Intro. to Programming	4		
PE 180/190—Physical Education		1	
HE 252—First Aid	3		
General Electives		3	3
	17	17	16

Communication Skills I should be taken fall term of the first year if necessary.

# 6.316 - Introduction to Electricity/Electronics 1 class hrs/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 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.



# engineering technology

The Engineering Technology program offers technician level training for civil and mechanical engineering fields 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. For those interested in obtaining a Bachelor of Science Degree in Engineering, LBCC offers a freshman-level orientation sequence. Students completing the freshman engineering and general studies classes at Linn-Benton may then transfer to a four-year school.

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:

#### Freshman Year

Course No. & Title	F	W	Sp
4.109—Technical Sketching	1		
4.110-2—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
1.102—Occupational Writing		3	
PE 180/190—Physical Education	1	1	1
	15	15	17

#### Sophomore Year

Course No. & 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—Civil Drafting I, II		3	3
6.208—Machine Drafting	4		
6.210—Engineering Design Project			3
6.330—General Electricity I		3	
2.589—Drafting and the Computer	2		
MT 233—Intro./Num. Comp.		4	
1.112—Technical Report Writing			3
HE 250—Personal Health or			
HE 252—First Aid or			
4.108-Industrial Safety & First Aid	3		
Technical Electives	3	3	3
	17	16	17

Suggested Electives: 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.

#### 4.109 - Technical Sketching

2 class hrs/wk 1 cr. F

Freehand sketching to develop skills with technical and industrial applications. Includes visualization, multiview theory, pictorial views, graphic enlargement, shade and shadow techniques, and "on the-spot" sketches.

#### 4.110 - Drafting Lab

#### 6 class hrs/wk variable 0-3 cr. F/W/Sp/Sm

Individualized instruction to provide basic skills and knowledge of drafting techniques. Students can earn from 0-3 credits and are placed within the course content at a performance level that compensates for previous experiences. The 9-hour sequence course includes the application of drafting instruments, dimensioning techniques, sketching, lettering, pictorial drawings, auxiliary views, sectioning, tolerances, fasteners, detail drawings, 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 variable 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 variable 0-3 cr. F/W/Sp/Sm

Prerequisite: 3 cr. 4.111 Drafting Lab or consent of instructor.

#### 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.

#### 4.148 - Practical Descriptive Geometry

#### 4 class hrs/wk 2 cr. Sp

Individualized course in spatial graphics as required by the drafting and engineering technician. Includes design problems incorporating auxiliary views, true lengths of lines, true size and shape of angles-planes, and points of intersection. Development from point-line-plane through the use of revolution and auxiliary projection will be included. Prerequisite: 6 hrs. of Drafting Lab or consent of instructor.

#### 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

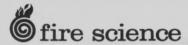
#### 6 class hrs/wk 3 cr. Sp

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.

#### 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.



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.

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#### Freshman Year

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Course No. & Title	F	W	S
4.202 or 1.110 or			
MT 95 or MT 101—Mathematics	4	4	
1.102 or WR 121 or			
1.103 or SP 111—Communications	3	3	-
1.200 and Seminar—Work Experience	4	3	3
PE 180/190—Physical Education	1	1	1
5.254—Intro Fire Prot.	3		
5.264—Build. Const. for Fire Prot.	3	2	
5.256—Elem. Science—F.F.		3 2	
5.257—Fire Service Hydraulics		2	3
1.606 or PY 201—Psychology 5.275—Fire Science I			4
5.245—F.S. Rescue Practices			3
5.263—Fire Pump Construction			3
and Operation			4
und operation	-		40
	18	16	18
Sophomore Year			
Course No. & Title	F	W	S
9.313—EMT	6		
5.277—Fire Science II	4		
5.262—Fund. Fire Prev.	3		
5.260-1—Hazardous Materials I, II	3 2	3	
4.100—Blueprint Reading	2		
5.273—Fire Investigation		3	
5.258—Fire Company Organization			
& Station Management		3	
Technical Electives		6	9
9.500—Elem. of Supervision			3
1.124—Am. Institutions	_		3

# 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.

# 5.254 - 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.

#### 5.256 - Elementary Science for Firefighting

#### 3 class hrs/wk 3 cr. On Demand

Characteristics and behavior of fire; fundamentals of physic 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 Org. & Station Mang.

#### 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.

#### 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.

#### 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.

# 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.

#### 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.

# 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.

#### 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.

#### 5.275 - Fire Science I

#### 3 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

#### 3 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 & 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 system, 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.

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# mathematics

#### 1.109 - Pre-Business Mathematics

4 class hrs/wk 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 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

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 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 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.

General mathematical and computational skills that assist technicians in their training and on their jobs. Emphasis on problem solving.

6.551: A study of algebraic functions, systems of linear equations,

quadratic equations, exponents and radicals, logarithms, and exponential function. Emphasis on technical applications and problem solving. Prerequisite: Algebra 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. Prerequisite: 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, applications 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, partial differentiation, the gradient, 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

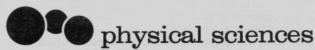
Emphasis on using the computer as a problem solving tool. Programming techniques will be introduced to facilitate problem solving. The student will solve a wide variety of problems from the fields of Business, Mathematics, Physics, Biology and other sciences. The computer language used will be BASIC. 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.



#### 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 atomic structure and the interactions of atoms, ions and molecules. Includes inorganic and organic chemistry. Students planning to take advanced chemistry lab courses at Oregon State University must follow this series with CH 107. Co-requisite: MT 95. Prerequisite: High school chemistry desirable.

#### CH 107 - General Chemistry Lab 6 class hrs/wk 2 cr. F

Extends practical laboratory experience from CH 104, 105 and 106 to prepare students for advanced laboratory training in chemistry. Prerequisite: CH 106 or consent of instructor.

# CH 201, 202, 203 - General Chemistry 6 class hrs/wk 4 cr. F/W/Sp

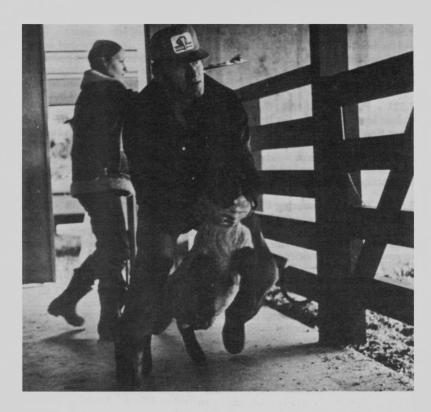
A year sequence for chemistry, science and engineering students. Introduces the physical and chemical aspects of inorganic and organic chemistry. Students intending to take advanced chemistry lab courses at Oregon State University must later supplement this course with CH 207. Co-requisite: MT 101. Prerequisite: High school chemistry or Basic Chemistry I and II.

#### CH 207 - General Chemistry Lab 6 class hrs/wk 2 cr. F

Extends practical laboratory experience from CH 201, 202, and 203 to prepare students for advanced laboratory training in chemistry. Prerequisite: CH 203 or consent of instructor.

# 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. Prerequisite: CH 107 or CH 207.

# CH 234 - Quantitative Analysis 8 class hrs/wk 4 cr. W

Service course on classical and instrumental analytical techniques for students in biological and physical sciences. Prerequisite: CH 107 or CH 207.

# 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 courses in the physical sciences. Topics may include chemistry, physics, astronomy and geology.

#### 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.

# 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.

#### 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, glass-metal seals, construction, repair, and modification of glass laboratory equipment.

# refrigeration, heating and air conditioning

Refrigeration, Heating and Air Conditioning is an individualized program aimed at developing the background of each student in the wide variety of aspects in any or all of the three areas of the domestic and/or commercial refrigeration, heating and air conditioning industry. The student may option to follow the program to any level from parts counterman to design technician. The program offers a two-year Associate of Science Degree or a one year certificate. Students new to the profession should be prepared to purchase tools over a two-year period at a cost of \$800.

Freshman Year			
Course No. & Title	F	W	S
3.530—Refrigeration, Heating,			
Air Conditioning Orientation	5		
3.535—Domestic Refrigeration		4	
3.536—Commercial Refrigeration			4
3.540—Residential Heating		4	
3.545—Residential Air Conditioning Systems			4
3.550—Control Theory	4		
1.110—Elements of Algebra	4		
4.100—Blueprint Reading			2
4.330—Practical Physics		4	
6.330—General Electricity I	3		-
6.331—General Electricity II			3
MT 95—Intermediate Algebra or			
6.550—Pre-Tech Math HE 252—First Aid or		4	
4.108—Industrial Safety and First Aid			3
	16	16	16
Sophomore Year			
Course No. & Title	F	W	S
3.541—Commercial Heating		4	
3.546—Commercial Air Conditioning Systems			4
3.551—Control Application	4		
1.102—Occupational Writing or			
WR 121—English Comp.	3		
1.112—Technical Report Writing			
or WR 122—English Comp.		3	
PE 180/190—Physical Education	1	1	1
Technical Electives	6	9	8
Business Electives	3		3
	17	17	16

TECHNICAL ELECTIVES Include: Co-op Work, Introduction to Data Processing, Welding, Machine Processes, Auto Air Conditioning, Small Engine Repair, Applied Hydraulics, Alternative Energy Sources, Electronics, Physics, Environment Comfort System Analysis, Industrial Refrigeration, Pneumatics and Hydraulics, Plant Engineering I, II and III. BUSINESS ELECTIVES Include: Accounting, Business Management, Business Law, Principles of Advertising, and Supervisory Training Courses.

#### 3.520 - Plant Engineering I 6 class hrs/wk 4 cr. On Demand

The first of a three term course. Includes instruction in hand and power tools of the trade, trade math and physics, blueprint reading, safety and refrigeration.

#### 3.521 - Plant Engineering II 6 class hrs/wk 4 cr. On Demand

Plant Engineering II will include an introduction to industrial and commerical refrigeration. Hermetic, reciprocating, centrifugal, absorption and cascading systems will be discussed. Heating, ventilation and air conditioning for large buildings will be included. Brazing and welding will be practiced in the laboratory.

#### 3.522 - Plant Engineering III 6 class hrs/wk 4 cr. On Demand

The student will learn theory and observe the operation of boilers, pneumatic and water systems. Preventative maintenance and introduction to power plant electricity will be included this term.

One year certificate students in Refrigeration, Heating, and/or Air Conditioing Service should substitute MT II and III for 1.110 and MT 95 or 6.550. The certificate student should also take Speech, Psychology of Human Relations, and Elements of Supervision instead of Occupational Writing or WR 121, Technical Report Writing or WR 122 and the busines elective.

# 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.

# 3.530 - Refrigeration, Air Conditioning and Heating Orientation 5 class hrs/wk $\,$ 5 cr. $\,$ F

A general lecture/lab course dealing with the theory, terminology, tools, basics of regrigeration, air conditioning, and heating. Prerequisite: Basic Math background, mechanical aptitude.

# 3.531 - Environmental Comfort System Analysis 6 class hrs/wk 4 cr. On Demand

Design and development of heating and air conditioning system for residential and/or industrial application. Prerequisite: Industrial Refrigeration and Math III.

#### 3.535 - Domestic Refrigeration 6 class hrs/wk 4 cr. W

Introduction to domestic refrigeration systems. Fundamental refrigeration theory is applied in general operation and repair of sealed systems. Instruction in preliminary troubleshooting. Prerequisite: 3.530 or instructor approval.

#### 3.536 - Commercial Refrigeration

#### 6 class hrs/wk 4 cr. Sp

Introduction to commerical refrigeration systems and control circuits. Instruction in methods of troubleshooting and specific repairs and in use of basic charts and graphs. Prerequisite: 3.535, Elements of Algebra and Practical Physics.

#### 3.537 - Industrial Refrigeration

#### 6 class hrs/wk 4 cr. On Demand

Advanced course in applying theory of refrigeration in practice. Troubleshooting and repair of problems in commercial and industrial refrigeration is emphasized. Design of refrigeration systems for home and industrial application. Prerequisite: Commercial Refrigeration.

#### 3.540 - Residential Heating

#### 6 class hrs/wk 4 cr. W

A lab/lecture course in the usage, repair and maintenance of residential heating systems. Prerequisite: 3.530 and 3.550.

#### 3.541 - Commercial Heating

#### 6 class hrs/wk 4 cr. W

Instruction in types of fuels, controls, burners, and coils used in commercial heating. Advanced troubleshooting and repair. Prerequisite: 3.540.

#### 3.545 - Residential Air Conditioning Systems

#### 6 class hrs/wk 4 cr. Sp

A basic theory analyzing the relationships of refrigeration to air conditioning. Introduction to handling units and methods of sizing and installation. Prerequisite: Practical Physics, Elements of Algebra or instructor approval.

#### 3.546 - Commercial Air Conditioning Systems

#### 6 class hrs/wk 4 cr. Sp

Instruction and experience in methods of sizing systems. Application of charts, graphs, and calculation of air conditioning. Basic troubleshooting of existing systems and guidelines for purchasing components. Introduction of designing systems. Prerequisite: 3.545.

#### 3.550 - Control Theory

#### 6 class hrs/wk 4 cr. F

Introduction to operation of various control systems in heating, air conditioning, and refrigeration: temperature, pressure pneumatic, hydraulic, and electric. Prerequisite: Basic math background, mechanical aptitude, or instructor approval.

#### 3.551 - Control Application

#### 6 class hrs/wk 4 cr. F

Operation and repair of electromechanical pneumatic-hydraulic control systems. Prerequisite: 3.550, Practical Physics and Elements of Algebra.

## 3.555 - Pneumatics and Hydraulics

#### 5 class hrs/wk 4 cr. On Demand

Basic concepts of hydrostatics, fluid mechanics, metering devices, pressure control, and flow rate controllers as well as principles of pump operation. Prerequisite: Math III or equivalent.

# science lab technology

The Science Lab Technology program at Linn-Benton expands career options for students interested in environmental 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 their course work.

#### Freshman-VoTech Curriculum

F	W	S
4	4	4
2		
3	3	3
4		
	4	
	2	2
3		
		4
		4
1	1	1
	3	
17	17	18
F	W	S
4		
	4	4
	4	
	3 4 3 1 17 F	4 4 2 3 3 4 4 2 3 17 17 F W

# Course No. & Title F W S 6.174—Inter. Aquatic Chemistry 4 4 4.300-2—Pract. Physics 4 4 6.135—Inst. Analysis 4 4 Electives 10 9 HE 252—First Aid 3 1 1.200—Cooperative Work Experience 12 17 17 16

#### Freshman Year-Transfer Curriculum Course No. & Title CH 201-3—General Chemistry BI 101-Microbiology MT 95-102-Math sequence WR 121-2-English Composition 6.127-Intro. Lab Tech. 6.114—Aquatic Micro 3 6.330-Gen. Electricity I 3 Electives 17 Sophomore Year-Transfer Curriculum Course No. & Title CH 226-9—Organic Chemistry PH 201-3—General Physics PE 180/190-Physical Education CH 207-Advanced Chem. Lab 3 HE 252-First Aid Electives CH 234—Quant. Analysis WE 201—Co-op Work Experience

Electives include scientific glassblowing, lab animal care, electronics, computer programming, blueprint reading, machine processes, ecology, aquatic biology, animal behavior, genetics.

#### 6.127 - Introduction to Lab Technology

#### 2 class hrs/wk 2 cr. F

Orientation to the field of Laboratory Technician. Prerequisite: Enrolled in Science Laboratory Technology curriculum.

#### 6.130-1 - Laboratory Procedures I, II 4 class hrs/wk 2 cr. W/Sp

Techniques and procedures common to science laboratories. Includes housekeeping procedures, solution preparation, weighing techniques, laboratory notebooks, and record keeping procedures, stockroom procedures, graphing and data handling, sampling techniques and safety. Prerequisite: Basic Chemistry I (4.205) or equivalent.

#### 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

# \* wastewater technology

The Water/Wastewater Technology program is divided into three programs.

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).

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.

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 which the student works full time in a wastewater treatment plant.

#### Two-Year Associate of Science Degree Curriculum Wastewater and Water/Wastewater

Freshman Year [Common to Both]				
Course No. & 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 101—Microbiology		4		
4.205-6—Basic Chemistry I, II	4	4		
1.102—Occupational Writing	3			
HE 252—First Aid			3	
	18	16	18	

6.168-In-Plant Practicum

Summer-16 credits

#### Sophomore Year [Wastewater]

Course No. & Title	F	W	Sp
6.154—Process Interaction	4		
6.155—Advanced Waste Treatment		4	
6.174—Inter. Aquatic Chemistry	4		
6.181—Wastewater Mechanics 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		
PE 180/190—Physical Education	1	1	
Technical Electives	4	4	9
	18	16	15

#### Sophomore Year [Water/Wastewater]

Sophomore Tear [water/wastewater]			
Course No. & Title	F	W	Sp
6.154—Process Interaction	4		
6.164—Water Sources	4		
6.165—Water Purification Systems		4	
6.166—Water Distribution			4
6.174—Inter. Aquatic Chemistry	4		
6.181—Wastewater Mechanics II	2		
6.235—Applied Hydraulics		4	
6.554—Technical Projects			3
1.125—American Institutions			3
6.161—Management		3	
9.500—Elements of Supervision	3		
PE 180/190—Physical Education	1	1	
Technical Electives		4	6
	18	16	16

#### **One-Year Certificate Program**

#### Water/Wastewater Treatment Plant Operator

Program st	tarts winter	term and	lasts	four	quarters.
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Course No. & Title	W	Sp	S	F
6.185-7—Water/Wastewater Treatment				
Plant Operator I, II, III	10	10		10
4.202 and 4.204—Math II, III	4	4		
6.168—In-Plant Practicum			16	
1.101—Communication Skills I				3
1.124—American Institutions		3		
1.135—Developmental Reading	3			
HE 252—First Aid				3
	17	17	16	16

Suggested technical electives include: Advanced Aquatic Chemistry, Basic Protozoology, Ecology, Aquatic Biology, Technical Math III, Computer Programming, Instrumental Analysis, Blueprint Reading, Welding, Surveying, General Electricity, and Machine Processes.

#### 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.

#### 6.115 - Basic Protozoology 4 class hrs/wk 2 cr. On Demand

This optional course will deal with microbiology as applied to wastewater treatment. Total emphasis will be placed on examination, identification and ecology of protozoa.

# 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.

# 6.152 - Primary/Secondary Sedimentation/Digester Operation Control Processes

#### 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.

# 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.

#### 6.154 - Process Interaction 4 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 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.

#### 6.155 - Advanced Waste Treatment 4 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.

#### 122

#### 6.161 - Water/Wastewater Management

#### 3 class hrs/wk 3 cr. W

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

#### 6 class hrs/wk 4 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.

#### 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 acide; and chlorine requirement. The student will be able to relate the data obtained in the above tests to water and wastewater treatment operational controls.

#### 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.

#### 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: indentification 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.

#### 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.

#### 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.

#### 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.

#### 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 effecting 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 Flouridation

#### 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 flouridation 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

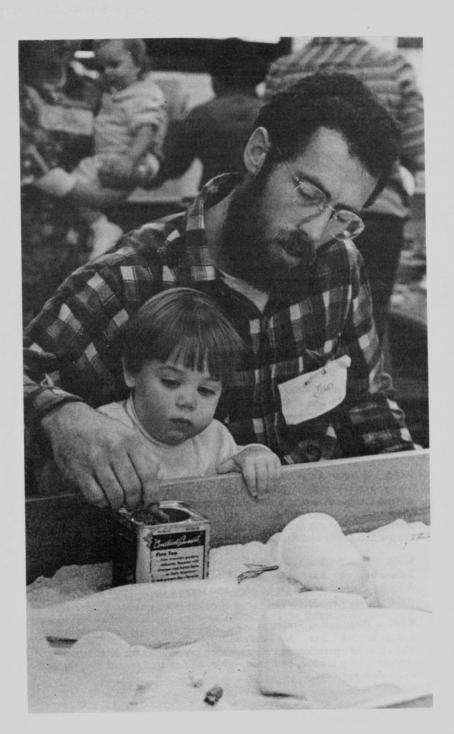
#### 3 class hrs/wk 3 cr. On Demand

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

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.

#### Associate Dean: Mike Patrick

#### Staff:

W.A. Jordan, Coordinator, Lebanon Center
Hal Johnson, Director, Benton Center
Mona Waibel, Coordinator, Sweet Home Center
Ann Crisp, Coordinator, Campus Center and Homemaking/Parent Education
Melvin Gilson, Coordinator, Special Education Programs
Carolyn Miller, Special Programs Instructor
Paula Grigsby, Living Skills Instructor
Laurel Bible, Adult Basic Education Instructor
Nancy Meyrick, Adult Basic Education Instructor

### 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 any certificate or degree 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, Coordinator.

The Benton Center is located at 1235 N.W. Pierce Way, in Corvallis, adjacent to Corvallis High School, 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. Jordan, Coordinator.

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 District. For more information contact the Lincoln County Center by phone 265-2283. Harry R. Earles, 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 Test 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 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 employment. 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. 222.

# retired senior volunteer program (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.

## 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.

# homemaking/parent education

#### **Home and Family Living**

Home & Family Living classes are offered to help individuals and families in managing their resources in their daily living situations. Classes come from the following major areas: housing, home furnishings, home management and equipment, consumer education, textiles, clothing, food preparation and nutrition. Most of the Home & Family Living classes are non-credit and the student should refer to the class schedule for specific classes.

Contact the Homemaking/Parent Education coordinator with suggestions for other types of classes at 928-2361.

The following is a partial listing of Home & Family Living credit classes.

#### 0.841 - Get Your Money's Worth

5 week class 3 class hrs/wk 1 cr.

Helps student evaluate and plan to become more skillful in managing money.

#### 0.844 - Stretching Your Dollar

5 week class 3 class hrs/wk 1 cr.

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 week class 3 class hrs/wk 1 cr.

For students who seek to add organization to the problem solving process we call LIFE. If is for those who desire to take charge of the multitude of daily situations in more creative ways.

#### 9.901 - Tailoring

3 class hrs/wk 2 cr.

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.

#### **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 by help individuals who work with children as foster parents, teachers 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:

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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; Understanding your Child I; Understanding your Child II; P.E.T.; Parenting & Family Communications; You & Your Teen; Single Again; I'm OK, You're OK; Applied Transactional Analysis; Foster Parent Training; Home/School Cooperation, 1st Grade.

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 Homemaking & 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.

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.

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.

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 40 hrs/term 3 cr.

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.

A course designed for parents of children walking to  $2\frac{1}{2}$  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.

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 weeks 3 class hrs/wk 1 cr.

This class deals with parent-child interaction and how the parent may participate fully in his childs education. The class will focus on specific areas such as reading, language, behavior, etc. Current teaching techniques will be reviewed.

#### 0.894 - Children's Books and Materials

#### 3 class hrs/wk 2 cr.

Books, records, pictures, and filmstrips for elementary school children, particularly 8 to 14 years old; selection aids, sources, and bibliographies.

# 0.894 - Making Educational Games and Materials 5 week class 3 class hrs/wk 1 cr.

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 involving children in heightened learning situations as they play.

# 0.896 - Arts and Crafts for Adults who work with Preschoolers 5 week class 3 class hrs/wk 1 cr.

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 weeks 2 class hrs/wk 1 cr.

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.

#### 0.901 - You and Your Teen

#### 3 class hrs/wk 2 cr.

Effective parenthood for the teen years, stressing communication skills. Participants practice dealing with common problems and learn to understand adolescent development to help teens prepare for adult life.

#### 0.902 - Foster Parent Seminar

#### 15 class hrs 1 cr.

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.

# 9.005 - Creative Ways of Teaching Children Music 3 class hrs/wk 3 cr.

#### 3 class hrs/wk 3 cr.

Rhythm, voice, chants, games, sounds, movements, art songs, drama, instrumental sound composition in teaching concepts to children.

# credit classes and occupational supplementary courses

#### 9.006 - Calligraphy, Intermediate

3 class hrs/wk 2 cr.

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.

#### 9.010 - Career Awareness

3 class hrs/wk 3 cr.

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

3 class hrs/wk 2 cr.

Fundamentals of individual and personal grace in food service, techniques of good customer service, good customer and co-worker relations. Fundamentals for coffee shop waitresses and beginning techniques for dining room and cocktail waitresses.

#### 9.022 - FCC License Preparation

3 class hrs/wk 3 cr.

FCC Rules and Regulations; FCC Commercial License exam testing procedures through use of FCC rules, typical FCC exam questions and answers, radio and T.V. terms and definitions.

#### 9.045 - Audio-Visual Aids

3 class hrs/wk 2 cr.

Planning and production educational media materials: Graphic Arts, slides, super and movie, video tape, transparancies, and operation of equipment.

#### 9.050 - Industrial Orientation

3 class hrs/wk 2 cr.

Materials and tools used in modern industry. Terminology, math, construction details, tools, equipment, and processes as related to manufacturing industries.

#### 9.100 - Land Surveyors' Review

3 class hrs/wk 3 cr.

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.

Accepted drafting practices as applied in civil engineering. An upgrading course for draftsmen who wish to enhance civil engineering skills.

#### 9.120 - Automotive Parts Counterman

3 class hrs/wk 3 cr.

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 districtors and other positions where parts descriptions, inventory control, methods of purchasing and related knowledge is necessary.

#### 9.143 - Integrated Circuits for Scientists

3 class hrs/wk 3 cr.

A course in micro electronics and instrumentation for chemists. physicists and other scientists.

#### 9.163 - Small Engine Repair

3 class hrs/wk 2 cr.

An introductory course to 2 and 4 cycle engines. Includes care and maintenance of 2 and 4 cycle engines and processes of carburation, ignition, overhaul, trouble shooting, and estimation of cost of repairs and/or a new engine.

#### 9.210 - School Bus Driving

9 class hrs/wk 1 cr.

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.

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.

Why and how of first aid, artificial respiration, effects of heat and cold, common emergencies (related to school problems).

#### 9.264 - Interstate Commerce Law I

3 class hrs/wk 3 cr.

Study of transportation regulation covering the Interstate Commerce Act and related acts.

#### 9.268 - Real Estate License Preparation

3 class hrs/wk 3 cr.

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.

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.

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 - Transportation and Traffic Management I 3 class hrs/wk 3 cr.

For junior traffic men and those preparing to enter transportation management. Technical background and knowledge of fundamental procedures basic to all traffic. Heavy emphasis on freight rates and traffic for rail and motor carriers.

#### 9.274 - Transportation and Traffic Management II

#### 3 class hrs/wk 3 cr.

More advanced aspects of traffic practice bringing to broader application fundamental principles covered in the first semester.

#### 9.275 - Transportation and Traffic Management III

#### 3 class hrs/wk 3 cr.

Continues the work of first two quarters. Advanced program in rail and motor rates, commodity rates, routing tariff rules, diversion and re-consignment, and traffic management competencies.

#### 9.277 - Real Estate Appraisal

#### 3 class hrs/wk 3 cr.

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.

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.

To provide the secretary with skills and knowledge needed to meet and interact successfuly with the public and others in the real estate field.

#### 9.280 - Real Estate Investments

#### 3 class hrs/wk 3 cr.

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.

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.

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.

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 Principles

#### 3 class hrs/wk 3 cr.

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.

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.

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.

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.

Economic aspects of real estate land use and patterns of growth. Dynamic factors that create value and analysis of residential and urban planning, zoning, and governmental control factors that influence development of real estate in Oregon.

#### 9.289 - SRA Real Estate Appraisal Seminar

#### 3 class hrs/wk 3 cr.

Basic theory, function, and purpose of appraisal. Aspects of appraising, including economics of real estate, principles of cost and market valuation, and income approach.

#### 9,290 - Real Estate Appraisal/Report Writing

#### 3 class hrs/wk 3 cr.

Continuation of real estate appraisal. Emphasis on problem areas such as commercial appraisals, industrial appraisals, and farm appraisals. Real estate report writing, including the writing of a sample report.

#### 9.291 - Real Estate Law

#### 3 class hrs/wk 3 cr.

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.

#### 9.295 - Transportation and Traffic Management IV

#### 3 class hrs/wk 3 cr.

Advanced transportation and traffic management involving further study in water carrier freight rates, export and import rates and application of arbitraries.

### 9.296 - Transportation and Traffic Management V

#### 3 class hrs/wk 3 cr.

Advanced transportation and traffic management involving study of the 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.

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.

Advanced transportation and traffic management involving futher study in remedies before ICC, civil liability, operating authority, penalties, ICC rules of practice, and various other meaningful topics.

#### 9.303 - OSHA

#### 15 hour seminar 1 cr.

To inform school, business, and industrial para-professionals and professionals of safety requirements and regulations of the occupational Safety and Health Act of 1970, and the safety requirements and regulations of the Oregon Safe Employment Act.

#### 9.305 - Supervisory Safety Management

#### 3 class hrs/wk 3 cr.

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.

Emphasis on development of individual skill, 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.

Review of concepts, such as ventilation, breathing equipment, ropes and knots. Rescue problems and procedures encountered by the volunteer fire department.

#### 9.440 - Eve Care Professional Assistant I

#### 3 class hrs/wk 3 cr.

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 3cr.

#### 9.546 - Basic Sales Methodology

#### 6 week class 2 cr.

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.

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.

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.

Advanced theory in electronics circuitry applicable to students with either vocational or avocational interests.

#### 9.645 - Scientific Glass Blowing

#### 3 class hrs/wk 3 cr.

Introduction to scientific glass blowing. Properties of glasses, working with glass tubing and making glass-metal seals.

#### 9.739 - Office Procedures

#### 3 class hrs/wk 2 cr.

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.

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.

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.

#### 9.758 - Introduction to Business Records Management

#### 2 class hrs/wk 2 cr.

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.

General practices related to feeding, care, selection, and management of livestock.

#### 9.828 - Tractor Safety

#### 12 class hrs/term 1 cr.

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.

#### 9.832 - Farm Machine Safety

#### 12 class hrs/term 1 cr.

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

#### 11/2 class hrs/wk 2 cr.

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.

Basic black and white photography covering cameras, film developing and printing negatives, enlarging, lighting subjects and other basic skills.

#### 0.595 - Bookkeeping

#### 3 class hrs/wk 3 cr.

Operation of an accounting system, including its use in making management decisions. Active participation through projects involving flow of data through the accounting system.

#### 0.614 - Think Metrically

#### 3 class hrs/wk 1 cr.

Basic use of the Metric System as a form of measurement. Emphasizes actual measurement of length, mass, area, volume, and temperature in accordance with the International System of Measurement Units (I.E. Metric System).

#### 0.686 - Your Attitude is Showing

#### 3 class hrs/wk 3 cr.

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.

Concepts of T.A., practically applied to the human situation of students. Training in accurate, therapeutic listening; congruent communication and no-lose conflict resolution.

#### 0.686 - Applied Transactional Analysis

#### 3 class hrs/wk 3 cr.

A laboratory experience in human relationships in which the concepts of Transactional Analysis are practically applied to the human situation of the students. Training in accurate, therapeutic listening; congruent communication and no-lost conflict resolution are an integral part of the course.

#### 9.802 - Beekeeping I

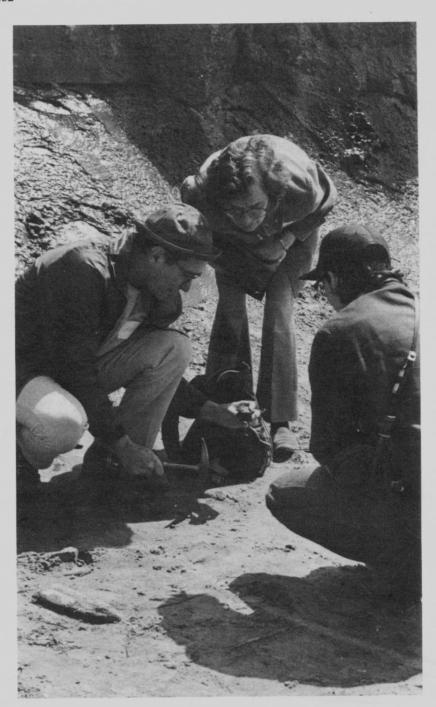
#### 3 class hrs/wk 2 cr.

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.

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.



# faculty and staff

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.

Adams, O. Robert, Vice-President for Planning & Development; B.A., Oregon State University; M.A., D.ED., University of Oregon.

Alvin, John, Welding; B.S., Oregon State University; State of Oregon Welding Certification; 7 years journeyman welding experience.

Andreasen, Regina, Sociology-Psychology; B.A., Northern Illinois University.

Arasmith, Everett, Wastewater Technology; A.A., Oregon Institute of Technology.

Archibald, A. Lee, Dean of Students; B.A., M.A., Oregon State University.

Armstrong, Harry, Wood Technology; B.S., Oregon State University. Atwood, Illa, Business Skills; B.S., M.Ed., Oregon State University. Ayers, Martha, Language Arts; B.A., M.A., Western Michigan University.

Baker, James, Biology; B.A., M.S., University of Wyoming; Ph.D., Oregon State University.

Bakley, David, Health & Physical Education; B.S., Westmar College; M.Ed., Oregon State University.

Bergeman, Richard, Assistant to Coordinator of Public Information; B.S., Bowling Green State University.

**Bervin, Arthur,** Language Arts; B.A., Portland State College; M.A., University of Redlands.

Bible, Laurel, Community Education, ABE/GED; B.A., University of Oregon.

Boyse, Peter, Coordinator of Student Activities; B.A., Albion College; M.S., University of Michigan; M.S., Oregon State University.

Bowler, Virginia, Reference Librarian; Ed.B., University of California at Los Angeles; M.L.S., University of Oregon.

Brem, Janet, Counselor; B.S., M.S., Oregon State University.

Brick, Walter J., Art; B.A., University of Washington; M.S., University of Oregon.

Brooks, Jay, Business Management; A.A., San Jose City College; B.S., M.Ed., Oregon State University.

Brown, Marc, College Center Evening Supervisor; B.S., Oregon State University.

Brubaker, Sherry, Business Skills; B.S., M.Ed., Miami University. Bruce, Christina, Associate Degree Nursing; R.N., B.S.N., Hunter College; M.S., San Jose State University.

Burke, Michael, Machine Technology; A.A., Santa Ana College; 16 years field experience.

Call, Shirley, Language Arts; B.A., Goshen College; M.A., University of Oregon.

Carnahan, Jon, Director of Admissions and Registrar; B.Ed., M.Ed., Central Washington State College.

Carter, David, Automotive Technology; Eugene Technical Vocational School; General Motors Training School; Toyota Training School; IGOA Master Technician Certificate.

Chambers, Maynard, Business Management; B.S., M.B.A., Oregon State University.

Chase, Thomas, Language Arts; B.A., University of Colorado; M.A., California State College, Hayward.

Cheney, Kenneth, Director of Humanities and Social Services Division; B.A., M.A., Colorado State College.

Chester, Patsy, Business Skills; B.S., Idaho State University; M.Ed., Oregon State University.

Clark, Douglas, Political Science; B.A., M.A., University of Oregon. Clark, Philip V., Director of Business Division; B.S., M.B.A., San Jose State College.

Clemons, Marvin, Cooperative Work Experience; B.S., University of Wisconsin at Stout; M.S., University of Oregon.

Collett, Ken, Civil-Mechanical Technology; B.S., M.A.T. in Ed., University of Idaho.

Conner, Gerald, Business Management; B.A., Park College; M.B.A., University of Oregon.

Cooper, Violet, Placement Coordinator; B.S., M.S., California State University, Hayward.

Cope, Marian, Study Skills; A.A., B.S., Montana State University. Creighton, Dennis, Coordinator of Veterans' Affairs; Service in U.S. Armed Forces; attended LBCC.

Cripe, Sue, Assistant Registrar; Attended University of California, Berkeley.

Crisp, Ann, Community Education, Homemaking/Parent Ed. Coordinator, B.S., Ball State University; Master of Home Economics, Oregon State University.

Crosman, Arlene, Physical Education; B.S., M.Ed., Oregon State University.

Cushman, James, Farm Records Management; B.S., Ed.M., Oregon State University.

Dallman, Charles, Culinary Arts and Restaurant Management; Cooking Certificate, Laney Community College; Community College Teaching Certificate-Food Services, California; B.A., University of Connecticut.

**Dixon, Barbara**, Assistant Dean for Vocational Education and Instructional Operations; B.S., Oregon State University.

Durham, Russell, History; B.A., M.A., Arizona State University.

Easton, Joyce, Health Counselor; R.N., Methodist Hospital School of Nursing, Los Angeles; B.S., M.S., Oregon State University.

Farnell, Vernon E., Dean of Business Affairs; B.S., M.Ed., University of Idaho.

Felton, James, Wastewater Technology; A.S., Linn-Benton Community College.

Gilson, Mel, Coordinator ABE/GED, Disadvantaged and Handicapped; B. Music, Willamette University.

Gregory, Russell, Study Skills; B.A., M.Ed., Colorado State University. Griffiths, John, Machine Tool Technology; B.S., M.Ed., Utah State University; Professional Counseling Certificate; Journeyman Machinist Certificate.

Grigsby, Paula, Community Education, ABE Living Skills, Special Programs; B.S., Portland State University; M.S. Oregon College of Education.

Hankey, Richard, Criminal Justice Administration; 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.

Hansen, Kent, Electricity and Electronics Technology; A.S., Oregon Institute of Technology: B.S., Oregon State University.

Hansen, Lee, Small Engine Repair; Attended University of Wisconsin. Montana State University, Northern Montana.

Hazel, Dorothy, Business Skills; B.S., University of South Dakota; M.B.A., University of Denver; Ed.D., University of Kentucky.

Hedberg-Duff, Judith, Graphic Communications; B.S., Oregon State University: M.A., Waseda University, Tokyo.

Hurst, Doug, Manager of Food Services; A.S., Linn-Benton Community College.

Hysmith, Eugene, Auto Body Repair; Long Beach City College, Lane Community College; 22 years industrial experience.

Irvin, Jean, Physical Education; B.A., Slippery Rock State College; M.A., College; M.A., Ohio State University.

Jean, Raymond A., Director of Facilities; Certification, Journeyman's Carpenters and Joiners, Plant and Field Concrete Supervisors; Construction experience.

Johnson, Hal. Director, Benton Center; B.S., M.S., Washington State University.

Johnson, Lyndall, Associate Degree Nursing; D.N., Emanuel Hospital; B.S., Pacific Lutheran University; M.Ed., Oregon State University.

Jordan, Wilfred, A., Coordinator, Lebanon Center, Attended University of Washington.

Kahrs, Fred, Refrigeration, Heating and Air Conditioning; B.S. Oregon State University.

Kimpton, Verlund [Butch], Physical Education; B.S., M.S., University of Oregon.

Klopping, Paul, Water/Wastewater Technology; B.S., California State University, Long Beach.

Kraft, John R., Chemistry; B.A., Willamette University.

Lambert, Rita, Director of Financial Aids and Placement; B.S., Mt. Angel College; M.S., Oregon State University.

Lamberton, Bobbie, Nursing Home Nursing Assistant; R.N., B.S., Walla Walla College.

Lawrence, Dorothy, Business Skills; B.S., M.S., Oregon State University. Ledbetter, Ward, Business Management; B.S., University of Tulsa; M.B. Ed., Indiana University.

Lee, Yvonne, Cataloging Librarian; B.A., Ewha Women's University, Korea; B.A., Oregon State University; M.L.S., University of Oregon.

Lieberman, Max, Sociology; B.S., Defiance College; M.A., Miami University; M.A., California State University, San Jose.

Liles, Jack V., Dean of Instruction; B.S., Pacific University; M.Ed., Oregon State University.

Liverman, Earl, Security-Information Coordinator; B.B.A., Southern Methodist University; M.S., Southern Oregon State College.

Love, Carl, Metallurgy Technology; San Diego Vocational School Welding Certification: Eggerts Electronic Institute, one year certificate; B.S., M.S., Oregon State University: Ph.D., Laurence University.

Majer, William D., Business Manager; B.B.A., Southwest Texas State College.

Mann, Charles, Reading; B.S., M.A., Oregon State University.

May, Don, Wastewater Technology; B.A., B.S., University of Idaho. McClain, Richard, Director of Physical Education and Sports; B.S., M.S., University of Oregon.

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