

**Linn·Benton  
Community  
College  
1976·1977**

# calendar

## fall term, 1976

Registration Begins	August 23
Classes Begin	September 27
Last Day to Register	
Students Registering for 8 or More Credits	October 1
Students Registering for 7 or Less Credits	October 15
Last Day to Drop Without a "W"	October 8
Last Day to Add	October 15
Last Day for Refunds	October 29
Veteran's Day Holiday	November 11
Thanksgiving Holiday	November 25-28
Last Day to Request P/NP Option	December 10
Last Day to Officially Withdraw	December 10
Final Exams	December 13, 14, 15
Last Day of Fall Term	December 17
Christmas Recess	December 20-January 2

## winter term, 1977

Registration Begins	November 29
Classes Begin	January 3
Last Day to Register	
Students Registering for 8 or More Credits	January 7
Students Registering for 7 or Less Credits	January 21
Last Day to Drop Without a "W"	January 14
Last Day to Add	January 21
Last Day for Refunds	February 4
Last Day to Request P/NP Option	March 11
Last Day to Officially Withdraw	March 11
Final Exams	March 14, 15, 16
Last Day of Winter Term	March 18
Spring Recess	March 21-27

## spring term, 1977

Registration Begins	February 28
Classes Begin	March 28
Last Day to Register	
Students Registering for 8 or More Credits	April 1
Students Registering for 7 or Less Credits	April 15
Last Day to Drop Without a "W"	April 8
Last Day to Add	April 15
Last Day for Refunds	April 29
Memorial Day Holiday	May 30
Last Day to Request P/NP Option	June 3
Last Day to Officially Withdraw	June 3
Final Exams	June 6, 7, 8
Graduation	June 10
Last Day of Spring Term	June 10

## summer term, 1977

Registration Begins	May 23
Classes Begin	June 20
Last Day to Register	
Students Registering for 8 or More Credits	June 24
Students Registering for 7 or Less Credits	July 8
Last Day to Drop Without a "W"	July 1
Independence Day Holiday	July 4
Last Day to Add	July 8
Last Day for Refunds	July 22
Last Day to Request P/NP Option	August 19
Last Day to Officially Withdraw	August 19
Final Exams - Ten Week Session	August 22, 23, 24
Last Day of Summer Term	August 26

# **linn-benton community college 1976-1977**

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# history & philosophy

Linn-Benton Community College is a two-year coeducational public institution offering vocational - technical training, lower division college transfer classes, and community adult education to residents of Linn and Benton counties.

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

Besides its varied instructional programs, LBCC 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. In addition to Board representation more than 250 local citizens actively participate in college governance through membership in program advisory committees and the budget committee.

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

## oregon board of education

Eugene H. Fisher, Chairman, Oakland  
Eleanor Beard, Vice-Chairman, Lake Oswego  
Wanda Silverman, Portland  
Kenneth Smith, Warm Springs  
Sedley Stuart, Portland  
Frank M. Warren, Portland

Jesse Fasold, Superintendent of Public Instruction

Carol deBroekert, Associate Superintendent for Community Colleges and Career Education

## lbcc board of education

Earl S. Hirsheimer, Chairman; Sweet Home (Zone 1)  
Virgil H. Freed; Corvallis (Zone 6-7)  
Kenneth H. Haevernick, M.D.; Lebanon (Zone 4)  
H.L. Hammond Jr.; Corvallis (Zone 6-7)  
Joe Malcom; Philomath (Zone 5)  
Russell W. Tripp; Albany (Zone 2-3)  
Ethel B. Yocum; Albany (Zone 2-3)

## philosophy

The following statement of beliefs outlines the commitment the community has made in Linn-Benton Community College.

### Beliefs:

1. Individuals have different potentials for growth and different needs for self-fulfillment.
2. Learning should provide the individual with an understanding of the relationship between his freedom and his responsibility to society.
3. Through learning, individuals tend to grow from self-centeredness toward social consciousness.
4. Life and learning are dynamic processes, therefore, the individual, and society and its institutions must be free to change goals and aspirations.

### Implementations:

The following three criteria constitute the base upon which the college philosophy is implemented.

1. The college program will be comprehensive, offering opportunities consistent with individual needs, abilities, interests and potential.
2. The college program will be consistent with local, state and national needs, responding to these needs with flexibility.
3. Learning opportunities will be available to the greatest number of people, with the minimum number of restrictions.

Educational opportunities will be provided through a wide variety of occupational, academic and independent learning programs with additional learning opportunities provided through counseling services, student activities, and adult and continuing education.

### Guidelines:

These guidelines are used in evaluating the operation of LBCC:

1. LBCC is and will continue to be an open-door institution.
2. It is understood that resources are limited, that priorities must be established and the open-door policy therefore is affected by such priorities.

3. Student tuition is to be maintained at a reasonable cost.
4. The instructional staff will be competent in their subject matter area and student and learning oriented.
5. The college membership will be sensitive to each other and cooperative action shall be taken by the Students, the Staff and the Board.

## history & development

Linn-Benton Community College commemorates its tenth anniversary on December 6, 1976.

The drive to establish the college was initiated in 1963 by the Linn County Chamber of Commerce in cooperation with community leaders in Benton county. A feasibility study on the need for a community college was prepared by the University of Oregon's Bureau of Educational Research in 1964 and on December 6, 1966 the Linn-Benton Community College Area Education District was established with the approval of voters in the two counties.

In 1967 the college assumed the assets of the former Capital Business College in Albany 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.

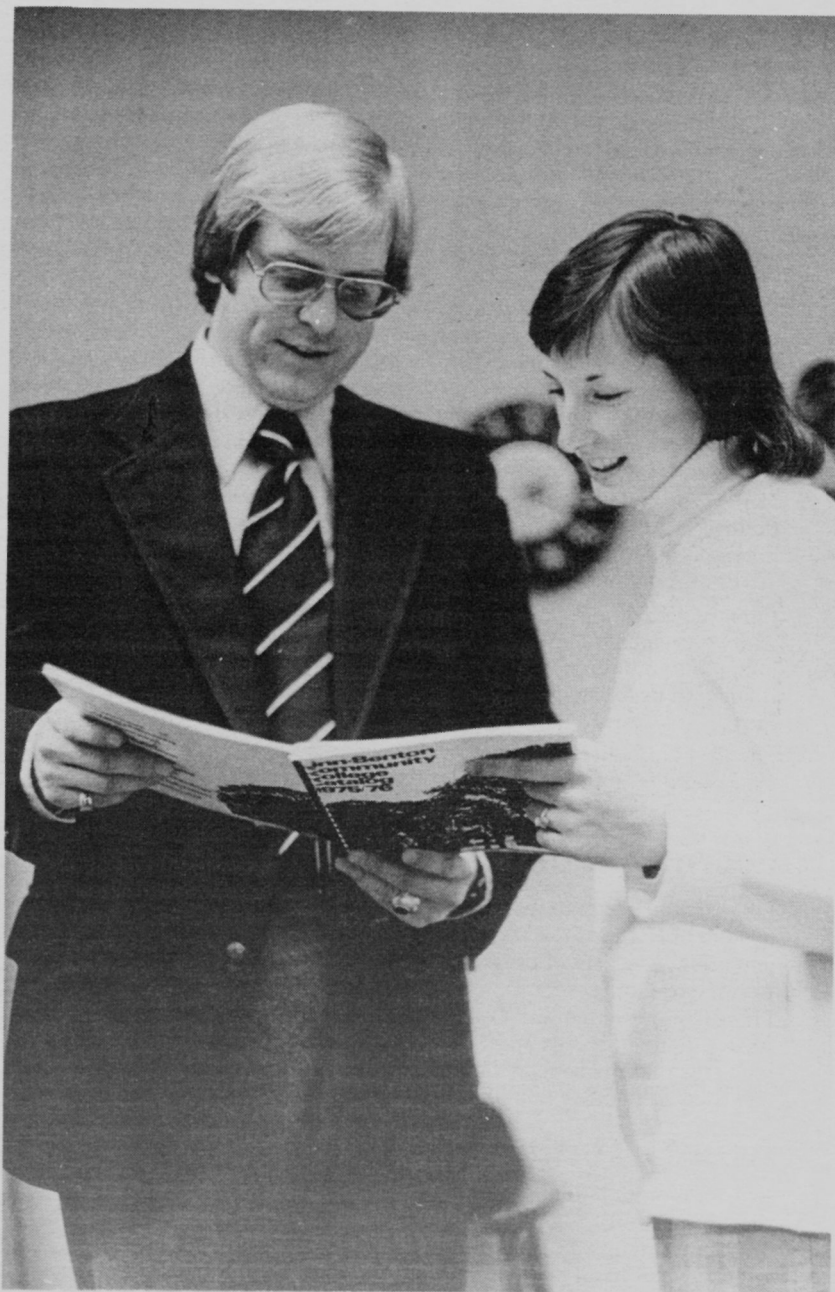
## accreditation

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 Northwest 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

Jim Waggoner, Coordinator

#### Guidance Services

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

#### Student Activities

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

# 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 judgement 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 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 services provided in this center. The center is staffed with an admissions and information assistant and a career information assistant.

## Full-Time [Matriculated] Admission

Students who register for 8 or more credits must file with the Admissions Office:

1. Application for Admission.
2. Official copy of high school transcript if applying for admission directly from high school, or official copy of previous college transcripts.
3. \*Comparative Guidance and Placement Examination is required of all students.

### \*EXCEPTIONS TO #3:

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

A student who has provided the College with the required application, transcript and test scores, receives a letter of acceptance. (See specific major for special admissions requirements.)

### NOTE:

**LBCC will allow early admission of high school students planning to graduate in June on the basis of a 7-semester transcript.**

## Part-Time Admission

Students enrolling for 7 or fewer credits or enrolling on a non-credit basis may apply at the time of registration, and are not required to secure transcripts of college work unless they plan to graduate from LBCC. Part-time students are unclassified for admission purposes.

## 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. Students who have attended another college or university during the interim are to also submit an official transcript from that school.

## Special Admission

Persons qualified by maturity and ability, but who fail in some respect to meet the requirements for regular standing, may apply for admission as special students until such entrance deficiencies are removed. Students must file a "Special Student Agreement" form with the Admissions Office. The form is available from the Director of Admissions.

## Admission of Non-High School Graduates [Special Students]

\*LBCC admits non-graduates as special students. Those applying as special students must complete a Special Student Agreement, available from the Director of Admission.

\*See Special Admission for limitations.

### **Admission of High School Students Part-Time Simultaneous:**

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

1. The class(es) meet after normal high school hours.
2. Enrollment is 7 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 admissions requirements.

Applications should be on file at least one month prior to the preferred quarter of entry.

### **Admission of Transfer Students**

LBCC freely admits students who are transferring from other collegiate institutions. Transfer students like all new full-time students, must have counselor approval of the first quarter schedule. Transfer students may be accepted as "Special Students" while waiting to receive transcripts from prior collegiate enrollment.\*

\*See Special Admission.

### **Adult High School Diploma**

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

1. High School Completion—a high school student, 16 years of age or older can obtain a high school diploma by attending classes at LBCC with the permission and approval of the high school (Simultaneous Enrollment). 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 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 needs.

### **High School Continuation**

This 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. 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.

### **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 the end of February in order to have a good chance of being admitted fall term.

- Auto Body Technology
- Automotive Technology
- Construction Technology
- Dental Assistant
- Drafting Assistant
- Electricity/Electronics
- Machine Tool Technology
- Nursing Assistant
- Heating, Refrigeration, and Air Conditioning Technology
- Science Laboratory Technology
- Small Engine/Recreational Vehicle Repair
- Wastewater Technology
- Welding

In addition to the general college requirements for admission, each individual applying to 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 if recommended by the committee. (5) if accepted, file a complete physical exam form. Specific admissions criteria for the ADN program is available in the Admissions Office.



ADN applicants will be notified of the disposition of their applications by June 1. Individuals are required to complete application no later than March 1 to be considered for the fall class. For further information regarding the admission of Associate Degree Nursing applicants, students should contact the Admissions Office.

#### **Dental Assistant [Four Quarters]\***

Two classes are offered each year, one beginning winter term, in January, and one beginning summer term, in June. Dental Assistant applicants must: (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 all regular admission steps. (3) complete the Comparative Guidance and Placement (CGP) Examination. (4) file a completed physical examination form with the Admissions Office.

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

#### **Nursing Assistant [Three Months]\***

Those wishing admission to the Nursing Assistant program must: (1) provide evidence of past educational achievement. (2) arrange for an interview with a member of the Admissions Committee.

Each total application file will be reviewed by the Admissions Committee. Individuals are encouraged to apply at least one month prior to the beginning of the quarter for which they wish to attend.

Notification will be at least two weeks prior to the beginning of the quarter. Students who are accepted for the Nursing Assistant program are required to complete the standard physical examination form and questionnaire available through the Admissions Office. For further information students should contact the Admissions Office.

\*See General Policy, page 5

#### **Classification of Residency**

A resident student, for tuition and fee paying purposes, is a student whose parents are bona fide residents of the Linn-Benton Community College District. A student who is 18 years of age, or who is married, and who is entirely self-supporting, may qualify as a resident if he or she can satisfactorily present evidence that permanent residence has been established in the Linn-Benton Community College District at least three months prior to registration for the term. A veteran who registers for classes at Linn-Benton Community College within 90 days of discharge from active duty will be considered a resident for tuition and fee paying purposes. All other students are required to pay either an out-of-district or out-of-state non-resident fee as outlined in the tuition schedules.

## **registration procedures**

#### **Credit Classes**

1. Complete all admission requirements (see page
2. Pre-registration advisor conferences are required for:
  - a. all new students registering for 8 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.

3. All continuing students in the following special 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

Machine Tool Technology

Recreational Vehicle & Small Engine Repair

Welding

Construction Technology—Carpentry

Drafting Technology

Electricity & Electronics Technology

Refrigeration, Heating & Air Conditioning Technology

Wastewater Technology

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. Packets of registration materials are available in the Registration Office lobby. When all forms are completed, they are to be presented at the Registration Office windows with full tuition payment or payment authorization from the Financial Aids Office. Social Security Number is required to positively identify your records. An alternate assigned number is available upon request to the Registrar.

#### **Community Education Classes**

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

# tuition schedule

(Service Fee Included—See Below)

Regular Classes	District	Out-of-District	Out-of-State
Per Credit	\$9.25	\$17.00	\$43.00
Minimum Charge	\$18.50	\$34.00	\$43.00
*Maximum Charge	\$111.00	\$204.00	\$516.00
**Per Credit over 18 Credits	\$9.25	\$17.00	\$43.00
*12 to 18 credits			
**Non-refundable			

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 1976-77 school year.

## Special Fees & Expenses

Add Fee Per Quarter	
First add	No Charge
All others (each transaction)	\$2.00
Drop fee	No Charge
Credit by Examination (per credit)	\$3.00
Career Guidance and Placement Examination	\$5.00
*Student Medical Insurance (12 months starting Fall Term)	\$40.50
Late Registration Fee	
Eight credit hours or more, beginning first week	per day \$2.00
Maximum charges	\$10.00
Seven credits or fewer, Beginning third week	\$1.00
Official copy of LBCC transcripts	\$1.50
Unofficial copy of transcripts	\$.50
Special fees for some physical education classes, such as bowling and golf, may be charged.	

\*Rates shown are subject to change for 1976-77 school year. Please check with the 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.

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.

## Golden Age Club

Senior citizens (65 years and older) may acquire LBCC Golden Age Cards which provide tuition and fee waivers to most college classes and all college activities. The cards are available at the Registration counter.

## Unique Programs

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

## Change of Program

**Adding a course:** A student taking 8 or more credits may add a course only during the first week of class. A student taking fewer than 8 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 seven 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 \$15 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.

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 per cent refund or re-enrollment 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 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. Several schools will accept the Associate of Arts degree as meeting junior standing.

## 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 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 Examination 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 ~~Guidance~~ Center at LBCC.

For information regarding credits and test scores, contact the Admissions Office or ~~Guidance~~ Center. For testing information, contact the ~~Guidance~~ Center. *Developmental*

## 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
- W—Withdrawal
- P—Pass
- N—No Pass
- NE—No Entry
- AU—Audit

**Incomplete Rule:** Incompleted work must be completed by the end of the following term with the exception of Summer, or it is automatically considered 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 Point 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 Credit, 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 8 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 8 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 per cent 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 an 8 credit load or more of graded work, are placed on the Honor Roll List for that quarter.

### Transcripts & Records

LBCC official student transcripts may be secured through the Records Office at a cost of \$1.50 each. Unofficial copies are available for \$.50 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 8

# 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 General Studies:** This degree is awarded to students who complete the requirements outlined below.

Associate degree students seeking a second or third degree must pay a \$5.00 fee for each additional degree awarded.

## General Requirements for Associate of Science Degree (AS)

The degree will be awarded to those who complete the required courses and credit hours prescribed by any structured occupation program of at least 90 credits, provided they:

1. Earn at least 24 credits at LBCC and are enrolled during the term degree requirements are completed.
2. Maintain a grade point average of at least 2.00.
3. Earn a minimum of eighteen (18) credits in general education courses as follows:
  - A. Six credits in communications.
  - \*b. Three credits in Physical Education activity courses.
  - c. A credit course in Health or First Aid.

\*\*d. Additional credits to bring total to 18. These are to be selected from the following areas: Social Sciences, Science and Math and Humanities, with a minimum of three credits in each of two areas.

\*See Waivers and Exceptions.

\*\*The Humanities group includes such courses as Art, Drama, Foreign Language, 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.

## General Requirements for Associate of Arts Degree (AA)

1. Complete 90 quarter hours of transfer course work with a cumulative grade point average of 2.00 or higher.
2. Include in the program the following:
  - a. Language Arts, six credits (WR121 plus WR122 or WR123).

\*b. Physical Education activity courses (three credits recommended, but need only meet requirements of transfer college of choice).

c. A credit course in Health.

\*\*d. A minimum of nine credits in each of two areas: Humanities, Social Science, Science and Math; plus another 18 credits from among these three areas.

3. Earn at least 24 credits at LBCC and be enrolled during the term degree requirements are completed.

## Requirements for Associate of General Studies Degree (AGS)

1. Complete a minimum of 90 credit hours of vocational or college transfer courses with a cumulative grade point average of not less than 2.00.
2. Include in the program the following:
  - a. Six credit hours of English.
  - b. Two credit hours of Health.
  - \*c. Three credit hours of Physical Education.
  - d. Two or three hours of Group Relations.
  - \*\*e. Nine credit hours of Humanities.
  - \*\*\*f. Nine credit hours of Social Science.
  - \*\*\*\*g. Nine credit hours of Math and/or Science.
3. Earn at least 24 credits at LBCC and be enrolled during the term degree requirements are completed.
4. Complete the above requirements plus a choice of courses to total 90 credits.

\*See Waivers and Exceptions.

\*\*The Humanities group includes such courses as Art, Drama, Foreign Language, 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.

## 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.

## 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 assistance, welding, dental assistance 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.

### Adult High School Diploma

Students may complete the "Adult High School Diploma" through LBCC. The diploma should not be confused with the GED examination.

### GED Examination

LBCC offers the GED high school certificate examination through the Guidance Center.

### 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.

A waiver may be granted for other reasons. Specific requests for a waiver should be directed to the Dean of Students.

## financial aids

It is the intent of Linn-Benton Community College to permit college attendance by students who cannot pay the full cost of college education. The concept of financial aids at LBCC is based on the belief that parents and individuals have the primary responsibility of meeting educational cost. 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 1976-77

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

### 1976-77 High School Seniors Who Will Be Entering Freshman

1. File the proper confidential statement following instructions on the form. Request on the form that one copy of the statement be sent to State Scholarship Commission in Eugene and one to Linn-Benton.
2. File a State of Oregon Financial Aid Application with the State Scholarship Commission in Eugene.
3. Complete and return the Linn-Benton Financial Aid Application.
4. File a Basic Grant Application.

### All Other Students

1. File the proper confidential statement with College Scholarship Service.
2. File the State of Oregon Financial Aid Application with the LBCC Financial Aids Office.
3. Complete and return the Linn-Benton Financial Aid Application form.
4. File a Basic Grant application (not available to graduates of four year colleges).

Applications will be received by the Financial Aids 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 aid monies you will receive, you should apply according to the following deadlines: Students attending summer term should apply before April 1; those attending fall term should apply by August 1; winter term applicants need apply by November 1; spring term applicants by February 1. 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)
Tuition & Fees	333	333
Books & Supplies	200	200
Rent & Food	800	1700
Personal Expenses	450	450
*Transportation	600	600

\*Transportation costs may vary according to a student's place of residence. Commuting cost can be estimated at \$180 a year plus 12 cents per mile for daily home-to-school car expense.

## **Payment of Tuition Costs**

### **Deferred Tuition Loans**

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 down at the time of registration, 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.

### **BankAmericard and Master Charge Cards**

These two credit card charge plans may be used to charge tuition and fees or purchase books and supplies and other merchandise in the College Bookstore. All transactions are made in accordance with the terms and limitations of the credit card plans.

## **types of assistance**

### **Basic Opportunity Grants [BEOG]**

Grants are available for students carrying six or more credits. Grant awards 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.

### **Educational Opportunity Grants**

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 per cent 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.

### **College Board Grants**

Twenty-five full year tuition-free grants to Linn-Benton Community College are awarded annually. Presently enrolled high school students 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.

### **Student Part-Time Employment**

A federally supported College Work Program provides on and off campus employment for full-time 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 may not exceed 20 hours per week. When possible, students are placed in jobs compatible with their career goals.

### **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. Loans are repaid at the College Business Office.

### **National Direct Student Loans**

Full-time 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 loan 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. Teachers of handicapped children and 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 \$15,000 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 Aids Service 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 fulltime 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.

### **Law Enforcement Education Program [LEEP]**

Financial assistance to pay the cost of tuition is available to Law Enforcement Personnel who have been previous LBCC LEEP recipients in the past fiscal year. Proof of financial need is not required. Law Enforcement Education application forms are available from the Financial Aids 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 Aids Coordinator or high school principal or counselors for additional information.

## **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 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 Aids 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 Aids 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-time 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 veteran's application with necessary supporting documents, the LBCC veterans' clerk will certify enrollment and forward the complete application package to the Veterans Administration regional office in Portland. In most cases this will complete the application process for educational allowance. It should be noted that this application procedure is separate from application for admission to the college.

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

## 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. Student who wish to participate in an alumni organization should contact the Coordinator of Placement.

## 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. Students are

provided group sessions pertaining to their major where teachers and counselors are available. For further information contact the Guidance Director.

### 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.

### Testing

LBCC requires the Comparative Guidance and Placement Test (CGP) for all students taking 8 or more credits. This test battery is administered by the ~~Guidance Center~~ and costs the student \$5.00. The CGP takes between 3½ to 4 hours and the results are used for counseling and placement purposes. Call or visit the ~~Guidance Center~~ for further information including test dates. *Developmental*

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

### 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.

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 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.

Psy 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.

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 a 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.

### **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. Interested students should contact the Coordinator of Recreational Programs through the Office in the Activities Center.

### **Sports Clubs**

The sports club program provides the student with opportunities for inter-city and inter-county competition as well as an opportunity for the development of leisure activity. Sports clubs presently established are skiing, flag football, basketball, volleyball, slow-pitch softball, billiards and handball. Individuals interested in participating in present sports clubs or in the establishment of new sports clubs should inquire at the Office in the Activities Center.

### **Intercollegiate Athletics**

Linn-Benton Community College has developed a comprehensive program of intercollegiate athletics with affiliation with the Oregon Community College Athletic Association. Present competitive sports offered at LBCC are in baseball, basketball, golf, cross country, women's gymnastics, rodeo, track, tennis, and women's volleyball. Students interested in participation should contact the Coordinator of Intercollegiate Athletics at the Activities Center.

### 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, acting, or 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.



### 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 Service

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 8:30 a.m. until 3:30 p.m. Monday through Friday with the hours being extended for special occasions. Profits, if any, derived from the food service are transferred into the Activities and Co-Curricular Fund to further support extra-curricular programs at the College.

### Housing

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

### Bookstore

The Bookstore provides all the required textbooks and miscellaneous supplies and materials which a student requires while attending LBCC. Profits from the Bookstore help support the extra-curricular activities and programs at LBCC. The Bookstore is located in the College Center and is open from 8 a.m. to 5 p.m. Monday through Friday, and 6:30 p.m. to 8:30 p.m. Tuesday and Wednesday, unless otherwise posted.

### 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 Dean of Students Office. Parking and traffic rules are available through the Dean of Students Office. Cars improperly parked are ticketed and subject to fines.



# 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.

All transfer courses in Oregon community colleges are, by law, approved by the Oregon Board of Education and all instructors in such courses are also approved.

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 offices of many 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.

## 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.

**Missions & Objectives.** The Army ROTC selects and prepares young men and women through a program of Army instruction coordinated with the students' normal academic curriculum, to serve as officers in the Regular and Reserve components of the Army, Navy, Air Force, and Marine Corps. Each of the units strives to develop in students a capacity for leadership, to develop them morally, mentally, and physically, and to provide them with the basic working knowledge required of young officers. Students in each unit receive uniforms to be worn at drill and on special occasions.

The Basic Course consists of freshman classes each term for which the student receives one credit hour each, and classes each term of sophomore year earning 2 credit hours per term. (Students who have not taken the basic course may attend a six-week basic summer camp at the end of the sophomore year and also be eligible for the advanced course. This provision allows students transferring from junior colleges, graduate students, or students who for other reasons have not taken the basic course, to get into the commissioning program.)

For further information please contact Director of Admissions.

## transfer curricula

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

### Agriculture and Science (OSU)

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

### Freshman Year

Course No.	Course Title	F	W	Sp
Wr 121-3	English Composition	3	(3)	(3)
Ch 104-6	General Chemistry	5	5	5
Mth 95	Intermediate Algebra		4	
Mth 101	College Algebra			4
Bot 201-3	General Botany or			
Bi 101-3	General Biology or	3-4	3-4	3-4
Z 201-3	General Zoology I			
PE 190	Physical Education	1	1	1
HE 250	Personal Health		3	
	Electives	3	0-3	2
		15-16	15-18	15-19

### Sophomore Year

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

Maximum acceptable credit: 108 hours

### Business Administration (UO, OSU, PSU, SOSC) and Business and Economics (EOSC)

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

### Freshman Year

Course No.	Course Title	F	W	Sp
Wr 121 or 121-123	English Composition	3	(3)	(3)
BA 101	Introduction to Business	4		
Sp 111	Fundamentals of Speech		3	
	Mathematics	4	4	4
	Science Sequence (OSU)*			
	Humanities Sequence (UO, PSU, SOSC, EOSC)	3-4	3-4	3-4
HE 250	Physical Education	1	1	
	Personal Health			3
	Electives	3-4	3-6	3-6
		15-17	15-17	16-17

### Sophomore Year

Course No.	Course Title	F	W	Sp
EC 201-203	Principles of Economics	3	3	3
BA 211-213	Principles of Accounting	3	3	3
BA 232	Intro. to Num. Computation*	4		
	Social Science*	3	3	3
	English Comp. or Elective		3	
	Physical Education*	1	1	1
	Electives*	2-3		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 programs outlined below are recommended for students who plan to transfer to a major program in business education at Oregon State University, Portland State University, Southern Oregon College, and

Eastern Oregon State College or at a program in Distributive Education at Oregon State University.

**Freshman Year**

Course No.	Course Title	F	W	Sp
BA 101	Intro. to Business (OSU, SOSOC)	4		
Wr 121 (OSU), Wr 121, 122 (SOSOC), Wr 121, 211, 123 (EOSC)	English Composition	3	(3)	(3)
SP 111	Data Processing (if available) (OSU)*			3
	Fundamentals of Speech (SOSOC, EOSC)			
	Mathematics*	4	4	4
	Physical Education*	1	1	1
SS 111-113	Stenography*	3	3	3
SS 121-123	Typewriting*	2	2	2
	Humanities sequence (EOSC)			
	Natural Science or Social Science Electives (OSU, SOSOC)	0-3	3-7	0-4
		16-17	16-17	16-17

**Sophomore Year**

Course No.	Course Title	F	W	Sp
EC 201-203	Principles of Economics*	3	3	3
BA 211-213	Prin. of Accounting*	3	3	3
SS 211-213	Applied Stenography*	3	3	3
Psy 201-203	General Psychology	3	3	3
PE 250	Personal Health			3
BA 214	Business Comm. (SOSOC)			
BA 226	Business Law (OSU)			
BA 232	Intro. to Business Statistics (OSU, SOSOC)	3	(3)	3
Hst 201-203	History of the United States, or			
PS 201-203	American Government (EOSC)			
	Electives		0-3	0-3
		15	15	16-18

Maximum Acceptable Credit: 108 hours

\*Prior to taking any of these courses, contact Counseling.

**Criminal Justice**

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
CJA 111-3	Intro. to Criminal Justice	3	3	3
Wr 121-122	English Composition	3	3	
Soc 204-6	General Sociology	3	3	3
HE 252 or 250	First Aid or Personal Health	3		
SP 111	Oral Communication		3	
	Literature sequence	3	3	3
	P.E. Activity	1	1	1
	Electives			6
		16	16	16

**Sophomore Year**

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

**Dental Hygiene**

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
Wr 121-122	English Composition		3	3
Bi 101-3	General Biology or			
Z 201-3	General Zoology	4	4	4
Ch 104-6	General Chemistry	5	5	5
Soc 204-6	General Sociology	3	3	3
Mth 101	College Algebra	4		
PE 190	Physical Education	1	1	1
		17	16	16

**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 institutions dental school where they wish to enroll early in their first two years at a community college.

**Freshman Year**

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

**Education**

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

elementary education

**Freshman Year**

Course No.	Course Title	F	W	Sp
WR 121-123	English Composition	3	3	3
SP 111	Fundamentals of Speech	3		
Hst 101-103 or Hst 201-203	History Sequence	3	3	3
Eng 104-6 or Eng 101-103 or Eng 107-109 or Eng 201-203 or Eng 253-255	English Sequence	3	3	3
	PE Activity**	1	1	1
Geog 105 and Geog 106 or 107	Geography		3	3
BI 101-103	General Biology	4	4	4
		17	17	17

**Sophomore Year**

Course No.	Course Title	F	W	Sp
HE 250	Personal Health			3
GS 104-5	General Science	4	4	
Soc 204-206	General Sociology	3	3	3
Psy 201-203***	General Psychology	3	3	(3)
	PE Activity**	(1)	(1)	(1)
Mth 121-123	Math Sequence	3	3	3
Art 201-203 or Art 204-206	Art Sequence	3	3	3
		17	17	16

\*OCE prefers Hst 101, 102, 103  
 OSU prefers Hst 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.  
 \*\*\*Psy 203 will transfer as elective credit only at OCE.

secondary education

**Freshman Year**

Course No.	Course Title	F	W	Sp
Wr 121-123	English Composition	3	3	3
Sp 111	Fundamentals of Speech	3		
HE 250	Personal Health		3	
Bi 101-103	General Biology	1	1	1
Eng 104-106, or Eng 101-103, or Eng 107-109, or Eng 201-203, or Eng 253-255	English Sequence	4	4	4
	Electives from major/minor area***	3	3	3
		3	3	6
		17	17	17

**Sophomore Year**

Course No.	Course Title	F	W	Sp
Soc 204-206	Sociology Sequence	3	3	3
Hst 101-103, or Hst 201-203**	History Sequence	3	3	3
	P.E. Activity*	(1)	(1)	(1)
Psy 201-203	General Psychology	3	3	3
	Electives from major/minor area***	6	6	6
		16	16	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 Hst 101, 102, 103  
 OSU prefers Hst 201, 202, 203

\*\*\*Prior to taking these courses, contact counseling.

**Engineering or Engineering Technology (OSU)**

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
Mth 101-2	College Algebra, Trigonometry	4	4	
Mth 110	Analytic Geometry			4
Ch 201-3	General Chemistry	4	4	4
Wr 121	English Composition	3		
PE 190	Physical Education	1	1	1
	Electives			
	Social Sciences & Humanities	1-3	4-7	4-7
		13-15	13-16	13-16

**Fine Arts**

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
PE 180/190	P.E. Activity	1	1	1
HE 250	Personal Health	3		
Wr 121	English Composition	3		
Bi 101-103, or Ch 104-106, or GS 104-106	Science Sequence	4	4	4
Art 195			3	
Art 291			3	3
Art 282				3
Art 281				3
		17	17	17

**Sophomore Year**

Course No.	Course Title	F	W	Sp
Soc 204-206, or Psy 201-203	Sociology or Psychology	3	3	3
Hst 101-103, or Hst 201-203	History Sequence	3	3	3
Wr 122 or 123	English Composition	3		
	Electives*	6	9	9
		15	15	15

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

**Forestry—Forestry (OSU)**

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
Bot 201-2	General Botany or			
Bi 101-3	General Biology	4	4	(4)
Ch 104-6	General Chemistry	5	5	5
Mth 101-2	College Algebra, Trigonometry	4	4	
Mth 110	Analytic Geometry			4
Wr 121-3	English Composition	3	3	3
PE 190	Physical Education	1	1	1
HE 250	Personal Health			3
		17	17	16-19

**Humanities Major**

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
PE 180/190	P.E. Activity	1	1	1
Wr 121-123	English Composition	3	3	3
HE 250	Personal Health		3	
Bi 101-103, or Ch 104-106, or GS 104-106	Science Sequence	4	4	4
	Electives*	9	6	9
		17	17	17

**Sophomore Year**

Course No.	Course Title	F	W	Sp
Soc 204-206, or Psy 201-203	Sociology or Psychology	3	3	3
Hst 101-103, or Hst 201-203	History Sequence	3	3	3
	Electives*	9	9	9
		15	15	15

\*Prior to taking these courses, contact Counseling.



### Music Major

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

#### Freshman Year

Course No.	Course Title	F	W	Sp
PE 180/190	P.E. Activity	1	1	1
Wr 121, and Wr 122 or 123	English Composition	3	3	
Eng 104-106, or Eng 101-013, or Eng 107-109, or Eng 201-203, or Eng 253-255	English Sequence	3	3	3
MU 201-203	Music Sequence	3	3	3
MU 111-113	Music Sequence	4	4	4
HE 250	Personal Health			3
	Choir or Band	1	1	1
	Performance Studies	1	1	1
		16	16	16

#### Sophomore Year

Course No.	Course Title	F	W	Sp
Bi 101-103, or Ch 104-106, or GS 104-106	Science Sequence	4	4	4
Soc 204-206, or Psy 210-204	Sociology or Psychology	3	3	3
Hst 101-103, or Hst 201-203	History Sequence	3	3	3
MU 211-213	Music Sequence	3	3	3
MU 214-216	Music Sequence	1	1	1
	Choir or Band	1	1	1
	Performance Studies	1	1	1
		16	16	16

### Pharmacy

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

#### Freshman Year

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

#### Sophomore Year

Course No.	Course Title	F	W	Sp
Ch 226-8	Organic Chemistry	3	3	3
Ch 229	Organic Chemistry Lab			2
Ph 201-3	General Physics	4	4	4
Psy 201-3	General Psychology	3	3	3
Mth 200-2	Calculus	4	4	4
	Electives	3	3	(3)
		17	17	16-19

Maximum acceptable credit: 108 hours.

### Physical Education

Students who wish to become physical education instructors must begin course work in professional activities (PE 194 and 195 Professional

Activities) during the freshman year if they are to complete baccalaureate degree programs in four years. Service course work in physical education (PE 180 and 190 Physical Education) cannot be substituted for the professional activity courses.

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

#### Freshman Year

Course No.	Course Title	F	W	Sp
Wr 121 or 121-123	English Composition and Electives	3	(3)	(3)
Bi 101-103 or Z 201-203	Biology or Zoology	3-4	3-4	3-4
PE 194/195	Professional Activities	2	2	2
PE 131	Intro to Health, PE and Recreation (PSU, UO, EOSC)	3		
SP 111	Introduction to Speech		3	
HE 252	First Aid			3
	Humanities	3	3	3
	Electives	0-3	0-6	0-6
		15-17	15-17	15-17

#### Sophomore Year

Course No.	Course Title	F	W	Sp
Ch 101-103, or Ch 104-106-, or Ch 201-203 (UO, SOS, PSU)	Chemistry Sequence	3-5	3-5	3-5
PE 294/295	Professional Activities	2	2	2
	Social Science Sequence	3	3	3
HE 250	Personal Health	3		
FN 225	Nutrition (UO, OSU, SOS)			4
	Electives	0-6	3-7	0-10
		15-19	15-16	15-17

Maximum acceptable credit: 108 hours.

### Social Science

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

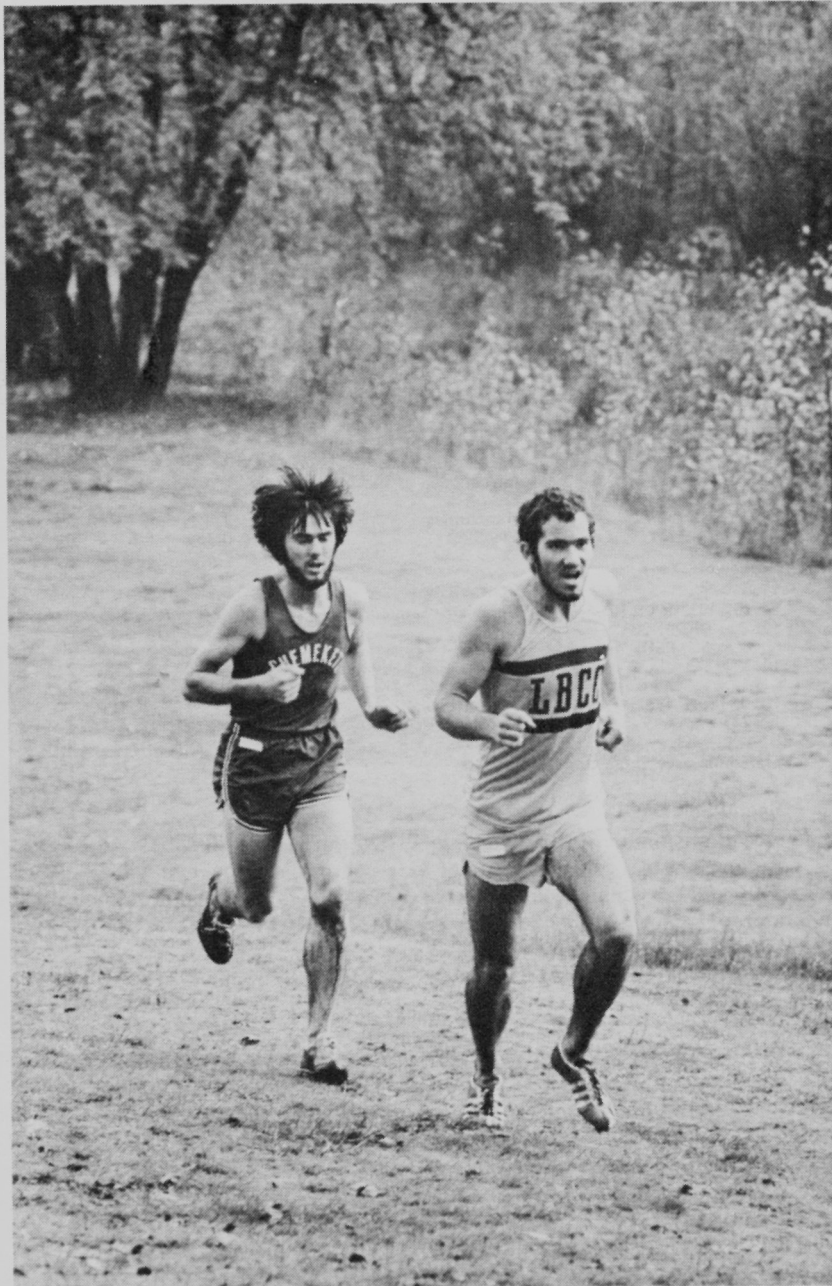
#### Freshman Year

Course No.	Course Title	F	W	Sp
PE 180/190	PE Activity	1	1	1
HE 250	Personal Health			3
Wr 121,122 or 123	English Composition	3	3	
Bi 101-103, or Ch 104-106 or Ch 104-106, or GS 104-106	General Biology or General Chemistry, or Physical Sciences	4	4	4
Eng 104-106, or Eng 101-103, or Eng 107-109, or Eng 201-203, or Eng 253-255	Literature Sequence			
		3	3	3
	Electives*	6	6	6
		17	17	17

#### Sophomore Year

Course No.	Course Title	F	W	Sp
Soc 204-206	General Sociology	3	3	3
Mth 161-163	Mathematics	4	4	4
	Electives*	9	9	9
		16	16	16

\*Prior to taking these courses, contact Counseling.



# allied health and physical education division

The Allied Health and Physical Education Division provides both career preparation programs in the allied health field and physical education service courses for students who desire to participate in physical activities. Personal health and first aid are also a part of the division's curriculum.

Vocational programs are offered in associate degree nursing, nursing assistant, dental assistant and related allied health areas. Students completing these programs are qualified to pursue varied occupations in the health services field in hospitals, nursing homes, clinics, or doctors' offices.

The physical education curriculum provides activity classes for students who must take physical education classes to meet graduation requirements and for students who desire to participate in individual or team activities.

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  
Dr. Jack Arthur, Dental Assistant, Program Coordinator  
Arlene Crosman, Physical Education  
Adella Wood, Associate Degree Nursing Dept. Coordinator  
Verlund "Butch" Kimpton, Physical Education  
Virginia McCraw, Associate Degree Nursing  
Anne Mills, Nursing Assistant Program Coordinator  
Gerald Morgan, Dental Assistant  
Jacqueline Paulson, Associate Degree Nursing  
Dianne Meyers, Associate Degree Nursing  
Christina Bruce, Associate Degree Nursing  
Bobbie Lamberton, Nursing Home Assistant Program Coordinator

## associate 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; Corvallis Health Care; Linn Care Center, Albany; and Villa Cascade, Lebanon.

See page 6 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 judgment 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 Dean of Students. 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 Chairman, 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.	Course Title	F	W	Sp
5.711	Nursing I	5		
5.712	Nursing II		5-6	
5.713	Nursing III			8-9
5.726-8	Nursing/Contemporary Soc.	1	1	1
Bi 221-3	Human Biology	4	4	4
4.211-2	Nutrition I, II	3	3	
Psy 201-2	Psychology	3	3	
		16	16-17	13-14

#### Sophomore Year

Course No.	Course Title	F	W	Sp
5.721	Nursing IV	9-11		
5.722	Nursing V		9-12	
5.723	Nursing VI			8-10
5.729	Nursing/Contemporary Soc.			1
Wr 121	Writing*	3		
Sp 111	Speech*		3	
PE 180-190	Physical Education*	1	1	1
	Humanities Electives*	3	3	
Soc 204	General Sociology*			3
	Elective*	3		
		19-21	16-22	13-15

\*May be taken any term  
Nursing I-VI will total 47 credits

## Admissions

Associate Degree Nursing (RN Two Years) applicants must: (1) have application and transcripts on file by March 1. (2) complete the National League for Nursing, Pre-Nursing and Guidance Examination. 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 if recommended by the committee. (5) if accepted, file a complete physical exam form. (6) It is recommended the student have taken and completed satisfactorily the equivalence of High School Chemistry and Algebra. Specific admissions criteria for the ADN program is available in the Admissions Office.

- 5.711 **Nursing I**  
9 class hrs lab/wk 5 cr. F
- 5.712 **Nursing II**  
9 class hrs lab/wk 5-6 cr. W
- 5.713 **Nursing III**  
14 class hrs lab/wk 8-9 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 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**  
17 class hrs/wk 9-11 cr. F
- 5.722 **Nursing V**  
24 class hrs/wk 9-12 cr. W
- 5.723 **Nursing VI**  
14 class hrs/wk 8-10 cr. Sp

The continued study of major areas of illness in the United States, including complications of pregnancy. Consideration to the 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 are presented. The rehabilitative aspect of nursing care is studied with consideration of available community agencies. Social workers, psychologists and psychiatrists collaborate in the 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./term 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 the 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.

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 Allied Health & Physical Education Division as specialized service courses to supplement programs in other divisions.

5.625

**Clinical Office Procedures I**

**4 class hrs/wk 4 cr. On Demand**

Basic procedures necessary for the medical receptionist and/or the medical assistant to successfully assist the doctor in patient preparation and examination. Prerequisite: Anatomical Terminology.

5.626

**Clinical Office Procedures II**

**4 class hrs/wk 4 cr. On Demand**

Examination techniques and sterilization and laboratory procedures. 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.

5.630

**Anatomical Terminology**

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

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 I**

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

Introduction to the basic root words, as well as prefixes and suffixes, which are fundamental to the understanding of medical terminology. Prerequisite: Anatomical Terminology.

5.634

**Medical Terminology II**

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

Continuation of Medical Terminology I with special emphasis on terminology as it relates to body systems. Prerequisite: Medical Terminology I.

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.



# dental assistant

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

Students are trained in fundamental techniques and use of equipment and 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. High school graduation or equivalency is required. High school typing, biology and chemistry are recommended. Applicants must be in good physical and mental health as determined by a doctor's report.

Final selection is made by the Dental Assistant Acceptance Committee. Books, special clothing and miscellaneous costs total approximately \$215.00.

## First Quarter

Course No.	Course Title	Credits
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
		<u>15</u>

## Second Quarter

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

## Third Quarter

Course No.	Course Title	Credits
5.453	Dental Pathology	1
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
		<u>12</u>

## Fourth Quarter

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

\*Typing 2.502 is required to complete the Dental Assisting Certificate program. If a student has not completed Typing 2.501 it will be necessary to complete this course first term and Typing 2.502 second term.

## 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

1 class hr/wk 1 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, preventative 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 periapical 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

Introduction of dental materials, their composites, and properties. Practical experience in handling and manipulating operatory and laboratory equipment. 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

Introduction to practical office procedures including instrumentation, tray set-ups, rubber dam and restorative procedures. Equipment and its care, patient seating and dismissal. Prerequisite: Introduction to Dental Assisting 5.445.

5.495

**Clinical Practice II**

8 class hrs/wk 4 cr. W

Continuation of Clinical 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: \*Fourth term status.

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 Fourth Term Status requires completion of every course during the first three terms.

# 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.

Course no.	Course Title	
5.406	Nursing Assistant Lecture	
5.407	Nursing Assistant Lab	12 credits

**Curriculum**

I	Introduction	8	8
II	Physical Environment	12	35 47
III	Social Environment	8	9 17
IV	Daily Living Activities	50	124 174
V	Therapeutic Health Measures	12	28 40
VI	Nursing Care Plan	8	8
VII	Job Application Procedures	6	6

It is expected by the Allied Health & Physical Education 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.

## **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, uneven bars, 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. F/Sp  
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. F/Sp  
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. F/Sp  
Intercollegiate as well as recreational golf with the emphasis on development of skills during competitive play.

**PE 185**  
**Jogging**  
3 class hrs/wk 1 cr. F/Sp  
Instruction and practice in jogging to increase maximum amount of oxygen that the body can process in a given time.

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

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

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

**PE 291**  
**Lifesaving**  
2 cr. W  
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]**  
2 cr. 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**

**Handball**

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

Instruction in the basic skill of handball.



**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.

**9.601****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.



# business and industrial division

Education for business prepares students vocationally and helps them develop the social and economic attitudes essential for future success. It offers knowledge and understanding of business and business methods that prove helpful in a changing society.

Increased and new skill levels are demanded in a business environment in which technology is advancing, production techniques are changing, and both government and industry are seeking new ways to control environmental problems.

The Business/Industrial Division attempts to meet the needs of all students, including those working full time in business and industry. The Division offers one-year and two-year programs leading to certificates and degrees. It also offers a variety of courses for students with special needs and interests, many of them in the evenings, and a number of one-day seminars for those currently employed in business and industry.

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:**

John Alvin, Welding, Department Chairman  
 Illa Atwood, Business Skills  
 Garland Brooks, Business Skills  
 Michael Burke, Machine Tool Technology  
 David Carter, Automotive Technology  
 Maynard Chambers, Business Management, Department Chairman  
 Patsy Chester, Business Skills, Department Chairman  
 Gerry Conner, Business Management  
 Charles Dallmann, Food Services, Department Chairman  
 Henry Day, Wood Technology, Department Chairman  
 John Griffiths, Machine Tool Technology, Department Chairman  
 Lee Hansen, Small Engine/Recreational Vehicle Repair

Dorothy Hazel, Business Skills  
 Eugene Hysmith, Auto Body Repair, Automotive Department Chairman  
 Dorothy Lawrence, Business Skills  
 Ward Ledbetter, Accounting  
 L. Carl Love, Metallurgy, Department Chairman  
 John Daniel Miller, Marketing  
 James Moran, Data Processing, Department Chairman  
 Joyce Moreira, Business Skills  
 Edward Movius, Business Management/Community Liaison  
 Keith Pond, Automotive Technology  
 Stephen Shelton, Data Processing  
 Elwyn Stewart, Welding  
 Larry Thornton, Auto Body Repair  
 Al Walczak, Business Skills  
 Dennis Wood, Welding

# business programs

The Business area offer 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 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 (proposed) leading to an Associate of Science degree;
7. A two-year program in Marketing (proposed) 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 Office Assistants (proposed) leading to an Associate of Science degree;
13. A two-year program for Medical Receptionists leading to an Associate of Science degree;
14. A two-year program in Restaurant Management leading to an Associate of Science degree or a two-year certificate;
15. A two-year program in Chef Training 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.

### **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 any 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 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 211**

#### **Principles of Accounting I**

**3 class hrs/wk 3 cr. F/W**

Techniques of account construction and preparation of financial statements. Emphasis is on application of problems of recording, measuring income, purchasing, sales, inventories, special journals, and internal control of cash.

**BA 212**

#### **Principles of Accounting II**

**3 class hrs/wk 3 cr. W/Sp**

Accounting systems and management control, concepts and principles of depreciation, merchandise inventory, evaluation, partnership and corporate accounting, capital stock, investments, dividends. Prerequisite: BA 211 or consent of instructor.

**BA 213**

#### **Principles of Accounting III**

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

Control accounting for departments and branches, cost accounting for manufacturing plants, income taxes and their effect on business decisions and analysis of financial statements. Prerequisite: BA 212 or consent of instructor.

**BA 217**

#### **Basic Accounting and Financial Analysis**

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

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**

#### **Intro. 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****Intro. to Business Statistics****4 class hrs/wk 4 cr. W**

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: Mth 95.

**BA 238****Intro. 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.


**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.	Course Title	F	W	Sp
2.500	Business Orientation & Career Awareness	1		
BA 101	Introduction to Business	4		
2.530	Practical Accounting I	3		
2.515	Business Math	3		
2.501	Typing I	3		
1.101	Communication Skills I		3	
2.119	Introduction to Management		3	
2.531	Practical Accounting II		3	
2.121	Applied Economics		3	
2.130	Business Quantitative Methods		3	
PE 180/190	Physical Education		1	
1.102	Communication Skills II			3
2.131	Marketing			3
2.532	Practical Accounting III			3
2.521	Office Machines			2
2.516	Business Statistics			3
PE 180/190	Physical Education			1
		14	16	15

**Sophomore Year**

Course No.	Course Title	F	W	Sp
2.595	Intermediate Accounting I	3		
9.743	Income Tax Preparation	3		
2.645	Bus. Conference Techniques	3		
2.518	Business Law	3		
	Physical Education	1		
HE 252	First Aid or 4.108 Industrial Safety	3		
2.710-2	On-The-Job Training		4	
2.596	Intermediate Accounting II		3	
2.534	Cost Accounting		3	
2.415	Human Relations in Business		3	
	Business Elective		3	
2.710-2	On-The-Job Training			4
2.597	Intermediate Accounting III			3
2.222	Financial Management			3
2.510	Introduction to Data Processing			4
	Business Elective			3
		16	16	17

**2.220****Personal Finance****3 class hrs/wk 3 cr. Sp**

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.

**2.530****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.

**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.

2.595

**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.

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.



# 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 1976-77 school year.

**Freshman Year**

Course No.	Course Title	F	W	Sp
2.500	Business Orientation & Career Awareness	1		
2.150	Principles of Bank Operations	3		
2.530	Practical Accounting I*	3		
2.501	Typing I	3		
PE 180/190	Physical Education	1		
2.515	Business Math*	3		
1.101	Communication Skills I*		3	
2.531	Practical Accounting II*		3	
2.121	Applied Economics*		3	
BA 101	Introduction to Business		4	
PE 180/190	Physical Education		1	
2.130	Business Quantitative Methods		3	
1.102	Communication Skills II*			3
2.131	Marketing*			3
2.532	Practical Accounting III*			3
2.521	Office Machines			2
2.516	Business Statistics			3
PE 180/190	Physical Education			1
		14	17	15

**Sophomore Year**

Course No.	Course Title	F	W	Sp
2.155	Money and Banking	3		
2.518	Business Law*	3		
2.119	Introduction to Management*	3		
2.510	Introduction to Data Processing	4		
	Banking & Finance Elective	3		
2.710-2	On-The-Job Training		4	
2.152	Bank Management		3	
HE 250	Personal Health		3	
4.108	or Industrial Safety		3	
	Business Elective		3	
	Banking & Finance Elective			
2.710-2	On-The-Job Training			4
2.645	Bus. Conference Techniques*			3
2.415	Human Relations in Business			3
	Banking & Finance Elective			3
	Banking & Finance Elective			3
		16	16	16



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

Column One	Column Two
1.101-2 Communication Skills I, II	WR 121-2 English Composition
2.530-2 Practical Accounting I, II, III	BA 211-3 Principles of Accounting I, II, III
2.515 Business Math	1.110 Elements of Algebra
2.121 Applied Economics	2.160 Marketing for Bankers
2.131 Marketing	BA 226 Business Law
2.518 Business Law	9.500 Elements of Supervision
2.119 Introduction to Management	SP 111 Beg. Oral Communication
2.645 Business Conference Techniques	EC 115 Outline of Economics

**2.150**  
**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.

**2.151**  
**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.

**2.152**  
**Bank Management**  
**3 class hrs/wk 3 cr. On Demand**

New trends in the philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management.

**2.153**  
**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.

**2.155**  
**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.

**2.156**  
**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.

**2.158**  
**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.

**2.159**  
**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 transferred from one country to another, how trade is financed, what the international agencies are and how they supplement the work of commercial banks, and how money is changed from one currency to another.

**2.160**  
**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.

**2.162**  
**Trust Functions and Services**  
**3 class hrs/wk 3 cr. On Demand**

This course presents a complete picture of the services rendered by institutions engaged in trust business. Providing an introduction to the services and duties involved in trust operations, the course is intended for all bankers, not only those who are engaged in trust business. It endeavors to keep clear the distinction between business and legal aspects of trust functions.

**2.163**  
**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.

2.164

**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.

2.165

**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.

2.166

**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 fundamental principles underlying modern correspondence, and examines different kinds of bank letters.

2.167

**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.

2.169

**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.

2.170

**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.

2.171

**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.

2.172

**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.

2.173

**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.

2.174

**Selling Bank Services**

3 class hrs/wk for 5 weeks 1 cr. On Demand

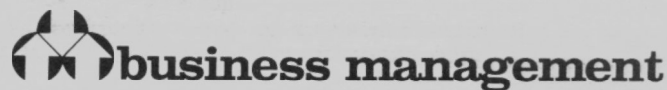
Teaches tellers and new-account personnel how to recognize and meet bank customer needs: checking accounts, savings services, loans to individuals, safe deposit boxes, travelers checks, and cross-selling.

2.175

**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.



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.	Course Title	F	W	Sp
2.500	Business Orientation & Career Awareness	1		
BA 101	Introduction to Business	4		
2.530	Practical Accounting I	3		
2.515	Business Math	3		
2.501	Typing I	3		
1.101	Communication Skills I		3	
2.119	Introduction to Management		3	
2.531	Practical Accounting II		3	
2.121	Applied Economics		3	
2.130	Business Quantitative Methods		3	
PE 180/190	Physical Education		1	
1.102	Communication Skills II			3
2.131	Marketing			3
2.532	Practical Accounting III			3
2.521	Office Machines			2
2.516	Business Statistics			3
PE 180/190	Physical Education			1
		14	16	15

#### Sophomore Year

Course No.	Course Title	F	W	Sp
2.645	Bus. 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		
	Business Elective	3		
2.710-2	On-The-Job Training		4	
2.415	Human Relations in Business		3	
HE 250	Personal Health or		3	
4.108	Industrial Safety			
	Business Elective		6	
2.710-2	On-The-Job Training			4
2.222	Financial Management			3
2.111	Labor-Management Relations			3
	Business Elective			3
	Business Elective			3
		17	16	16

#### 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 Division.

#### Freshman Year

Course No.	Course Title	F	W	Sp
2.500	Business Orientation & Career Awareness	1		
BA 101	Introduction to Business	4		
2.530	Practical Accounting I	3		
2.515	Business Math	3		
2.501	Typing I	3		
1.101	Communication Skills I		3	
2.119	Introduction to Management		3	
2.531	Practical Accounting II		3	
2.121	Applied Economics		3	
2.130	Business Quantitative Methods		3	
PE 180/190	Physical Education		1	
1.102	Communication Skills II			3
2.131	Marketing			3
2.532	Practical Accounting III			3
2.521	Office Machines			2
2.516	Business Statistics			3
PE 180/190	Physical Education			1
		14	16	15

#### 2.500

##### Business Orientation & Career Awareness

2 class hrs/wk 1 cr. F

Introduces the various career opportunities in the business field. Included in the course are films, speakers, and field trips.

#### 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

##### Intro. 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.

2.130

**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. Basic algebra skills desirable.

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 is Showing II**

3 class hrs/wk 3 cr. W/Sp

Continued reading, studying and discussing "attitudes" to further develop confidence in dealing with human relations problems. Demonstrates how attitudes affect personal happiness, productivity and performance on and off the job. Prerequisite: Your Attitude is Showing I or permission of the instructor.

2.499

**Business Honors**

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

Students will be exposed to advanced concepts of business structures and the individuals who may be expected to be found running them. They will experience additional human relations situations preparatory to the jobs they will soon have. Individual and team studies of local business as well as larger national corporations will be made in order to prepare students for 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 performance, experience and attitude. Instructor input will be solicited.

2.516

**Intro. to Business Statistics**

3 class hrs/wk 3 cr. S

Emphasis on understanding methods and terminology used in statistical reports generated in business and industry. Topics covered: descriptive

statistics; probability; binomial, normal, "t", and chi-square distributions; linear regression and correlation; and hypothesis testing. Prerequisite: Business Quantitative Methods or consent of the instructor.

2.518

**Business Law**

3 class hrs/wk 3 cr. W/Sp

The legal environment of business and principles of contract law. Introduction to the study of law and business, legal reasoning and the evolutionary process of law. Emphasis on the study of business agreements—their information, operation, performance and discharge.

2.585

**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.

2.645

**Business Conference Techniques**

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

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.

2.710-2

**On-The-Job Training [Business Management]**

12 hrs/wk 4 cr. F/W/Sp

Supervised studies in positions related to the student's field of academic endeavor. Intended to provide practical experience for students preparing for careers in Accounting, Marketing, Management, and Banking and Finance. Must be employed, preferably in degreed area, for a minimum of 12 hours per week. Employment may be non-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 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 Management 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.

9.253

### 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.



## marketing

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

Course No.	Course Title	F	W	Sp
2.500	Business Orientation & Career Awareness	1		
BA 101	Introduction to Business	4		
2.530	Practical Accounting I	3		
2.515	Business Math	3		
2.501	Typing I	3		
1.101	Communication Skills I		3	
2.119	Introduction to Management		3	
2.531	Practical Accounting II		3	
2.121	Applied Economics		3	
2.130	Business Quantitative Methods		3	
PE 180/190	Physical Education		1	
1.102	Communication Skills II			3
2.131	Marketing			3
2.532	Practical Accounting III			3
2.521	Office Machines			2
2.516	Business Statistics			3
PE 180/190	Physical Education			1
		14	16	15

## Sophomore Year

Course No.	Course Title	F	W	Sp
2.110	Salesmanship	3		
2.645	Bus. 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		
2.710-2	On-The-Job Training		4	
2.134	Retail Merchandising		3	
HE 250	Personal Health		3	
2.139	Market Research		3	
	Business Elective		3	
2.710-2	On-The-Job Training			4
2.308	Advertising			3
2.140	Promotional Strategy			3
2.222	Financial Management			3
	Business Elective			3
		17	16	16

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.

2.131

### Elements of Marketing

3 class hrs/wk 3 cr. W

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. Sp

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 stores in the community.

2.138

**Purchasing**

3 class hrs/wk 3 cr. On Demand

Special application of fundamental principles of economics and management. Principles and methods of purchasing as they apply to the business environment. Quantitative techniques as applied to purchasing will be presented when applicable to certain buying decisions. Prerequisite: Business Statistics, 2.516.

2.139

**Marketing Research**

3 class hrs/wk 3 cr. W

Introduction to marketing research. Examines why business uses marketing research, how business uses research, and its limitations. Prerequisite: Business Statistics, 2.516.

2.140

**Promotional Strategy**

3 class hrs/wk 3 cr. Sp

Designed around the case problems as related to marketing promotion. Consumer psychology, advertising, reseller stimulation, and other communication tools as a part of the overall promotion mix. Prerequisite: Marketing Research, 2.139.

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.



# 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 quarter cr.]**

Course No.	Course 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, On-The-Job Training, or credit for approved prior work experience	
		<u>5</u>
		18

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

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

**Certificate in Advanced Supervisor Development [45 credits]**

Course No.	Course 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	Beg. Oral Communication	3
9.555	Industrial Safety I	3
	Business Electives, On-The-Job Training, or credit for approved prior work experience	
		<u>8</u>
		45

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

Course No.	Course 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	Beg. 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 250	Personal Health	3
or 4.108	Industrial Safety	
	Business Electives	9
	Non-Business Electives	12
	On-The-Job Training, or credit for approved prior work experience	24
		91

**9.500**

**Elements of Supervision**

3 class hrs/wk 3 cr. F

Introduction to total responsibilities of a supervisor in industry, such as organization, duties and responsibilities, human relations, grievance, training, rating, promotion, quality-quantity control, and management-employee relations.

**9.502**

**Psychology for Supervisors**

3 class hrs/wk 3 cr. Sp

Assists in understanding the people with whom the supervisor works, with emphasis on the psychological aspects, perceptions, learning processes, emotions, attitudes and personalities.

**9.503**

**Business Conference Techniques**

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

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.

**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. On Demand**

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. On Demand**

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. On Demand**

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.

**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.

**Freshman Year**

Course No.	Course Title	F	W	Sp
2.571	Data Processing I	10		
2.572	Data Processing II		10	
2.573	Data Processing III			10
1.101-2	Communication Skills I, II			
or				
WR 121-2	English Comp.	3	3	
2.518	Business Law			3
2.415	Human Relations in Business	3		
2.516	Intro. to Business Statistics			3
HE 250 or 4.108	Pers. Health or Indus. Safety		3	
PE 180/190	P.E.			
		<u>1</u>	<u>1</u>	<u>1</u>
		17	17	17

**Sophomore Year**

Course No.	Course Title	F	W	Sp
2.581	Data Processing IV	10		
2.582	Data Processing V		10	
2.583	Data Processing VI			10
	Business Elective		3	
2.530-2	Practical Accounting I, II, III			
or				
BA 211-3	Principles of Account'g I, II, III	3	3	3
	General Education Electives	<u>3</u>		
		16	16	13

**2.508****Introduction to Keypunch Operation****5 class hrs/wk 2 cr. F/W/Sp**

Individualized instruction on operation of the IBM 029 keypunch machine. Includes familiarization with IBM Card and interpretation of punched hole instruction on the names and functions of all operating parts, keys, and switches; manual duplication procedures and error corrections procedures; operation of the program control unit and coding of the program card.

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

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/W/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% = 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/Sp

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 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. 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.

#### 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.

# culinary arts and restaurant management

The Culinary Arts and Restaurant Management curriculum offers programs in all phases of the industry: food preparation, service, and management.

All students in the department develop basic knowledge and skills in food preparation, but those with a major interest in cooking may 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 cook, sous chef and student chef. Special certificates are awarded those who develop competency in a limited area while one and two-year certificates are awarded to students who satisfactorily complete forty-five and ninety units in food preparation and related subjects. Major emphasis will be on the two year Associate of Science Degree in Advanced Professional Cooking and Chef Training.

The combined service and management program prepares students through theory and hands-on training for entry level service and supervisory jobs. Emphasis is on practical line management for resorts, restaurants and coffee shops. Students who complete one quarter of service training and achieve basic competency level receive a Busboy or Busgirl certificate. Successful completion of two quarters at competency level leads to a Waiter/Waitress certificate, and a Dining Room Supervisor certificate is awarded upon achieving competency level after three quarters of service training. Certificates in Restaurant Management are awarded to students who successfully complete the second year of the program and meet the minimum standards for previous industry experience and skill level.

Students with no previous industry experience can earn an Associate of Science Degree by successfully completing the two-year curriculum in Restaurant Management which is the major emphasis of this course of instruction.

A Culinary Arts and Restaurant Management graduate may enter industry as a cook's helper, fry cook, waiter/waitress, or management trainee, depending upon interest and competency level. Persons completing the comprehensive two-year Associate of Science Degree program will be in greater demand and will go to industry with a chance for rapid advancement to sous chef, dining room supervisor or assistant manager.

## First Year Cooking

Course No.	Course Title	F	W	Sp
8.303	Intro. to Professional Food Ser.	7		
8.325	M & P: Kitchen & Dining Room Stations, Tools, Equip., Methods, Safety and Vocabulary	2		
8.311	A Cook's French: French Culinary Vocabulary	3		
8.300	Food Microbiology	3		
9.137	Multi-Media First Aid	1		
PE 180/190	P.E.	1		
8.304	Intermed. Prof. Cooking I		7	
8.326	M & P: Gardemanger		2	
2.415	Human Relations in Business			
or				
Psy 111	Personal Development			3
1.101	Communication Skills I or II			3
PE180/190	P.E.			1
8.305	Intermed. Prof. Cooking II			7
8.327	M & P: Vegetables and Entrees			2
2.515	Pre-Business Math or Business Math & Machines			3-5
1.102	Communication Skills II			
or				
SP 111	Beginning Oral Comm.			3
PE 180/190	P.E.			1
		17	16	16-18

## Second Year Advanced Cooking

Course No.	Course Title	F	W	Sp
8.306	Advanced Prof. Cooking I	7		
8.328	M & P: Stocks, Soups, Sauces	2		
8.353	Food Service Facilities I	2		
8.340	Menu Plan'g & Food Controls Elective	2		
8.307	Adv. Prof. Cooking II		7	
8.329	M & P: The Butcher Station		2	
8.354	Food Service Facilities II		2	
8.341	Menu Plan'g/Food Controls II		2	
8.308	Adv. Prof. Cooking III			7
8.330	M & P: The Bakeshop			2
8.355	Food Service Facilities III			2
8.342	Menu Plan'g/Food Controls III			2
		15	13	13

## Second Year Chef Training

Course No.	Course Title	F	W	Sp
8.315	Intro. to Commercial Kitchen Production & Management	7		
8.328	M & P: Stocks, Soups, Sauces	2		
8.353	Food Service Facilities I	2		
8.340	Menu Plan'g/Food Control I Elective	2		
8.316	Intermed. Commercial Kitchen Production and Management		7	
8.329	M & P: The Butcher Station		2	
8.354	Food Service Facilities II		2	
8.341	Menu Plan'g/Food Controls II		2	
8.317	Adv. Commercial Kitchen Production and Management			7
8.330	M & P: The Bakeshop			2
8.355	Food Service Facilities III			2
8.342	Menu Plan'g/Food Controls III			2
BA 217	Basic Accounting/Financial Analysis			3
		15	13	16

**Restaurant Management First Year**

Course No.	Course Title	F	W	Sp
8.303	Intro. to Prof. Food Service	7		
8.325	M & P: Kitchen/Dining Room Stations, Tools, Equipmt., Methods, Safety & Vocabulary	2		
8.311	A Cook's French: French Culinary Vocabulary	3		
8.300	Food Microbiology	3		
9.137	First Aid, Multi-Media	1		
PE 180/190	P.E.	1		
8.338	Cook'g for Food Service Man. I		5	
8.326	M & P: The Gardemanger		2	
8.335	Dining Room Lab I		2	
8.350	Table/Counter/Banquet Serv.		2	
2.415	Human Relations in Business			
or	or			
Psy 111	Personal Development		3	
1.102	Communication Skills I or II		3	
PE 180/190	P.E.		1	
8.339	Cook'g/Food Serv. Managers II			5
8.327	M & P: Vegetables and Entrees			2
8.336	Dining Room Lab II			2
8.345	Dining Room/Bar Management			2
2.515	Business Math/Office Machine			3-5
PE 180/190	P.E.			1
8.351	Beverage Lists and Controls			2
		17	18	17-19

**Restaurant Management Second Year**

Course No.	Course Title	F	W	Sp
8.346	Management Lab I	3		
8.328	M & P: Stocks, Soups, Sauces	2		
8.312	Rest. a la carte, Cook'g & Serv.	3		
8.353	Food Service Facilities I	2		
8.340	Menu Plan'g/Food Controls I	2		
2.530	Practical Accounting I	3		
	Elective	2		
8.347	Management Lab II		3	
8.312	Rest. a la carte, Cook'g & Serv.		3	
8.354	Food Service Facilities II		2	
8.341	Menu Plan'g/Food Controls II		2	
2.531	Practical Accounting II		3	
1.102	Communication Skills			
or	or			
SP 111	Beginning Oral Communication		3	
8.348	Management Lab III			3
8.312	Rest. a la carte, Cook'g & Serv.			3
8.355	Food Service Facilities III			2
8.342	Menu Plan'g/Food Control			2
2.308	Principles of Advertising			3
2.222	Financial Management			3
		17	16	16

**8.300****Food Microbiology I****4 class hrs/wk 3 cr. F**

Types of food poisoning; transmitting of food-borne diseases; sanitation measures for discouraging of microorganisms; storage conditions for foods.

**8.303****Introduction to Professional Food Service****20 class hrs/wk 7 cr. F/W/Sp**

A laboratory and work-experience class in which the beginning student will spend time as an assistant on the following stations: Entree, salad, vegetable, soup & stock, bakery, storeroom, warewashing and dining room. Instructor demonstrates safe use of machines and hand tools, sanitation and hygiene procedures, basic cooking processes, and proper station set-up and clean-up. Prerequisite: Negative TB test, Food Handler's Card or Health Card in accordance with state health laws.

**8.304****Intermediate Professional Cooking I****20 class 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 continue more to rotate stations on a two-week basis but begin to take on more responsibility in producing a salable product.

**8.305****Intermediate Professional Cooking II****20 class hrs/wk 7 cr. F/W/Sp**

This laboratory section focuses on vegetables and entree preparation. Students cook vegetables, starches and main dishes for service in the college cafeteria. Student cooks prepare entrees according to the various styles of service: restaurant, hotel and institutional. The student begins in this quarter to assume responsibility for directing a station, rotating duties every two weeks.

**8.306****Advanced Professional Cooking I****20 class hrs/wk 7 cr. F/W/Sp**

An advanced course in the kitchen under service conditions. For the first time students take charge of a station and are 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.

**8.307****Advanced Professional Cooking II****20 class hrs/wk 7 cr. F/W/Sp**

The advanced cooking student begins making menus for the station and coordinates the activities of the station with that of the chef and the rest of the kitchen. Other activities are ordering and receiving merchandise.

**8.308****Advanced Professional Cooking III****20 class 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.

8.311

**A Cook's French: French Culinary Vocabulary**

3 class hrs/wk 3 cr. F

Familiarity with French cooking terms, including those used in the preparation and serving of French cuisine. Names of those who prepare and serve food will also be taught.

8.312

**Restaurant A La Carte**

1 lec hr/wk-4 lab hrs/wk 3 cr. F/W/Sp

Basic food preparation with emphasis on foods cooked to order. Opportunity to work the broiler, fry, griddle, and saute stations. Student cooks prepare a variety of short order dishes, from grilled sandwiches and omeletes to broiled steaks and other a la carte breakfast, lunch and dinner entrees. High priority on efficient station set-up and clean-up. Prerequisite: Intro. to Professional Food Service 8.303.

8.315

**Intro. to Commercial Kitchen and Production and Management**

20 class hrs/wk 7 cr. F/W/Sp

More responsible kitchen stations: entrees, sauces, 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.

8.316

**Intermediate Commercial Kitchen Production and Management**

20 class hrs/wk 7 cr. F/W/Sp

Chef-trainees work as chef or sous chef to coordinate kitchen activities from planning and ordering, to receiving, storing, cooking, and serving.

8.317

**Advanced Commercial Kitchen Production and Management**

20 class 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.

8.320

**Projects and Conferences for Food Service Skills**

3-30 hrs/wk 1-10 cr. F/W/Sp

Subject areas of particular need or interest to the student are given additional attention. Open to continuing Food Service students with instructor's permission. Hours and credits by arrangement.

8.325

**Materials and Processes: Kitchen and Dining Room Stations, Tools, Equipment, Methods, Safety, and Vocabulary**

2 class hrs/wk 2 cr. F

Lecture-demonstration class which presents theory and provides practice in the proper care, cleaning, and use of tools and equipment. Centers on

culinary terms, safety, sanitation, history and development, job descriptions, opportunities in industry, and the organization of kitchens and dining rooms in various types of food service operations.

8.326

**Materials and Processes: The Gardemanger**

2 hrs/wk 2 cr. W

Lectures, demonstrations, 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.

8.327

**Materials and Processes: Vegetables and Entrees**

2 class hrs/wk 2 cr. Sp

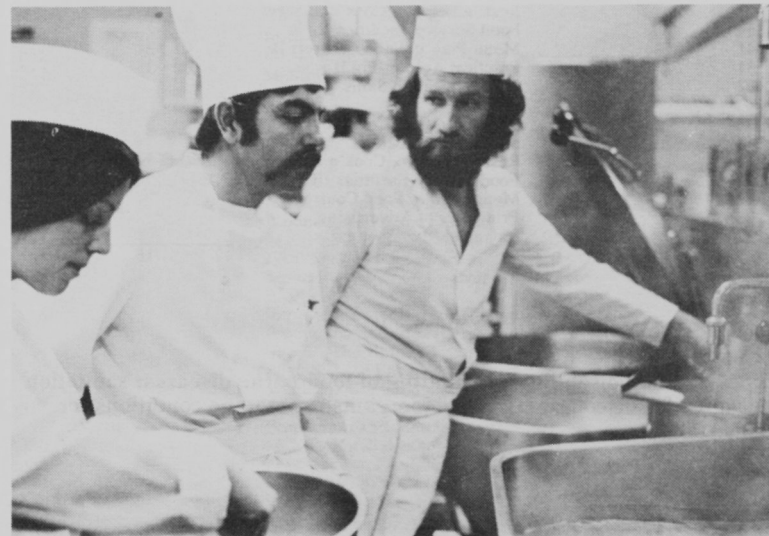
Basic knowledge and techniques through lecture-demonstrations and discussions on the preparation of green, red, yellow, and white vegetables. The various market forms of vegetables from raw to frozen pre-cooked. Rice, pastas, legumes and dried vegetables. Instructions and procedures for preparing entrees from beef, veal, lamb, pork, poultry, fish, variety meats, pastas, vegetables, and dairy products.

8.328

**Materials and Processes: Stocks, Soups and Sauces**

2 class hrs/wk 2 cr. F

Theory and training in preparation of basic and specialty stocks, classic and innovative soups, and the leading mother and secondary warm sauces.



8.329

**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.

8.330

**Materials and Processes: The Bakeshop**

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.

8.335

**Dining Room Lab I**

2 class hrs/wk      2 cr.      F/W/Sp

Provides waiter/waitress experience in coffee shop and tray service settings. Prerequisite: Negative TB test less than 1 year old.

8.336

**Dining Room Lab II**

2 class hrs/wk      2 cr.      S/W/Sp

The student books and supervise banquets, buffets and catered events; identify French and Russian service; schedules and supervises staff; opens and closes dining room, welcomes and seats guests; correctly handles money and cash register; prepares daily reports; demonstrates knowledge of personnel qualifications. Prerequisite: Dining Room Lab I.

8.338

**Cooking for Food Service Managers I**

15 class hrs/wk      5 cr.      F/W/Sp

A second laboratory course in food preparation, with emphasis on mastery of the basic salads and dressings. Students continue to rotate stations on a two-week basis and assume more responsibility in producing a salable product for cafeteria customers. Management majors work on design of salads and design of line set-up for maximum visual appeal. Management majors cost and price salads for sale. Prerequisite: 8.303 Introduction to Professional Food Service.

8.339

**Cooking for Food Service Managers II**

15 class hrs/wk      5 cr.      F/W/Sp

This laboratory section focuses on vegetable and entree preparation. Students cook vegetables, starches and main dishes for service in the college cafeteria. Student cooks prepare entrees according to the various styles of service: restaurant, hotel and institutional. The student begins to assume responsibility for directing a station rotating duties every two weeks. Management students cost and price entree and specials for sale. Prerequisite: Cooking for Food Service Managers I.

8.340

**Menu Planning and Food Controls I**

2 class hrs/wk      2 cr.      F

Cafeteria, coffee shop, dining room, banquet and catering menus planned according to seasonal availability, supplies and food costs, kitchen, dishwash and storage facilities, labor cost, skill level of employees, dining room capacity, leftovers, visual appearance and flavor, nutritional value, energy consumption, popularity, and sales projections.

8.341

**Menu Planning and Food Controls II**

2 class hrs/wk      2 cr.      W

Written specifications and comparative pricing of food and supplies, receiving and issuing procedures; storage requirements for various foods; security procedures; inventory systems. Prerequisite: Menu Planning I.

8.342

**Menu Planning and Food Controls III**

2 class hrs/wk      2 cr.      Sp

Production forecasting, portion controls, food costing, analyzing labor costs; regulations governing overtime, employee taxes and insurance. Prerequisite: Menu Planning II.

8.345

**Dining Room Management**

2 class hrs/wk      2 cr.      Sp

Scheduling staff, booking and supervising banquets and catering, cash register and daily reports, dining room supervision; maitre d' hotel and captain functions. Demonstrations of Russian and French service. Prerequisite: Table, Counter and Banquet Service or Competency demonstrated.

8.346

**Management Lab I**

9 class hrs/wk      3 cr.      F/W/Sp

Practice interviewing job applications and training employees. Writes job descriptions and performance evaluations. Gives talks on cost control procedures to staff. Handles dismissals and grievances.

8.347

**Management Lab II**

9 class hrs/wk      3 cr.      F/W/Sp

Prices, orders, receives and issues food and suppliers for campus food service operation. Sets up inventory system for food, utensils, and supplies. Prepares labor and food cost analysis for campus food service operation. Observes payroll procedures for campus food service.

8.348

**Management Lab III**

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

Prepares and analyzes budgets, P & L statements, and balance sheets for four types of food operations: institutional, fast food, coffee shop and deluxe restaurant. Develops a promotional campaign. Lays out deluxe and coffee shop menu. Prerequisite: Management Lab II.

8.350

**Table, Counter and Banquet Service**

2 class hrs/wk 2 cr. W

Setting tables, taking orders; appearance and attitude; hand and tray service for coffee shop and dining respectively; styles of service; wine and bar service, banquet service.

8.351

**Beverage Lists and Controls**

2 class hrs/wk 2 cr. F

Types of spirits and their methods of distillation; wines of America, France, Italy, Germany; wine storage facilities, liquor regulations, bar stock levels, bar layout, inventory controls and pricing. Open to non-majors. All students must have an OLCC card.

8.353

**Food Facilities I**

2 class hrs/wk 2 cr. F

Safety and sanitation regulations; fire prevention; emergency procedures; overview of electrical, plumbing, refrigerations, heating and air conditioning systems; repair and maintenance procedures, costs and schedules; reducing utility expenses. Open to other interested majors.

8.354

**Food Facilities II**

2 class hrs/wk 2 cr. W

Design and layout for various types of food service operations; the menu determines space, storage and equipment requirements; blue print reading; building codes. Open to non-majors.

8.355

**Food Facilities III**

2 class hrs/wk 2 cr. Sp

Leasing and owning; land, shell, building, turnkey operation; analyzing existing facilities; estimating remodeling costs; licensing; insurance and property taxes; preparing a feasibility study, resume writing. Open to other interested majors.

8.360

**History of Food Preparation**

2 class hrs/wk 2 cr. On Demand

The whys of the way foods are prepared and served in the restaurants as they are today. Emphasis on French haute cuisine. The names of historical figures and 'martyrs' and the parts they played. The reason different wines are served and used with different foods. Culinary art in America.



# 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.

**Option A**

Course No.	Course Title	F	W	Sp
1.101-2	Communication Skills I, II	3	3	
2.501-3	Typing I, II, III	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	
2.530	Practical Accounting I		3	
2.526	Duplicating Equipment		1	
2.527	Transcribing Machines I			3
2.610	Clerical Office Procedures			3
		14	15	15

**Option B**

Course No.	Course Title	F	W	Sp
1.101-2	Communication Skills I, II	3	3	
2.501-3	Typing I, II, III	3	3	3
2.537	Personal Shorthand		3	
2.538	Applied Personal Shorthand			3
2.515	Business Math	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
	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 awarding of an Associate of Science Degree.

**Freshman Year**

**Option A**

Course No.	Course Title	F	W	Sp
1.101-2	Communication Skills I, II	3	3	
2.501-3	Typing I, II, III	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	
2.530	Practical Accounting I		3	
2.526	Duplicating Equipment		1	
2.527	Transcribing Machines I			3
2.610	Clerical Office Procedures			3
		14	15	15

**Option B**

Course No.	Course Title	F	W	Sp
1.101-2	Communication Skills I, II	3	3	
2.501-3	Typing I, II, III	3	3	3
2.537	Personal Shorthand		3	
2.538	Applied Personal Shorthand			3
2.515	Business Math	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
	Elective	1		3
		15	15	15

**Sophomore Year**

**Option A**

Course No	Course 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	Bus. Conference Techniques		3	
		16	14	15

**Option B**

Course No	Course Title	F	W	Sp
2.613-4	On-The-Job Training		4	4
2.415	Human Relations in Business	3		
2.510	Intro. 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	Bus. 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

**Educational Secretary**

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
2.501-3	Typing I, II, III	3	3	3
2.541	Stenography I, II, III	3	3	3
	or	or	or	or
2.530-2	Practical Accounting I, II, III	3	3	3
1.101-2	Communication Skills I, II	3	3	
HE 250	Personal Health	3		
2.551	Business Correspondence		3	
2.415	Human Relations in Business			3
2.610	Clerical Office Procedures			3
2.521	Office Machines			2
PE 180/190	Physical Education		1	1
2.650	Records Management for Educational Secretaries		3	
	Electives	3		
		15	16	15

**Sophomore Year**

Course No.	Course Title	F	W	Sp
2.509	Intro. to Data Processing	4		
PSY 201-3	General Psychology	3	3	3
9.764	Oregon School Law	3		
HE 252	First Aid	3		
SP 111	Beg. 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

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

### Legal Secretary [Proposed]

This two-year degree prepares 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.

#### Freshman Year

Course No.	Course Title	F	W	Sp
1.101-2	Communication Skills I, II	3	3	
2.501-2	Typing I, II	3	3	
2.541-3	Stenography I, II, III	3	3	3
2.515	Business Math	3		
2.500	Business Orientation	1		
2.518	Business Law	3		
2.660	Legal Terminology		3	
2.521	Office Machines		2	
2.652	Filing		1	
2.551	Business Correspondence			3
2.530	Practical Accounting I			3
2.661	Legal Typing			3
2.610	Clerical Office Procedures			3
		16	15	15

#### Sophomore Year

Course No.	Course 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 in Business	3		
2.663	Legal Procedures and Ethics	3		
PE 180/190	Physical Education	1	1	1
2.662	Legal Transcription		3	
2.645	Bus. Conference Techniques		3	
2.613-4	On-The-Job Training		4	4
HE 250	Health			3
2.653	Word Processing			3
	Electives	2	1	
		15	15	14

### Medical Office Assistant [Proposed]

The medical office assistant program trains students to do some medical tasks as well as performing administrative and/or clerical duties in support of the medical receptionist. The office assistant is trained to assist with equipment sterilization, x-ray and patient preparation tasks which do not have to be done by a licensed nurse. An Associate of Science degree is given to students completing the two-year program.

#### Freshman Year

Course No.	Course Title	F	W	Sp
1.101-2	Communication Skills I, II	3		3
2.501-2	Typing I, II	3	3	
2.500	Business Orientation	1		
2.652	Filing	1		
5.630	Anatomical Terminology	3		
2.521	Office Machines*	1		
2.526	Duplicating Equipment		1	
2.415	Human Relations in Business		3	
5.625-6	Clinical Office Procedures I, II		4	4
2.506	Medical Typing			3
HE 252	First Aid			3
PE 180/190	Physical Education	1		
5.631	Pharmaceutical Terminology			2
	Electives		4	
		13	15	15

#### Sophomore Year

Course No.	Course Title	F	W	Sp
2.670	Medical Procedures & Ethics	3		
5.627	Clinical Office Proc. III	4		
2.530	Practical Accounting I	3		
2.645	Bus. Conference Technique	3		
2.551	Business Correspondence		3	
2.613-4	On-The-Job Training		4	4
PE 180/190	Physical Education		1	1
2.510	Intro. to Data Processing			4
	Electives	3	7	6
		16	15	15

#### Suggested Electives

Business Math  
Transcribing Machines I  
Medical Transcription I  
Medical Transcription II

\*Electronic calculator.

### 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.	Course Title	F	S	Sp
2.501-2	Typing I, II	3	3	
1.101	Communication Skills I		3	
2.500	Business Orientation	1		
2.515	Business Math	3		
2.652	Filing	1		
PE 180/190	Physical Education	1		
2.521	Office Machines		2	
2.526	Duplicating Equipment		1	
2.537	Personal Shorthand		3	
2.538	Applied Personal Shorthand			3
5.633-4	Medical Terminology I, II		3	3
2.506	Medical Typing			3
2.527	Transcribing Machines I			3
2.610	Clerical Office Procedures			3
5.630	Anatomical Terminology	3		
	Electives*	3		
		15	15	15

\*The student desiring Gregg shorthand should start the sequence his first term and take it in place of Personal Shorthand and Applied Personal Shorthand.

#### Sophomore Year

Course No.	Course Title	F	W	Sp
2.524-5	Medical Transcription I, II	3	3	
2.670	Medical Procedures & Ethics	3		
5.625	Clinical Office Procedures I	4		
2.530	Practical Accounting I	3		
2.415	Human Relations in Business	3		
2.645	Bus. Conference Techniques			3
2.551	Business Correspondence		3	
HE 252	First Aid		3	
2.613-4	On-The-Job Training		4	4
2.510	Intro. to Data Processing			4
5.631	Pharmaceutical Terminology			2
PE 180/190	Physical Education			1
1.102	Communication Skills II		3	
		16	16	14



### Medical Transcriptionist

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.

Course No.	Course Title	F	W	Sp
2.501-2	Typing I, II	3	3	
2.506	Medical Typing			3
2.500	Business Orientation	1		3
5.633-4	Medical Terminology I, II		3	3
1.101-2	Communication Skills I, II	3	3	
2.529	Applied Medical Transcription			6
2.527	Transcribing Machines I		3	
2.415	Human Relations in Business	3		
2.551	Business Correspondence		3	
5.630	Anatomical Terminology	3		
5.631	Pharmaceutical Terminology			2
	Electives	2		1
		<hr/>	<hr/>	<hr/>
		15	15	15

### SS 111

#### Stenography

5 class hrs/wk 3 cr. 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 3 cr. 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. Prerequisite: SS 111 or equivalent. Students are given the opportunity to advance at their own rate.

### SS 113

#### Stenography III

5 class hrs/wk 3 cr. 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. Prerequisite: SS 112 or equivalent. Students are given the opportunity to advance at their own rate.

### 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 3 cr.\* F/W/Sp

Beginning typing for those with no previous instruction or those needing a review of basic techniques. Basic techniques of the touch system, 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 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 122 or equivalent.

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

### SS 123

#### Typewriting III

5 class hrs/wk 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/W/F/Sp

Special emphasis on speed and accuracy. Special drills to work on numbers and remedial techniques. Prerequisite: Permission of Business Division required for enrollment.

\*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 3 cr. 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 3 cr. 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 3 cr. 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: 2.502 or equivalent.

2.504

**Typewriting IV**

5 class hrs/wk 3 cr. 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. 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 3 cr. 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. 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 3 cr. 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 2 cr. F/W/Sp

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

2.522

**Advanced Office Machines**

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

2.528

**Transcribing Machines II**

5 class hrs/wk 3 cr. 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 6 cr. 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. Prerequisites: 2.501 and 5.633.

2.537

**Personal Shorthand**

5 class hrs/wk 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 Personal Shorthand**

5 class hrs/wk 3 cr. Sp

Extensive review of ABC Stenoscript Shorthand 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.

2.541

**Stenography I [Gregg]**

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

Emphasis on further development of speed and accuracy in dictation and transcription. Intensive 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, dictation 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 and job interviewing. Students are employed in a simulated office in the classroom integrating all office skills and techniques. Prerequisite: 2.502, Typing II.

2.613-5

**On-the-Job Training [Secretarial]**

3-36 cl. hrs/wk      1-12 cr.      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.

2.647

**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/Sp

Provides the business student with experience in preparing minutes of meetings, inter-office reports, and formal business reports. Prerequisite: 1.101 Communication Skills I or equivalent.

2.652

**Filing**

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

Operation of the CPT Automatic Typewriter and IBM 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.      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.

2.655

**IBM Memory Typewriter Operation**

2 class hrs/wk      1 cr.      F/W/Sp

Operation of the IBM Memory Typewriter. Course includes procedures for recording, reading, duplicating, skipping and revising information.

2.660

**Legal Terminology**

3 class hrs/wk      3 cr.      F

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      3 cr.      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.      W

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**

3 class hrs/wk      3 cr.      F

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, and 2.662.

2.670

**Medical Procedures and Ethics**

3 class hrs/wk      3 cr.      F

Specifics of working in a medical office stressed, including insurance, medical records, medical law and ethics, and administrative procedures. Prerequisites: 2.503, 5.633, and 5.634.

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.

9.764

**Oregon School Law [for Educational Secretaries]**

3 class hrs/wk      3 cr.      On Demand

Legal framework for education, creation and administration of school districts, pupil control, contractual relations and conduct of schools in general.

# industrial programs

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

## Two-Year Programs

1. A two-year program in Auto Mechanics;
2. A two-year program in Machine Tool Technology;
3. A two-year program in Metallurgical Technology;
4. A two-year program in Auto Body Repair;
5. A two-year program in Small Engine and Recreational Vehicle Repair;
6. A two-year program in Welding;
7. A two-year program in Construction Technology-Carpentry;

The above programs lead to a two year certificate or to an Associate of Science degree. Students should contact the Department Chairman of the applicable program to determine the requirements for whichever option they wish to acquire.

## General Industrial Technology

3.425

### Employment Search Technique

1 class hr/wk      1 cr.      Sp

Designed to aid the student in securing employment. Emphasis upon personal interviews, letters of application, and organizing a personal resume. Local personnel managers will be invited to class sessions to discuss aspects of job applications and to discuss why some applicants fail to get jobs.

3.444

### Welding Metallurgy I

5 class hrs/wk      4 cr.      Sp

Introduction to the physical and mechanical properties of weld metal and how the application of soldering, brazing, and fusion processes affect the structural and service requirements of metal joints. Determination of operator's responsibility for completing joints in welded metals capable of matching or exceeding the strength and reliability of the base metals.

3.445

### Welding Metallurgy II

5 class hrs/wk      4 cr.      W

Introduction to the basic processes of welding fabrication as they effect metallic products. Structural characteristics of metals as they relate to quality low-cost welded assemblies. Prerequisite: Welding Metallurgy I 3.444 or consent of instructor.

3.462

### Industrial Electricity

5 class hrs/wk      3 cr.      F

Introduction to principles and applications of electricity in industry. Studies of the properties of conduction and insulators, the basic electrical and electronic circuits in testing equipment, principles and maintenance of AC and DC motors and generators, their controls, switching gear, and circuit protection devices.

4.108

### Industrial Safety and First Aid

3 class hrs/wk      3 cr.      F/W/Sp

Accident prevention and first aid in industry through development of safety practices relating to personnel, design, equipment and maintenance. Requirements for First Aid Certification by the American Red Cross are met.

4.120

### Fundamentals of Specifications

5 class hrs/wk      3 cr.      Sp


Usage and practice in the preparation and interpretation of manufacturing and fabrication specifications. Practical problems are assigned to relate class-work to industry.

4.127

**Industrial Practices**

5 class hrs/wk 3 cr. On Demand

Analysis of the technical procedures and processes used in industry, manufacturing and fabrication terminology, methods, materials, and tools are studied as they relate to major course requirements. Visitations to local industries are related with class assignments.



## 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**

Course No.	Course Title	F	W	Sp
3.511	Auto Body Repair I	12		
3.512	Auto Body Repair II		12	
3.513	Auto Body Repair III			12
4.151	Welding I	3		
4.152	Welding II		3	
PE 180/190	Physical Education	1	1	1
HE 252	First Aid			3
		<hr/>	<hr/>	<hr/>
		16	16	16

Suggested Electives

		F	W	Sp
4.202	Math II		4	
2.110	Principles of Salesmanship			3

**Sophomore Year**

Course No.	Course Title	F	W	Sp
3.514	Auto Body Repair IV	12		
3.515	Auto Body Repair V		12	
3.516	Auto Body Repair VI			12
4.108	Industrial Safety			3
1.101	Communication Skills I	3		
1.102	Communication Skills II		3	
		<hr/>	<hr/>	<hr/>
		15	15	15

Suggested Electives

		F	W	Sp
2.515	Business Mathematics	3		
2.651	Business Report Writing			3

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 12 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 12 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 12 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 12 cr. F/W/Sp

Principles of conventional and unitized frame member construction and alignment. Straightening frame damage, replacing necessary members, tramping, 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 12 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 material jobs, and judgment items. Agreed prices and guaranteed bids are contrasted.

### 3.516

**Auto Body Repair VI**  
**20 class hrs/wk**      **12 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 had two programs, the Certificate and Associate of Science Degree programs. The Certificate program provides the student with qualifications in one or more specific areas related to the Auto Mechanics Trade.

The Associate of Science Degree program provides the student with qualifications in all areas of auto mechanics as well as all academic 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 employment 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.	Course Title	Credits
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**	6
4.151	Welding I	3
4.130	Machine Processes	2
1.101	Communication Skills I	3
4.108	Industrial Safety-First Aid	
or		3
HE 250	Personal Health	
4.202	Math II	4
PE 180/190	Physical Education	3
1.112	Technical Report Writing	3
2.415	Human Relations in Business	3
		<hr/> 90

\*Block IV must be taken before Block V

\*\*to be taken concurrently with the last block taken.

\*\*\*6.330 General Electricity I is recommended to be taken prior to Auto Mechanics IV.

### 3.295

**Auto Mechanics I**  
**22 hrs/wk**      **10 cr.**      **F**

Introduction to correct shop procedures and cleanliness. Information on the correct selection, use, care and safety of tools and equipment in conjuncture with skill development for the repair and adjustment of auto brakes, suspension/steering systems, and wheel balance.

### 3.296

**Auto Mechanics II**  
**22 hrs/wk**      **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.

### 3.297

**Auto Mechanics III**  
**22 hrs/wk**      **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.

### 3.298

**Auto Mechanics IV**  
**22 hrs/wk**      **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.

**3.299****Auto Mechanics V****22 hrs/wk 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.

**3.300****Auto Mechanics VI****22 hrs/wk 10 cr.**

Operating principles, testing, and repair procedures of the automatic 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.

**3.301****Auto Mechanics VII****12 class hrs/wk 6 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 an dealership, to prepare the student for job entry.

**3.305****Automotive Fundamentals****9 class hrs/wk 6 cr. On Demand**

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. General conceptual knowledge in the internal combustion engine and its parts nomenclature. Methods of power transmissions and other mechanical devices, as they pertain to the automobile.

## construction technology- carpentry

A two-year curriculum in the carpentry trade is the major emphasis of LBCC's Construction-Technology-Carpentry program. Students completing the program have the necessary skills to pursue a variety of employment options in the building trades industry, and related occupations.

Carpenters 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.

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

The types of work performed by carpenters include erecting frameworks, building stairs, laying hardwood floors, and building forms used to pour concrete in the construction of bridges and buildings.

Carpenters, particularly those in rural areas, where there is less specialization, may perform the 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 a home.

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.	Course Title	F	W	Sp
3.200-2	Wood Technology	10	10	10
3.429	Blueprint Reading for the Construction Trades	2		
	Math II	4		
4.202	Drafting I-Construction		3	
3.205	Communication Skills I		3	
1.101	Drafting II-Construction			3
3.206	Business Report Writing			3
2.651				
		16	16	16

**Sophomore Year**

Course No.	Course Title	F	W	Sp
3.211-3	Wood Technology	6	8	8*
2.530	Practical Accounting I	3		
4.108	Industrial Safety	3		
PE 180/190	Physical Education	1	1	1
HE 252	First Aid	3		
2.531	Practical Accounting II		3	
3.215	Construction Estimating Codes, Contracts, and Specifications		4	
4.300	Practical Physics			4
2.534	Cost Accounting			3
		16	16	16

\*1.200

Cooperative Work Experience

**3.200-2, 3.211-13  
Wood Technology****20 class hrs/wk 10 cr. F/W/Sp**

Theory, fundamental and practical "hands-on" experience in converting blueprint reading, practical "on-site" estimating, surveying, masonry,



and all aspects of framing and finishing to a finished product. Field trips to suppliers, manufacturers, and special action construction sites.

### 3.205

#### Drafting I-Construction

5 class hrs/wk 3 cr. W

A drafting program to develop the student's spatial progress through geometric constructions 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.



## 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.

#### Freshman Year

Course No.	Course Title	F	W	Sp
3.403-5	Machine Tools I, II, III	10	10	10
4.100	Blueprint Reading & Sketching	2		
4.202.4	Mathematics		4	4
PE 180/190	Physical Education		1	1
4.151	Welding I	3		
HE 252	First Aid	3		
		18	15	15

#### Sophomore Year

Course No.	Course Title	F	W	Sp
3.406-8	Machine Tools IV, V, VI	10	10	10
6.293	Intro. to Metallurgy	2		
2.651	Business Report Writing			3
1.101	Communication Skills I		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 machine arts of drill presses. Primary emphasis will 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 layout, 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 material 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 the 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.



**AI**  
**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**

Course No.	Course Title	F	W	Sp
6.293	Intro. to Metallurgy	4		
6.276	Physical Metallurgy		4	
6.294	Process Metallurgy			4
4.151	Welding I			3
3.444	Welding Metallurgy			4
4.100	Blueprint Reading & Sketching	2		
4.205-6	Basic Chemistry I, II	4	4	
Mth 95	Intermediate Algebra			
or				
6.551	Technical Math I	4		
Mth 101	College Algebra		4	
or				
6.552	Technical Math II		4	
4.300-2	Practical Physics		4	4
PE 180/190	Physical Education	1	1	1
Suggested Electives		15	17	16
2.415	Psychology for Supervisors			
2.121	Applied Economics			
4.122	Strength of Materials			
3.162	Photography			
6.288	Vacuum Technology			

**Sophomore Year**

Course No.	Course Title	F	W	Sp
1.101	Communication Skills I		3	
2.645	Bus. 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	Non-Destructive Testing I	3		
6.282	Non-Destructive Testing II		3	
6.293	Non-Destructive Testing III			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. W

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. Sp

A continuation of Non-destructive Testing I with a major emphasis upon ultrasonic and radiographic methods of 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, photomicrography 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, compression, torsion, and shear. Three major factors will be involved including metals, time and force. Mechanical properties of metal will be examined as these properties relate to service performance. Prerequisite: Industrial Math III and Slide Rule.

## 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, outboard marine engines 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 water pumps, chain saws, drill 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 courses) or more in this program.

#### Freshman Year

Course No.	Course Title	F	W	Sp
3.560	Small Engine Repair I	10	10	10
or 3.562	Small Engine Repair III	10	10	10
or 3.570	Recreational Vehicle Repair I	10	10	10
4.200-2	Math I and II	4	4	
PE 180/190	Physical Education	1		
HE 252	First Aid			3
or HE 250	Personal Health			3
1.101	Communications Skills I		3	
1.200	S.F.E. Small Engine Repair or Elective, Science & Tech.			3
		15	17	16

#### Sophomore Year

Course No.	Course Title	F	W	Sp
3.561	Small Engine Repair II	10	10	10
or 3.563	Small Engine Repair IV	10	10	10
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			3
or 1.102	Communication Skills II			3
or 1.112	Technical Report Writing			3
or 1.200	S.F.E. Small Engine Repair or Electives, Hum. & Soc. Ser.		3	
4.108	Industrial Safety			3
		14	14	16

#### 3.556

##### Basic Small Engine Repair

6 class hrs/wk 3 cr. 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.

#### 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 of related 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 welder certification tests. These tests are administered by independent agencies. A one-year Certificate of Completion will be issued upon fulfillment of the program requirement.

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.

**Freshman Year**

Course No.	Course Title	F	W	Sp
3.444	Welding Metallurgy			4
4.100	Blueprint Reading & Sketching	2		
4.108	Industrial Safety			3
4.200, 4.202	Mathematics I, II	4	4	
4.240	Basic Arc Welding	6		
4.241	Intermed. Arc Welding		6	
4.242	Basic Oxyacetylene Welding	4		
4.243	Intermed. Oxyacetylene Weld.		4	
4.245	Layout Procedures for Welding		3	
4.246	Adv. Arc Welding			6
4.250	Adv. Oxyacetylene Welding			4
Suggested Elective		16	17	17
4.153	Welding Seminar Sp-3			

**Sophomore Year**

Course No.	Course 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		
4.255	Fabrication & Repair Pract. I	6		
1.101	Communication Skills I		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 for Business			3
3.555	Hydraulics and Pneumatics			3
4.257	Fabrication & 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 rods and composition of metal and application. (For non-majors)

**4.153****Welding Seminar****3 class hrs/wk 3 cr. 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****8 class hrs/wk 4 cr. F/W/Sp**

Necessary information and skill development to successfully undergo certain welder certification tests administered by independent agencies. Several tests are 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.



# 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, home economics, speech, philosophy, religion, foreign languages) 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 communication, 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.

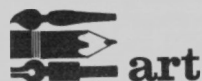
**Director:**

Kenneth Cheney

**Faculty:**

Regina Andreasen, Social Science  
 Martha Ayers, Speech-Drama  
 Arthur Bervin, English  
 J.W. Brick, Art  
 Shirley Call, English  
 Thomas Chase, English  
 Douglas Clark, Social Science  
 Russell Durham, Social Science  
 Richard Hankey, Criminal Justice,  
 Department Chairman

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 Chairman  
 Jennifer Spiker, Journalism  
 William Sweet, English  
 Clinton Tobey, Art, Department Chairman  
 Richard West, Music  
 Barbarajene Williams, English  
 Dwain Wright, Graphic Communication,  
 Department Chairman



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 a 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      3 cr.      F/W/Sp

Introduction to techniques of construction with fiber through weaving, macrame, stitchery. Emphasis on design considerations. \$2.00 lab fee.

**AR 102**

**Weaving II**

2 lec/4 lab      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      3 cr.      F/W/Sp

Introduction to the design field through study of art elements and principles and visual and psychological aspects of color. Students will explore applications; emphasis on developing sound judgment and individual creative growth.

**AR 196**

**Design II**

2 lec/4 lab      3 cr.      Sp

Continuation of two-dimensional design principles into three-dimensional considerations; development of sensitivity to structure and form. Prerequisite: AR 195.

**AR 201**

**Survey of Visual Arts—Sculpture and Architecture**

3 class hrs/wk      3cr.      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.

## humanities

The Humanities and Social Services Division offers the following types of courses and programs to meet a variety of student needs.

**Two-Year Program**

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 Communication 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).

**AR 202****Survey of Visual Arts—Photography in Motion Pictures****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 the overall dramatic impact of a film. \$5.00 film fee.

**AR 203****Survey of Visual Arts—History of Art****3 class hrs/wk 3 cr. Sp**

Survey the scope of the visual arts; historical development and contemporary impact pertaining to illustration, printmaking, easel and mural painting.

**AR 204, 205, 206****Intro. 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 3 cr. on demand**

Articulation of design concepts in textile. Original design production using dyeing processes. Studio experience in batik, dye painting, tie dye, and other dye techniques, with exploration of combined techniques.

**AR 235****Jewelry and Metalsmithing I****2 lec/4 lab 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 lab fee.

**AR 236****Jewelry and Metalsmithing II****2 lec/4 lab 3 cr. F/W/Sp**

Continued work in the design and creation of jewelry and other metal fabrication. Prerequisite: AR 235. \$5.00 lab fee.

**AR 255****Ceramics I****2 lec/4 lab 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 lab fee.

**AR 256****Ceramics II****2 lec/4 lab 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 lab fee.

**AR 281****Figure Drawing****2 lec/4 lab 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. \$5.00 model fee.

**AR 282****Intermediate Drawing****2 lec/4 lab 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 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 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 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 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 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 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 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**

**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 curriculum following toward graduation requirement 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 21.

**Law Enforcement**

**Freshman Year**

Course No.	Course Title	F	W	Sp
CJA 111	Introduction to Criminal Justice	3		
5.230	Fundamentals of Crime & Delinquency	3		
	Wr 121 or Com. Skills I	3		
	P.E. Activity	1		
	Math and/or Science	3		
	Elective or SFE	3		
CJA 112	Intro. to Criminal Justice		3	
CJA 211	Criminal Law I		3	
	Wr 122 or Com. Skills II Composition		3	
	P.E. Activity		1	
	Humanities or Social Science Elective		3	
	Elective or SFE		3	
CJA 113	Intro. to Criminal Justice			3
CJA 212	Criminal Law II			3
HE 252	First Aid			3
	P.E. Activity			1
	Elective or SFE			3
		16	16	13

**Sophomore Year**

Course No.	Course Title	F	W	Sp
CJA 219	Community Relations	3		
5.220	Concepts of Enforcement Ser.	3		
	Electives or SFE	6	3	
CJA 214	Criminal Investigation		3	3
CJA 213	Legal Aspects of Evidence	3		
	Electives or SFE		9	
5.236	Introduction to Juvenile Del.			3
	Electives or SFE			12
		15	15	15

**Corrections**

**Freshman Year**

Course No.	Course Title	F	W	Sp
CJA 111	Intro. to Criminal Justice	3		
5.231	Civil Procedures	3		
	Wr 121 or Com. Skills I	3		
	P.E. Activity	1		
	Math and/or Science	3		
	Elective or SFE	3		
CJA 112	Intro. to Criminal Justice		3	
CJA 211	Criminal Law I		3	
	Wr 122 or Com. Skills II		3	
	P.E. Activity		1	
	Humanities or Soc. Science elec		3	
	Elective or SFE		3	
CJA 113	Intro. to Criminal Justice			3
HE 252	First Aid			3
	P.E. Activity			1
	Elective or SFE			6
		16	16	13

**Sophomore Year**

Course No.	Course Title	F	W	Sp
5.230	Fund. of Crime & Delinquency	3		
CJA 219	Community Relations	3		
	Electives or SFE	6	3	
5.233	Institutions and Agencies		3	
CJA 213	Legal Aspects of Evidence	3		
	Electives or SFE		9	
5.229	Intro. to Interviewing			3
	Electives or SFE			12
		15	15	15

### **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.

#### **CJA 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.

#### **CJA 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: CJA 111 or consent of instructor.

#### **CJA 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: CJA 111 or consent of instructor.

#### **CJA 211**

##### **Introduction to Criminal Law I** 3 class hrs/wk      3 cr.      W

Historical development, philosophy of law and constitutional provision; definitions, classification 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: CJA 111 or consent of instructor. Not open to students who completed CJS 212 prior to September 1974.

#### **CJA 212**

##### **Introduction to Criminal Law II** 3 class hrs/wk      3 cr.      Sp

Developmental history in 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: CJA 111 or consent of instructor. Not open to students who completed 5.220 prior to September 1974.

#### **CJA 213**

##### **Legal Aspects of Evidence** 3 class hrs/wk      3 cr.      F

Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search, and

seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. Prerequisite: CJA 111 or consent of instructor.

#### **CJA 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: CJA 111 or consent of instructor.

#### **CJA 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: CJA 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: CJA 111 or consent of the 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: CJA 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: CJA 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: CJA 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: CJA 111 or consent of instructor.

1.200/WE 201

**Supervised Field Experience**

3-16 cr. F/W/Sp

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

1.201

**Field Experience Seminar**

1 cr. F/W/Sp

Refer to the Cooperative Work Experience section of this catalog.



## 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. F/W/Sp

Survey of theatre past and present. Development of dramatic literature, performers, theatres and theatre organizations. Detailed look at modern theatre organization 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 to 3 hrs. 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 to 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 sessions.

**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.      W/Sp**

Advanced practical work in oral communication centering on semantics in action; group interaction and 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.



# english

The English and Journalism curriculum is designed to provide skill-building opportunities in written communication as well as aesthetic appreciation and understanding of the various literary genres.

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## foreign language

**RL 60, 61, 62****First Year Spanish****4 class hrs/wk      4 cr.      F**

First year of a two-year sequence. Stresses aural comprehension and oral expression for the beginning student. Must be taken in sequence.

**RL 107, 108, 109****Second Year Spanish****4 class hrs/wk      4 cr.      F**

Further development of comprehension, speaking, reading, and writing skills. Prerequisite: RL 60, 61, 62.

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## 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.



## 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) Chaucer through Milton; (102) Defoe through Wordsworth and Keats; (103) Browning to the present.

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

### Writing

#### WR 121

##### English Composition

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

Study of the elements of English Composition intended to develop skill in writing and understanding expository prose. Special attention to correctness of fundamentals, organization and development of a unified theme. Frequent written themes and tutorial conferences.

#### WR 122

##### English Composition

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

Study of the procedures and methods used to produce the research paper. Special attention to library research techniques and organization and development of argumentative research writing to include bibliographical development, note taking, and outlining. Prerequisite: WR 121.

#### WR 123

##### English Composition

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

Study of creative writing that examines the compositional design of the poem, play, and short story, and makes application of these modes in the student's writing experiences. Primary emphasis on developing the writing of each student by providing the opportunities to examine, explore, and experience the imaginative writing process. Prerequisite: WR 121.

#### 1.101

##### Communication Skills I

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

Open-ended, programmed-learning approach to basic usage and grammatical skills. The approach is clinical in nature. Students progress at their own speed. Pretest performance may excuse students from one or all units. Individual assistance is emphasized.

#### 1.102

##### Communication Skills II

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

Basic rhetorical skills, emphasizing expository writing. Not open-ended, the approach is traditional. Practice in business-oriented as distinguished from academic writing is stressed. Prerequisite: 1.101.

#### 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: 1.101 or equivalent.

### 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

Elements of fiction (dialogue, setting, characters, tone), analyzing stories of established writers and applying the knowledge to the student's own work. Major emphasis placed on individual development as a creative writer.

#### WR 242

##### Introduction to Imaginative Writing

3 class hrs/wk 3 cr. W/Sp

Introduction to major concerns of poetry writing technique and form by studying the writings of accomplished poets and experimenting with these discoveries in student's own writing. Major emphasis on the development of individual work.

#### WR 243

##### Introduction to Imaginative Writing

3 class hrs/wk 3 cr. W/Sp

Advanced course in style and technique designed to intermix studies of poetry and fiction in complementary manner. Major emphasis on revision of work in progress. Course is conducted in a workshop fashion. Prerequisite: WR 241 or WR 242, or consent of instructor.



## graphic communication

Graphic Communication is a 90 hour, Associate Degree program in which students have the option of majoring either in commercial art or graphic production technology. The curriculum requires 18 hours of general education, 14-26 hours of elective credit, 23 hours of basic graphic courses, and 23-35 hours of specialized training in the graphic field of major interest.

Vocational opportunities for those majoring in graphic production technology include: photographer, stripper, darkroom technician, platemaker, duplicating machine operator, offset press helper, silk

screen printer, cameraman, bindery helper, and typesetter.

Vocational opportunities for those majoring in commercial art include: sign painter, showcard painter, 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, silk screen printer.

Candidates for the associate degree in graphic communication must complete the following courses.

**Commercial Art**

**Freshman Year**

Course No.	Course Title	F	W	Sp
3.150	Intro. to Graphic Comm.	3		
3.151	Publication Design	3		
AR 195	Design I	3		
AR 291	Drawing Fundamentals	3		
1.101	Communication Skills I	3		
	P.E. Activity	1		
3.170	Art Tools		3	
3.158	Typography		3	
3.162	Intro. to Photography		3	
AR 282	Intermediate Drawing		3	
1.102	Communication Skills II		3	
	P.E. Activity		1	
3.154	Sign Writing			3
3.152	Layout and Pasteup Procedures			3
AR 281	Figure Drawing			3
3.180	Publications Lab			2
	P.E. Activity			1
	Elective			3
		16	16	15

**Sophomore Year**

Course No.	Course Title	F	W	Sp
3.172	Commercial Illustration I	3		
3.166	Graphic Production I	3		
HE 250	Personal Health	3		
3.180	Publication Lab	2		
	Elective	3		
3.173	Commercial Illustration II		3	
3.180	Publication Lab		2	
4.124	Technical Drawing I		2	
	Electives		7	
3.174	Commercial Illustration III			3
4.123	Technical Illustration			3
4.115	Presentation Drawing			2
	Electives or SFE			7
		14	14	15

**Graphic Production Technology**

**Freshman Year**

Course No.	Course Title	F	W	Sp
3.150	Intro to Graphic Comm.	3		
3.151	Publication Design	3		
AR 195	Design I	3		
1.101	Communication Skills I	3		
HE 250	Personal Health	3		
	P.E. Activity	1		
3.162	Introduction to Photography		3	
3.158	Typography		3	
1.102	Communication Skills II		3	
2.501	Typing I		3	
	P.E. Activity		1	
	Elective		3	
3.164	Basic Graphic Arts Photo.			3
3.152	Layout and Pasteup Procedures			3
2.505	Typing Skill Building			3
	P.E. Activity			1
	Electives			6
		16	16	16

**Sophomore Year**

Course No.	Course Title	F	W	Sp
3.166	Graphic Production I	3		
3.181	Production Lab	2		
	Electives	10		
3.167	Graphic Production II		4	
3.182	Typesetting		2	
3.181	Production Lab		2	
4.124	Technical Drawing I		2	
	Electives		4	
3.168	Graphic Production III			4
3.181	Production Lab			2
	Electives or SFE			9
		15	14	15

**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.

**3.150**

**Introduction to Graphic Communication**

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

Survey course of commercial art, advertising design, illustration, printing and related areas. The basic printing processes of silkscreen, letterpress, offset and gravure printing are examined for operation and application to specific printing jobs. Also included is a study of printing papers.

**3.151**

**Publication Design**

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

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.

**3.152****Layout and Paste-up Procedures****2 lec/4 lab hrs/wk 3 cr. Sp**

Preparation of mechanical art. The terminology and practice of layout, pasteup, headlines, and body copy. Use of headliner, body copy setter, lucigraph and related tools. Imposition, binding, diecutting, sealing and positioning of illustrative matter, the screen print of "Velox" reverse copy, screen tints, mechanical assembly, overlays, color preparations, the preparation of mechanical art and preparation of illustrations. Also included are line art, halftone art. Prerequisite: 3.151 or consent of instructor.

**3.154****Sign Writing****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. Point of sale, direct mail, editorial, window, point of purchase and other graphic design projects. Materials and methods of printing, cutting and folding are explored to elicit both tactile and visual expression. \$5.00 lab fee. Prerequisite: 3.158 or consent of instructor.

**3.158****Advertising Typography****2 lec/4 lab 3 cr. 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 the phototypesetter, phototype, and the new transfer lettering sheets are studied. Prerequisite: 3.150 or consent of instructor.

**3.162****Introduction to Photography****1 lec/4 lab 3 cr. F/W/Sp**

An introduction primarily to black and white, but including color photography. Students calculate their exposures, develop film, and print enlargements. Primarily includes instruction on the 35 mm. cameras, lenses, film, filters, lighting, photographic chemistry, composition, and printing techniques. Demonstrations and individual projects. Students must provide own camera. \$5.00 lab fee.

**3.164****Basic Graphic Arts Photography****2 lec/4 lab 3 cr. Sp**

Basic course dealing with the functions and uses of the process camera for making line negatives and half-tones for offset and other printing processes. Prerequisite: 3.162 or consent of instructor.

**3.166****Graphic Production I****1 lec/4 lab 3 cr. F**

Introduction to graphic production techniques with special emphasis on letterpress, silk screen, and screenless processes. Students engage in type setting, makeup, make-ready, and lock-up activities. Practice in silk screen printing and imagery by various techniques. Introduction to screenless printing techniques by involving collotype and optak processes, and the dry offset process. Assigned projects and critiques. Prerequisite: 3.150 or consent of instructor.

**3.167****Graphic Production II****2 lec/4 lab 4 cr. W**

Introduction to the theory and practice of offset lithography. Preparation of the lithographic negative, stripping and opaquing. Lithographic plates, duplicates, conversions. Press operation, inks, and water systems. Project assignments and critiques. Prerequisite: 3.166 or consent of instructor.

**3.168****Graphic Production III****2 lec/4 lab 4 cr. Sp**

Advanced theory and practice of offset lithography. Special emphasis is given simple process and multicolor reproduction. Skill building in ink mixing, plate and blanket packing and register. Students do their own photography, drawing, negatives, strip their work, make and develop plates and print projects on a variety of papers. Prerequisite: 3.167 or consent of instructor.

**3.170****Art Tools and Their Application****2 lec/4 lab 3 cr. W**

The use of the artists' tools. Pen and ink, brushes, water colors, designers gouache, markers, inks, fixatives, colored pencils, washes, compass, rapidographs, air brush, drying equipment, pastels, matt knives, tapes, drafting machines, pencil pointers, templates, acrylics. Weekly 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 commercial artist.

**3.172****Commercial Illustration I****2 lec/4 lab 3 cr. F**

Basic course in illustration for reproduction. Weekly projects explore the methods and techniques of commercial illustration. Preparation of illustrated matter including visual instruction materials. Students may specialize in their chosen area of interest. Layout and design are of primary intent. Matting, framing presentation, papers, board, effects, are all discussed. Prerequisite: 3.170 or consent of instructor.



3.173

**Commercial Illustration II**

2 lec/4 lab 3 cr. W

Advanced course in commercial illustration. Layout and design and effects of color on various subjects included. Proposed use for reproduction is of prime consideration. Projects cover a wide application of materials, techniques, and styles. Students may choose their area of interest. Prerequisite: 3.172 or consent of instructor.

3.174

**Commercial Illustration III**

2 lec/4 lab 3 cr. Sp

An advanced course in color and black and white illustration. Individual work and study is emphasized. The students may choose their area of interest. Prerequisite: 3.173 or consent of instructor.

3.180

**Publications Lab**

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

Students work on the student newspaper to gain practical experience in the application of graphic arts skills. Maximum of 6 credits.

3.181

**Production Lab**

2-10 lab hrs/wk 1-5 cr. F/W/Sp

Students whose primary interest is in graphic production technology 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.

3.182

**Typesetting**

4 lab hrs/wk 2 cr. W

Introduction of various methods of setting type for publication. Operation of justowriters, the Compugraphic Jr. and the Compugraphic CG 7200 headliner.

1.201/WE201

**Supervised Field Experience**

3-16 cr. F/W/Sp


Supervised Field Experience gives students actual work experience which closely parallels their 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.



**home economics**

The Home Economics curriculum is designed to offer professional training to students seeking a transfer degree as well as to provide general interest elective credit for the non-major. Courses classified under the home economics heading include those relating to home management, clothing and textiles, nutrition (see Science and Technology Division—Biology), and family living.

HM 250

**Decision Making and the Consumer**

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

Concepts associated with home management in various situations include: values, goals, standards, decision-making, management processes, uses of human and material resources to meet individual and family needs.

CT 210

**Clothing Construction**

3 class hrs/wk 3 cr. F/Sp

Application of principles and techniques of construction and fitting to individual projects.

CT 231

**Home Furnishings**

3 class hrs/wk 3 cr. W

The home and its furnishings in relation to function, beauty, and cost.

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.

**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 personnel 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**

Course No.	Course Title	Credits
7.130	Human Service Systems and Personnel	3
7.148	Interviewing Procedures	3
7.153	Behavioral Objectives	2
		8

**Child Care Option**

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

**Adult Services Option**

Course No.	Course Title	F	W	Sp
7.142	Ages/Stages: Early Adult	3		
Soc 199	Women's Studies	3		
HE 250	Personal Health	3		
7.140	Techniques of Observing Behavior	1		
7.153	Behavioral Objectives Electives	2		
		3		
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			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.

7.143

**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 assistants

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).

**9.525**

**Corporations**

**3 class hrs/wk      3 cr.      F**

Gives the legal assistant trainee a general understanding of Oregon corporation law and how to assist the attorney in drafting and preparing documents necessary to the formation of a corporation. Also notices, waivers, minutes of corporate meetings, transferring shares, and preparing annual reports.

**9.543**

**Estate Planning**

**3 class hrs/wk      3 cr.      W**

General study of the planning of estates and the drawing of trusts and wills. Income, gift, and inheritance taxes are related to the planning procedure.

**9.545**

**Bankruptcy**

**3 class hrs/wk      3 cr.      Sp**

General view of the Bankruptcy Act, jurisdiction of bankruptcy court, the duties and powers of the trustee in bankruptcy, and the discharge of bankruptcy. How to assist the attorney in the preparation of petitions, schedules, and other bankruptcy forms.

**9.536**

**Introduction to Law Office Management**

**3 class hrs/wk      3 cr.      F**

Introduction to management and administration concepts of law office management. The development of an efficient support system for the law firm is emphasized. Required for Certification.

**9.541**

**Civil Litigation I**

**3 class hrs/wk      3 cr.      W**


Designed to give the legal assistant trainee a general understanding of the litigation process. An introduction to the differences between civil and criminal litigation with emphasis on civil litigation.

**9.542**

**Civil Litigation II**

**3 class hrs/wk      3 cr.      Sp**

Students work in detail with the forms and documents prepared by legal assistants in the litigation process. Prerequisite: 9.541.

 **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      1 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      1 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 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 cr./6 cr. maximum      F/W/Sp

Performance and rehearsal opportunities of modern jazz, rock, and improvisational music literature. Open by audition only.

**MU 295****Jazz Ensemble**

4 class hrs/wk      2 cr./6 cr. maximum      F/W/Sp

A continuation of MU 195 for advanced students. Open by audition only. Prerequisite: MU 195.

**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 MU214, 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 MU211, 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. max.      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. max.      F/W/Sp

Advanced opportunities in concert choir. Prerequisite: MU 197.

**MU 194****Chorus [Swing Choir]**

4 class hrs/wk      2/6 cr. max.      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. max.      F/W/Sp

Advanced opportunities in swing choir. Audition required for enrollment. Prerequisite: 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.

### PH 201

#### Problems of Philosophy

3 class hrs/wk      3 cr.      F/W

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.

### PH 202

#### Elementary Ethics

3 class hrs/wk      3 cr.      W/Sp

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

### PH 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.

### PH 204

#### Philosophy of Religion

3 class hrs/wk      3 cr.      F

Introduction to the philosophical analysis and justification of religious claims and concepts, e.g., God, the soul, immortality.

### RE 201

#### Religions of the World

3 class hrs/wk      3 cr.      F

Origin, thought, and practices of the world's major religions.

### RE 202

#### The Old Testament & its Backgrounds

3 class hrs/wk      3 cr.      W

Study of the conditions that affected the production of the Old Testament. This includes a historic and cultural view of the Hebrew people.

### RE 203

#### The New Testament & its World

3 class hrs/wk      3 cr.      Sp

Study of the influences that produced the New Testament. This includes not only the religious and social content but also the literary styles.

## social science

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 requirement in social science. Transfer students should not complete both Anth. 101, 102, 103 and Anth. 207, 208, 209.

### Anth 101

#### General Anthropology

3 class hrs/wk      3 cr.      F

Examination of man's morphological variation and physical evolution. (Physical Anthropology)

### Anth 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)

### Anth 103

#### General Anthropology

3 class hrs/wk      3 cr.      Sp

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

### Anth 207

#### Cultural Anthropology

3 class hrs/wk      3 cr.      F

Examination of man's cultural traditions at the band and tribal-chieftdom levels, including discussion of the major theoretical concepts of cultural anthropology that apply to this level of cultural evolution.

**Anth 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.

**Anth 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 hrs/wk      3 cr.      Sp

For those whose majors 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 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 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 hrs/wk      3 cr.      Sp

Introduction to international economics and economic development. Includes principles underlying international trade, trade regulations, exchange rates, economic development in both developing and developed parts of the world. Prerequisite: EC 202.

## 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 occupancy of the earth. Emphasis on the division of the world into regions of similar environments, the potential of each region for human use, and man's cultural and economic adaptations to such regions.

**GE 107**  
**Introductory Geography**  
3 class hrs/wk      3 cr.      Sp

An examination of the occurrences, patterns and interrelations of man's economic activities. The principles of economics and human behavior which structure our use of resources will be stressed.

## history

**Hst 101**  
**History of Western Civilization**  
3 class hrs/wk      3 cr.      F/W

Origins and development of Western Civilization from ancient times to the end of the Middle Ages. Emphasis is placed on the important influence of the Greeks and Romans to modern times.

**Hst 102**  
**History of Western Civilization**  
3 class hrs/wk      3 cr.      W/Sp

The Renaissance, with its primary emphasis on Man, the development of nations, and the French Revolution, all represent the beginnings and early development of modern times.

**Hst 103**  
**History of Western Civilization**  
3 class hrs/wk      3 cr.      F/Sp

Study of the political, economic, social, and religious institutions which have shaped 'modern man'. Also, a study of the significant men and women who have influenced man's development.

**Hst 199****Towards The Year 2000****3 class hrs/wk 3 cr. F/W/Sp**

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.

**Hst 201****History of the United States****3 class hrs/wk 3 cr. F/W**

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.

**Hst 202****History of the United States****3 class hrs/wk 3 cr. W/Sp**

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.

**Hst 203****History of the United States****3 class hrs/wk 3 cr. F/Sp**

Analysis of the United States in the 20th Century encompassing the 'War to end all War', The Roaring Twenties, The Great Depression, World War II, The Cold War, the Viet Nam conflict, Nixon, Watergate and post Nixon through Ford.

**political science****PS 201****American Government****3 class hrs/wk 3 cr. F**

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. F**

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 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 Soc 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/S

To enhance leadership skills in a day to day interaction setting, for student government participants.

### ED 210

#### Theory and Practicum II A [Field Experience]

15 lab hrs/wk 6 cr. F/W/Sp

A field based program to provide students in teacher education experience in working with pupils in public elementary and secondary schools on problems related to reading, careers, the affective and cognitive development of children and youth (learning), in understanding the school as a social system, cultural diversity, behavior modification and change, and the use of educational media.



## sociology

### Soc 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.

### Soc 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.

### Soc 205

#### General Sociology

3 class hrs/wk 3 cr. W/Sp

Analysis of major sociological institutions.

### Soc 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.



# learning services division

The Learning Services Division is responsible for the development and operation of the Learning Resource Center which includes the Library, Media Services, Study Skills Center, Math Lab, and Graphic Services. In addition, the division provides coordination for instructional and staff development activities for the college.

The Learning Resource Center provides the staff, facilities, equipment, and materials to serve the educational needs of students and faculty of the college. As the center for learning on the campus, the LRC is responsible for the acquisition and processing of comprehensive, quality instructional materials. Personnel and facilities are provided for the production of many locally developed materials or for consultation for improving the total instructional system. Special services or programs are offered to students through the Library and Study Skills Center to meet basic informational and educational needs.

The goal of the Learning Services Division is to coordinate the development and operation in the library, instructional and service facilities to support the expanding needs of the college's instructional programs.

#### **Director**

William A. Siebler

#### **Faculty**

Virginia Bowler, Librarian

Marian Cope, Study Skills Instructor

Russell Gregory, Study Skills Instructor

Yvonne Lee, Librarian

Charles Mann, Study Skills Instructor

Stan Ruckman, Assistant Director and Head Librarian

Paul Snyder, Instructional Media Specialist

## 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 center/math lab

Many of the regularly scheduled classes in the Mathematics program are individualized. Students in these classes, and other math students, use the Math Lab for studying. Staff, materials, and equipment are available in the lab so that a student can informally take an entire math course there as well as mini-courses in such areas as slide-rule use, solving verbal problems, and many others.

## study skills center

The Study Skills Center offers a program of classes and individualized instruction to help assure successful achievement in college courses through the improvement of reading, writing, listening, 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. The counseling staff and many faculty members refer students to the Study Skills Center when there is an indication of problems or deficiencies in various skills areas. Students whose work in class or on diagnostic tests indicates a need for instructional assistance in the study skills areas will find the opportunity for improvement in the Study Skills Center. Students may register for regular classes, or may sign up on an individualized basis for whatever amount of time is needed.

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

### 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)

Individualized instruction in English fundamentals, writing, spelling improvement, 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, spelling, 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 I.

### 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.



# 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 Scott

**Faculty:**  
Everett Arasmith, Wastewater Technology  
James Baker, Biology  
Ken Collett, Civil-Mechanical Technology  
Jack Custman, Farm Management  
James Felton, Wastewater Technology  
Kent Hansen, Electricity/Electronics,  
Department Chairman  
Hal Johnson, Agriculture,  
John Kraft, Chemistry  
Don May, Wastewater Technology

David Miller, Drafting, Department Chairman  
Bruce Moos, Animal Technology,  
Department Chairman  
Michael Morgan, Mathematics, on leave  
Raymond Perkins, Physical Science  
Steve Rasmussen, Physical Science,  
Department Chairman  
Wallace Reed, Mathematics,  
Acting Department Chairman  
James Reynolds, Drafting  
Robert Ross, Biology, Department Chairman  
Dell Swearingen, Mathematics  
Michael Vincent, Refrigeration/Heating/  
Air Conditioning, Department Chairman  
John Wooley, Wastewater Technology

### One Year Programs

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



## agriculture business

### Crop Management

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.

### Crop Management Program

#### Freshman Year [Certificate Program]

Course No.	Course Title	F	W	Sp
1.102	Communication Skills II		3	
1.200	Work Experience or Electives			12
4.202	Math II	4		
8.100	Survey of Agriculture	1		
8.125-7	Soils I, II, III	3	3	3
8.165	Crop Science	4		
	*Agriculture Elective	3	3	
8.188	Ag Equipment Maintenance		3	
PE 180/190	Physical Education	1	1	
		16	17	15

\*8.166 or 8.120 or 1.606 Vegetable or Seed Technology or Intro. to Psy & Human Rel.  
Students requiring Communication Skills I (1.101) should register for it fall term of their freshman year.

### Two Year Associate of Science Degree Programs

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

### 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.	Course Title	F	W	Sp
4.205-6	Basic Chemistry	4	4	
8.131	Pest Control	3		
8.138	Irrigation & Drainage	3		
AEC 111	Ag. Econ.		3	
1.200-1	Work Experience & Sem.			12
PE 180/190	Physical Education	1		
HE 252	First Aid		3	
	Business Electives	6	6	
		<hr/> 17	<hr/> 16	<hr/> 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.

### Turf Management Program

#### Freshman Year [Certificate Program]

Course No.	Course Title	F	W	Sp
1.606	Intro. to Psy & Human Rel.		3	
1.200-1	Work Experience & Sem.			12
4.202	Math II	4		
8.100	Survey of Agriculture	1		
8.125-6	Soils I, II	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 180/190	Physical Education		1	
		<hr/> 16	<hr/> 18	<hr/> 15

### 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.	Course Title	F	W	Sp
1.101-2	Communication Skills I, II	3	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	
		<hr/> 18	<hr/> 18	<hr/> 12

### 8.100

#### Survey of Agriculture

1 class hr/wk 1 cr. F

Information on employment opportunities in marketing, sales, service, processing, management, and distribution functions that are related to agriculture off-farm occupations. Students become acquainted with their own specific area of interest through individualized study.

### 8.120

#### Seed Technology

4 class hrs/wk 3 cr. W

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 seed identification, seed processing and seed testing.

### 8.125

#### Soils I

4 class hrs/wk 3 cr. F

Necessary soil science background for work with fertilizer, irrigation, drainage, and other soil management practices. Physical, chemical and biological properties of the soil discussed in relation to plant growth.

### 8.126

#### Soils II

4 class hrs/wk 3 cr. W

Second phase of soils instruction dealing with plant nutrition, and the proper use of fertilizer and other soil amendments. Diagnosing plant problems, soil testing, fertilizer recommendation, methods of application and storage and handling emphasized.

### 8.127

#### Soils III

3 class hrs/wk 3 cr. Sp

Third sequence to deal with practical application of knowledge of fertilizers. Special emphasis given to field projects to promote understanding and skill competencies.

### 8.130

#### Agriculture Chemicals

5 class hrs/wk 4 cr. W

Use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of material, safety in handling and storage and methods of application emphasized. Students develop ability to interpret and explain to customers the directions and precautions to be observed with various agriculture chemicals. Attention also given to procedures used in keeping current with new product development.

**8.131**  
**Pest Management**  
4 class hrs/wk 3 cr. F  
Includes the classification, anatomy, growth, life history, recognition and control principles of selected weeds, diseases, and insect pests.

**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 common practices, and actual maintenance and management of turf areas by students. Business practices and procedures also emphasized.

**8.137**  
**Turf and Plant Establishment**  
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. F  
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. W  
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**  
**Ag Equipment Maintenance**  
4 class hrs/wk 3 cr. W  
Principles, maintenance and repair of small engines used on power equipment.

**AEC 111**  
**Ag Econ**  
3 class hrs/wk 3 cr. W  
Introduction to the application of economics to agriculture. Includes production economics, marketing, agriculture policy and a discussion of agri-business.


**9.812**  
**Seed Cleaning**  
3 class hrs/wk 3 cr. On Demand  
Entry and updating skills for seed cleaners. Includes equipment operation, safety, maintenance, and repair. Seed laws and regulations, seed and weed identification, and warehouse practices.

**9.813****Agriculture Chemicals****3 class hrs/wk 3 cr. On Demand**

Use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of materials, safety in handling and storage, and methods of application emphasized. Students develop the ability to interpret and to explain to customers the directions and precautions to be observed with various agriculture chemicals. Attention to procedures used in keeping current with new product development.

**9.814****Soils and Fertilizers****3 class hrs/wk 3 cr. On Demand**

Presentation and discussion of basic facts of science as they relate to crop production.


**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**

Course No.	Course Title	F	W	Sp
1.200-1	Work Exper. & Sem. or Bus. Electives		3	3
4.202	Math II	4		
8.100	Survey of Agriculture	1		
8.125-6	Soils I, II	3	3	
8.143	Anat. & Phys. of Farm Animals		3	
8.144	Animal Nutrition		4	
8.145	Feeds & Feeding			3
8.150	Animal Genetics			4
8.160	Intro. to Animal Science	4		
8.146	Intro. to Livstk. Selection			4
PE 180/190	Physical Education	1	1	1
1.112	Tech. Report Writing			3
1.102	Comm. Skills II		3	
	Elective*	3		
		17	17	18

\*Use for elective of prerequisites for Comm. Skills II or Math II

**Sophomore Year**

Course No.	Course Title	F	W	Sp
1.200-2	Work Exper. & Sem. or Elect.	3		9
4.205-6	Basic Chemistry	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	3		
8.167	Forage Crops			3
8.170	Farm Mngmt. Alternate years		3	
AEC 111	Agric. Econ. elective			
HE 252	First Aid	3		
		17	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, utilizing heritability for production gains, inbreeding coefficient computation and practical systems of breeding for the modern livestock breeder.

**8.152**

**Beef Production**

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

Basics of modern beef production and management. Breeds of cattle, mating systems, nutrition, reproduction, marketing, production testing, diseases and parasites and other management practices. Particular emphasis is on the development of beef husbandry skills.

**8.153**

**Sheep Production**

**5 class hrs/wk 4 cr. W**

Fundamentals of modern sheep production. Breeds of sheep, nutrition, reproduction, diseases and parasites, wool evaluation, marketing and modern management practices. The opportunity to develop practical skill is afforded each student.

**8.154**

**Swine Production**

**5 class hrs/wk 4 cr. Sp**

All aspects of modern swine production. Opportunity to develop skills associated with swine production. Includes breeds of swine, marketing, breeding, feeding, production testing, diseases and parasites and modern swine production problems.

**8.158**

**Artificial Insemination**

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

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 practicing insemination techniques on other species. Persons currently 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**

**3 class hrs/wk 3 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 operation.
- (2) The farm operation is financially stable for continued operation.
- (3) The family unit has the ability to maintain basic farm records.

9.835

### Farm Management-Records Analysis I

10 lec hrs/month 20 lab hrs/month 8 cr./yr F/W/Sp

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

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

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

To be arranged when demand arises.

## biological sciences

4.220-1

### Integrated Basic Science I, II [Dental]

4-6 class hrs/wk 3-4 cr. Sm/F/W/Sp

An integrated science course offered to Dental Assistant students. Includes principles of general anatomy and physiology, anatomy and physiology of the head and teeth, microbiology, pharmacology and nutrition. Note: Dental Assistant program students take 6 class hrs/wk 4 credits the first term and 4 class hrs/wk 3 credits the second term of program.

Bi 101, 102, 103

### General Biology

5-6 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. They are equivalent in basic principles covered and credits given. They differ in point of view. General Biology may not be used to complete a previously begun sequence in Botany or Zoology.

Bi 101: The cellular level of life. Alternative courses include General Biology, Microbiology, Genetics, and Science-Ethics-Progress.

Bi 102: Structures and functions of the various organ systems of living things. Alternative courses include General Biology, Human Biology, Behavior, Foods, and Reproduction.

Bi 103: Ecology. Alternative courses include General Biology, Ecology, Wildflowers, Gardening, and Marine Biology.



**Bi 221, 222, 223****Human Biology****7 class hrs/wk**      **4 cr.**      **F/W/Sp**

For Biology or Health Science Majors. An integrated and individualized science course. Chemistry and algebra background at least to high school level or equivalent. Provides necessary scientific information and procedures for studying and understanding normal body functions.

Bi 221: Principles of physical science, mathematics and microbiology as applied to normal body function.

Bi 222 and 223: A system by system approach to the study of the anatomy and physiology of the human body. Prerequisite for Bi 222 is Bi 221 or concurrent enrollment—with instructor approval. Bi 222 is required for Bi 223.

**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: a study of bacteria, algae, fungi, mosses, ferns and seed plants (including some fossil forms), their structure and reproduction.

Bo 202: Structure, function, growth and genetics of seed plants. Prerequisite is Bo 201 or instructor approval.

Bo 203: Identification of native flowering plants, use of taxonomic keys and comparative floral structure. Ecology. No prerequisites.

**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 animal systems, with emphasis on control and behavioral manifestations.

Z 202: Introduction to genetics, evolution and ecology, with emphasis on mathematical description.

Z 203: Survey of the animal kingdom, with emphasis on the role of organisms in their environment.

**8.300****Food Micro****4 class hrs/wk**      **3 cr.**      **F**

Types of food poisoning; transmission of food-borne diseases; sanitation measures for discouraging optimum condition for growth of microorganisms; storage conditions for certain foods as related to metal toxicity. Prerequisite: None.

**4.211****Nutrition I****3 class hrs/wk**      **3 cr.**      **F**

Importance and role of fuel nutrients, vitamins, and minerals in body functioning. Food sources and planning for adequate nutrition. Requirement for and recommended allowance of the various nutrients.

**4.212****Nutrition II****3 class hrs/wk**      **3 cr.**      **W**

Principles of modifications in the diet to meet special needs of the body in disease. Prerequisite: 4.211.

**FN 225****Nutrition****4 class hrs/wk**      **4 cr.**      **Sp**

The relationship of food and its components to health. Current national and international concerns considered.

**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 is 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.	Course Title	F	W	Sp
4.109	Technical Sketching	1		
4.110-2	Drafting Lab	3	3	3
4.148	Practical Descript. Geometry			2
6.214-5	Technical Physics	4	4	
6.196	Drafting-Engineering Practices	2		
6.202	Statics			3
6.551-3	Technical Math I, II, III	4	4	4
1.102	Communication Skills II		3	
1.112	Technical Report Writing			3
4.130	Machine Processes		2	
PE 190	Physical Education	1	1	1
		15	17	16

**Sophomore Year**

Course No.	Course Title	F	W	Sp
4.126	Mechanical Design Principles		3	
6.200	Surveying I	2		
6.201	Surveying II			2
6.203	Strength of Materials	3		
6.204	Computer Applications			3
6.205	Civil Drafting I		3	
6.206	Civil Drafting II			3
6.208	Machine Drafting	4		
6.210	Engineering Design Project			3
6.330	General Electricity		3	
2.589	Drafting and the Computer	2		
MTH 213	Intro./Symbolic Lang.-Fortran		4	
HE 250	Personal Health	3		
	Technical Elective	3	3	3
		17	16	14

**4.109**

**Technical Sketching**

**3 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/SpSm**

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.

**4.111**

**Drafting Lab**

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

**4.112**

**Drafting Lab**

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

**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, Practical 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.      F**

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.

**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 Communication Skills I 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 Drafting Department.

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

**Freshman Year**

Course No.	Course Title	F	W	Sp
4.109	Technical Sketching	1		
4.110-2	Drafting Lab	3	3	3
4.121	Electronics Drafting		2	
4.148	Practical Descrip. Geometry			2
6.196	Drafting-Engineer'g Practices	2		
6.550	Pretech Math	4		
6.551-2	Tech Math I, II		4	4
1.101-2	Communication Skills I, II	3	3	
1.112	Technical Report Writing			3
4.130	Machine Processes		2	
3.494	Construction Methods & Materials			2
HE 250	Personal Health	3		
	Elective		2	
		16	16	14

**Sophomore Year**

Course No.	Course Title	F	W	Sp
3.490	Applied Mechanics			3
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			3
4.134	Prototype & Model Construct.			2
6.214-6	Technical Physics	4	4	
6.200	Surveying I	2		
6.204	Computer Applications			3
6.205	Civil Drafting I		3	
6.208	Machine Drafting	4		
2.589	Drafting and the Computer	2		
MTH 213	Intro. to Symbolic Language			
	Programming Fortran		4	
PE 180/190	Physical Education	1	1	1
		16	18	17

**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**  
3 class hrs/wk 2 cr. Sp

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 effective human use and for aesthetic human appreciation.

**4.100**

**Blueprint Reading and Sketching**  
2 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.

**4.101**

**Blueprint Reading for Welders**  
4 class hrs/wk 2 cr. On Demand

Fundamentals of drawing interpretation as applied in the welding trade. Includes such topics as basic views, dimensions, specifications, welding symbols, assembly drawings, and technical sketching.

**4.109**

**Technical Sketching**  
3 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.

**4.111**

**Drafting Lab**  
6 class hrs/wk variable 0-3 cr. F/W/Sp/Sm

**4.112**

**Drafting Lab**  
6 class hrs/wk variable 0-3 cr. F/W/Sp/Sm

**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 commercial planning. Architectural styles, orientation, site planning, kitchen planning, elevations, symbols, and specifications. Prerequisite: 3 hrs Drafting Lab or consent of instructor.

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**

5 class hrs/wk 3 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 employment may be substituted. Prerequisites: Sophomore standing; Drafting or Engineering Tech student.

4.134

**Prototype & Model Construction**

4 class hrs/wk 2 cr. Sp

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 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. 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.

6.208

**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 mechanical drawing competencies for their work.

**9.635****Technical Drawing II****3 class hrs/wk 2 cr. On Demand**

Emphasis on oblique and isometric projections, revolutions, fasteners, and production of machine drawings. Designed for persons who have either occupational entry level skills, or are currently employed and require mechanical drawing competencies for their work.

**9.636****Blueprint Reading for the Construction Trades****2 class hrs/wk 2 cr. On Demand**

Basic architectural blueprint reading. Emphasis on interpretation of blueprints of residential and light commercial structures.


**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 curriculums 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**

Course No.	Course Title	F	W	Sp
6.316	Intro./Electricity/Electronics	1		
6.320-2	Electricity/Electronics I, II, III	6	6	8
6.551-3 or Mth 101-2, 110	Technical Math I, II, III or College Algebra, Trig., and Analytical Geometry	4	4	4
4.100	Blueprint Reading & Sketching			2
6.214-6	Technical Physics	4	4	4
1.102	Communication Skills II		3	
or	English Composition			
PE 180/190	Physical Education	1	1	1
		16	18	19

**Sophomore Year**

Course No.	Course Title	F	W	Sp
6.323-5	Electricity/Electron. IV, V, VI	10	10	10
1.112	Technical Report Writing			3
1.606	Intro./Psych. of Human Rel.		3	
2.558	Intro. to Programming	4		
4.130	Machine Processes		2	
HE 252	First Aid	3		
	General Elective			3
		17	15	16

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

**6.316****Introduction to Electricity/Electronics****1 class hr/wk 1 cr. F**

This is a preparatory course designed to help the student better understand his/her role in electricity/electronics. The E/E program at LBCC, co-operative work experience and job placement will be outlined and discussed. All electricity/electronics career students are required to take this course.

**6.320****Electricity/Electronics I****9 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-requisites: Tech Math I or Mth 101 and Tech Physics I or Ph 201. Prerequisite: High school Algebra and Geometry.

**6.321****Electricity/Electronics II****9 class hrs/wk 1-6 cr. W**

Continuation of Electricity/Electronics I; theories and laws relating to AC electricity; basic skills in oscilloscope, function generator and power supply. Individualized course with variable credit, allowing the student to proceed at own pace. Co-requisites: Tech Math II or Mth 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 discreet 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

Circuit theory and practical applications of digital circuits. Introduction to transducers as well as linear and digital system concepts. Prerequisite: Electricity/Electronics IV or consent of instructor.

6.325

**Electricity/Electronics VI**

15 class hrs/wk 1-10 cr. Sp

Student teams design, build, and test each of four different systems: logic; instrumentation; communication; and electromechanical. Prerequisite: Electricity/Electronics V or consent of instructor.

6.330

**General Electricity I**

4 class hrs/wk 3 cr. F/W

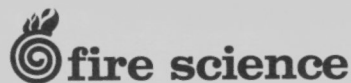
General electricity course designed to service other vocational-technical programs, basic working knowledge of electrical theories and laws. Basic skills in hand tool use, soldering, multimeter and oscilloscope use. A general course without the depth and detail of a career electricity/electronics course.

6.331

**General Electricity II**

4 class hrs/wk 3 cr. Sp

Follows General Electricity I, providing working knowledge of motors, generators, and basic instrumentation. A general course without the depth and detail of a career electricity/electronics course.



The Fire Science program is a part-time curriculum designed to meet the specific needs of students currently employed in fire service. 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 leads 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.

**Freshman Year**

Course No.	Course Title	On Demand
1.101-2	Communication Skills I, II	On Demand
1.606	Intro. to Psy. & Human Rel.	
4.100	Blueprint Reading & Sketching	
4.202-4	Math II, III	
5.250	Fire Fighting Skills I	
5.251	Fire Fighting Skills II	
5.253	Fire Apparatus & Equipment	
5.254	Intro. to Fire Protection	
5.245	Rescue & Emergency Care for Fire Science	
5.264	Building Const. for Fire Prev.	
HE 250	Personal Health	
PE 180/190	Physical Education	

**Sophomore Year**

Course No.	Course Title	On Demand
1.112	Tech. Report Writing	On Demand
1.124	American Institutions	
5.260-1	Hazardous Materials I, II	
5.262	Fund. of Fire Prevention	
5.263	Hydraulics & Pump Operation	
5.265	Fire Dept. Organ. & Mngmt.	
5.272	Fire Protection Systems	
5.273	Fire Investigation	
9.500	Elements of Supervision Electives	

5.245

**Rescue & Emergency Care for Fire Science**

3 class hrs/wk 3 cr.

A combination of First Aid and rescue practices, standard procedures in the aid and care of victims of the most common emergencies. First Aid emphasis is on handling of respiratory, burn, cardiac, fracture and shock victims. Practical methods of carrying out rescues in a number of types of emergencies.

5.250

**Fire Fighting Skills I**

9 class hrs/wk 3 cr.

Individual skills using small tools and minor equipment, practice in forcible entry, use of masks, and other individual activities. A course in practical chemistry I and physics II covering the chemistry of fire, hydraulics, matter, measurements, machines, and energy. Laboratory demonstrations and experiments to clarify principles and procedures covered in class.

5.251

**Fire Fighting Skills II**

7 class hrs/wk 3 cr.

Practice in team skills used in fire ground operation including hose and ladder evolutions, salvage, overhaul, rescue, fire attack and other activities requiring team effort.

5.253

**Fire Apparatus & Equipment**

5 class hrs/wk 3 cr.

Familiarization with different types of fire apparatus; principles of application, care, and preventive maintenance; safe operating procedures, emergency and non-emergency; National Board standards.

5.254

**Intro to Fire Protection**

3 class hrs/wk 3 cr.

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.

5.260

**Hazardous Materials I**

5 class hrs/wk 3 cr.

Review of basic chemistry; identification of hazardous materials by color, symbol, and marking; recommended safe practices for storage and handling of solids, liquids and gases; methods of fire control of these materials.

5.261

**Hazardous Materials II**

5 class hrs/wk 3 cr.

Methods for combating fires involving hazardous chemicals and other materials; radiation hazards of the fire service; space age fuel; highway transportation of explosives, and other hazardous materials.

5.262

**Fundamentals of Fire Prevention**

3 class hrs/wk 3 cr.

Organization and function of a fire prevention bureau; fire prevention codes; state and local laws and ordinances; familiarization with principles of fire prevention; the inspector's job; public relations.

5.263

**Pump Operation and Practical Hydraulics**

5 class hrs/wk 3 cr.

Principles of fire apparatus pumping operations, fire ground water supply; construction and operation of fire service pumps and accessories; pump operation under emergency conditions; rule-of-thumb hydraulics.

5.264

**Building Construction for Fire Prevention**

5 class hrs/wk 3 cr.

Classification of buildings; structural features affecting fire spread, effect of fire on structural strength; fire stops and ratings of materials, fire retardants; Sanborne maps.

5.265

**Fire Dept. Organization and Management**

3 class hrs/wk 3 cr.

Duties and responsibilities of a department officer and methods of organizing, maintaining and operating a fire department. Departmental communication, fire equipment, training, fire prevention and fire fighting, records and reports.

5.272

**Fire Protection Systems**

5 class hrs/wk 3 cr.

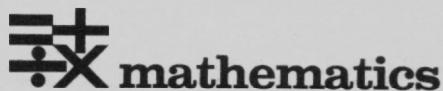
Portable extinguisher equipment; sprinkler systems; protection systems for special hazards; fire alarm and detection systems; ventilating systems.

5.723

**Fire Investigation**

3 class hrs/wk 3 cr.

Effect of fire prevention by isolating cause of fire; interpreting clues and burn patterns leading to point of origin; identifying sources of ignition and materials ignited; preservation of the fire scene.



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 determined in conference with the instructor.

4.200

**Math I**

4 class hrs/wk 4 cr. F/W/Sp

Thorough review of the arithmetical processes and provides a basis for the study of algebra or Math II and Math III. 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 the 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: Math 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.

**Technical Math I, II, III**

Develops general mathematical and computational skills that assist technicians in their training and on their jobs. Emphasis on problem solving. It is necessary for an entering student to have had two years of Algebra and a year of Geometry in high school. An entering student not meeting these criteria should complete Elements of Algebra (1.110) and Pre-Tech Mathematics (6.550) before beginning the Tech Math I, II, III sequence.

6.551-3

**Technical Math I, II, III**

4 class hrs/wk 4 cr. F/W/Sp

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.

6.554

**Technical Project**

1-3 class hrs/wk 1-3 cr. Sp

Course related field problems with student undertaking special study in a field of interest. Develops skill in gathering, sorting, finding solutions in logical, mathematical concepts to field problems and use of a programmable calculator. Prerequisite: Tech Math II 6.552.

Mth 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.

Mth 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 system of equations with introduction to matrices. Prerequisite: Mth 95 and/or consent of instructor.

Mth 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.

**Mth 103****Probability & Statistics**

4 class hrs/wk 4 cr. W/Sp

A general one term introductory course in probability and statistics. Concepts and language of the probability models and statistical inference. Probability; binomial, normal, student -t, chi-square, and F-distributions; confidence intervals; hypothesis testing; linear regression; contingency tables; analysis of variance. Prerequisite: Mth 95.

**Mth 110****Analytic Geometry**

4 class hrs/wk 4 cr. F/Sp

Conic sections, polar coordinates, polar graphing, vectors and solid analytical geometry. Prerequisite: Mth 101, 102.

**Mth 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. Mth 161, 162, 163 need not be taken in sequence. Prerequisite: Mth 95 and/or consent of instructor.

**Mth 191, 192, 193****Math for Elementary Teachers**

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

Introduction to mathematical language and logic; a major emphasis on the properties of an ordered field and their relations to whole numbers, integers, rational, and real numbers. Introduction to elementary plane geometry, i.e. incidence, measurement, congruence, and similarity. The student is expected to write simple proofs for conjectures and compare mathematical systems. Prerequisite: Elements of Algebra or equivalent and/or consent of instructor. Psy 201, 202, are prerequisites for Mth 193.

**Mth 200, 201, 202, 203****Calculus**

4 class hrs/wk 4 cr. F/W/Sp

Standard sequence for students in mathematics, science, and engineering.

Mth 200: Functions and graphs, limits, continuity, differentiation, applications of differentiation, related rates and extrema, anti-differentiation. Prerequisite: Mth 110 and/or consent of instructor.

Mth 201: The definite integral, fundamental theorem of calculus applications of integration, differentiation and integration of transcendental and trigonometric functions. Prerequisite: Math 200.

Mth 202: Techniques of integration, approximate integration, vectors in the plane, hyperbolic functions, improper integrals, vectors and analytic geometry in three dimensional space. Prerequisite: Math 201.

Mth 203: The calculus of functions of several variables, infinite series,

Taylor's theorem, differentiation and integration of power series, partial differentiation, the gradient, directional derivative, and multiple integrals. Prerequisite: Mth 202.

**Mth 213****Introduction to Symbolic Language Programming FORTRAN**

3 class hrs/wk 4 cr. W/Sp

Basic principles of computation; programming a computer in an algebraic language. Prerequisite: Mth 95 or consent of instructor.

**Mth 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 Mth 221: Mth 203.

**Mth 241****Elementary Linear Algebra**

4 class hrs/wk 4 cr. W/Sp

Vector spaces, linear transformation, matrices and determinants, characteristic roots. Prerequisite: Mth 200.


**physical sciences**
**4.205, 206, 207****Basic Chemistry I, II, III**

5 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. Prerequisite: Concurrent enrollment in Mth 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: Mth 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: Mth 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.

**P 201, 202, 203****General Physics****5 class hrs/wk 4 cr. F/W/Sp**

First year college physics for science majors. The study of energy and physical phenomena, including the fundamental principles of mechanics, heat, light, sound, electricity, magnetism, energy and a brief introduction to modern physics. Co-requisite: Tech Math II or Mth 101. Prerequisite: Tech Math I or Mth 95.

**4.300, 4.302****Practical Physics****5 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. Meets three times a week for lecture, and one two-hour lab.

**6.214, 6.215, 6.216****Technical Physics****5 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. Meets three times a week for lectures and one two-hour lab. Prerequisite: Pre-Tech Math completed; Tech Math I concurrently.

**G201, 202, 203****Geology****3 class hrs/wk 3 cr. F/W/Sp**

A study of earth materials, processes and forms, and the main events in the history of the earth. Accompanied by labs G 204,205,206. May not be offered every year. Prerequisites: Math 95 and Ch 104 concurrently, or consent of instructor.

**G 204, 205, 206****Geology Laboratory****2 class hrs/wk 1 cr. F/W/Sp**

Laboratory and field work to accompany G 201,202,203.

**A&S 101****Rudiments of Meteorology****1 class hr/wk 1 cr. On Demand**

A descriptive treatment of weather phenomena, including winds, air masses, fronts, clouds and precipitation. May not be offered every term. No prerequisite.



# refrigeration, heating and air conditioning technology

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.	Course Title	F	W	Sp
3.530	Refrigeration, Heating, Air Conditioning Orientation	5		
3.535	Domestic Refrigeration		4	
3.536	Commerical Refrigeration			4
3.540	Heating Systems I		4	
3.541	Heating Systems II			4
3.550	Control Theory	4		
1.102	Communication Skills II or WR 121		3	
1.110	Elements of Algebra	4		
6.331	General Electricity II			3
4.100	Blueprint Reading		2	
6.330	General Electricity I	3		
MT 95	Intermediate Algebra or 6.550 Pre-Tech Math		4	
HE 252	First Aid or 4.108 Industrial Safety and First Aid			3
	Business Elective			3
		16	17	17

## Sophomore Year

Course No.	Course Title	F	W	Sp
3.531	Environmntl. Comfort Systems			4
3.537	Industrial Refrigeration	4		
3.545	Residential Air Conditioning Systems	4		
3.546	Commerical Air Conditioning Systems		4	
3.551	Controls Applications		4	
3.555	Pneumatics and Hydraulics	4		
4.300	Practical Physics		4	
1.112	Tech. Report Writ'g or WR 122		3	
	Technical Electives	4		
	Technical Electives			12
PE 180/190	Physical Education	1	1	1
		17	16	17

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

**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.

**BUSINESS ELECTIVES** include: Accounting, Business Management, Business Law, Principles of Advertising, and Supervisory Training Courses.

One year certificate students in Refrigeration, Heating, and/or Air Conditioning Service should substitute Math II & 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 Communication Skills II, Technical Report Writing, and the business elective.

## 3.530

**Refrigeration, Air Conditioning and Heating Fundamentals**  
5 class hrs/wk      5 cr.      F

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

## 3.531

**Environmental Comfort System Analysis**  
6 class hrs/wk      4 cr.      Sp

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 and small commercial refrigeration systems. Fundamental refrigeration theory is applied in general operation and repair of sealed systems. Instruction in preliminary troubleshooting. Prerequisite: Basic Math and mechanical aptitudes.

## 3.536

**Commercial Refrigeration**  
6 class hrs/wk      4 cr.      Sp

Introduction to commercial refrigeration systems and control circuits. Instruction in methods of troubleshooting and specific repairs and in use of basic charts and graphs. Prerequisite: Domestic Refrigeration and Math II level.

## 3.537

**Industrial Refrigeration**  
6 class hrs/wk      4 cr.      F

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

**Heating Systems I**  
6 class hrs/wk      4 cr.      W

A lab/lecture course in the usage, repair and maintenance of residential heating systems. Prerequisite: Fundamentals of Refrigeration, Air Conditioning, and Heating.

**3.541  
Heating Systems II**  
6 class hrs/wk 4 cr. Sp

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

**3.545  
Residential Air Conditioning Systems**  
6 class hrs/wk 4 cr. F

A basic theory analyzing the relationships of refrigeration to air conditioning. Introduction to handling units and methods of sizing and installation. Prerequisite: Industrial Refrigeration. Consent of instructor or second year standing.

**3.546  
Commercial Air Conditioning Systems**  
6 class hrs/wk 4 cr. W

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 to designing systems. Prerequisite: Air Conditioning Systems I.

**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.

**3.551  
Control Application**  
6 class hrs/wk 4 cr. Sp

Operation and repair of electromechanical pneumatic-hydraulic control systems. Prerequisite: Control Theory.

**3.555  
Pneumatics and Hydraulics**  
5 class hrs/wk 4 cr. F

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



## 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 science laboratory operation. Additionally, lower division transfer courses can be taken at LBCC and transferred later to an Oregon four-year college.

The vocational science lab curriculum prepares students for positions as laboratory technicians in chemical and biological labs and wastewater treatment plants.

Specific job openings are available in treatment plants, rare metals laboratories, pulp and paper companies, and state and federal agency laboratories associated with environmental concerns.

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

Course No.	Course Title	F	W	Sp
4.205-7	Basic Chem. I, II, III	4	4	4
6.127	Intro. Lab Tech.	2		
1.101-2	Comm. Skills I, II	3	3	
1.110	Elem. of Algebra	4		
MT 95	Inter. Algebra		4	
6.130-1	Lab Procedures I, II		2	2
6.330	Gen. Electricity I	3		
6.114	Aquatic Micro			4
6.173	Basic Aquatic Chemistry			4
PE 180/190	Physical Education	1	1	1
	Elective			3
		17	14	18

### Sophomore Year-VoTech Curriculum

Course No.	Course Title	F	W	Sp
6.174	Inter. Aquatic Chemistry	4		
4.300-2	Pract. Physics		4	4
6.135	Inst. Analysis		4	
	Electives	3		
HE 252	First Aid	3		
	Technical Electives	7	6	
1.200	Co-op Work Experience			12
1.112	Technical Report Writing		3	
		17	17	16

### Freshman Year-Transfer Curriculum

Course No.	Course Title	F	W	Sp
Ch 201-3	General Chemistry	4	4	4
BI 101	Microbiology	4		
Mt 95-102	Math sequence	4	4	4
Wr 121-2	English Composition	3	3	
6.127	Intro. Lab Tech.	2		
6.114	Aquatic Micro			4
6.330	Gen. Electricity I		3	
	Elective			4
		17	14	16

### Sophomore Year-Transfer Curriculum

Course No.	Course Title	F	W	Sp
Ch 226-9	Organic Chemistry	3	3	5
P 201-3	General Physics	4	4	4
PE 180/190	Physical Education	1	1	1
Ch 207	Advanced Chem. Lab	2		
HE 252	First Aid	3		
	Electives	3	6	
Ch 234	Quant. Analysis		4	
WE 201	Co-op Work Experience			8
		16	18	18

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

### 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.

### 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 Technician curriculum.

## 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. Hand-on-training is provided in 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.	Course Title	F	W	Sp
6.101	Intro. to Env. Tech.	3		
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
6.161	Management			3
6.173	Basic Aquatic Chemistry			4
6.180	Wastewater Mechanics I			3
6.551	Technical Math I	4		
6.552	Technical Math II		4	
BI 101	Microbiology		4	
4.205	Basic Chemistry I	4		
4.206	Basic Chemistry II		4	
1.102	Communication Skills II		3	
		15	19	18

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

6.168 In-Plant Practicum Summer-16 credits

#### Sophomore Year [Wastewater]

Course No.	Course Title	F	W	Sp
6.154	Process Interaction	4		
6.155	Advanced Waste Treatment		4	
6.163	Intro. to Potable Water System	4		
6.174	Inter. Aquatic Chemistry	4		
6.181	Wastewater Mechanics II	2		
6.235	Applied Hydraulics		4	
6.554	Technical Project			3
1.112	Technical Report Writing		3	
1.124	American Institutions			3
9.500	Elements of Supervision	3		
PE 180/190	Physical Education	1	1	1
	Technical Electives		4	
	Technical Electives			9
		18	16	16



### Sophomore Year [Water/Wastewater]

Course No.	Course Title	F	W	Sp
6.154	Process Interaction	4		
6.163	Intro. to Potable Water System	4		
6.164	Water Sources		4	
6.165	Water Distribution		4	
6.166	Water Purification Systems			4
6.174	Inter. Aquatic Chemistry	4		
6.181	Wastewater Mechanics II	2		
6.235	Applied Hydraulics		4	
6.554	Technical Projects			3
1.112	Technical Report Writing		3	
1.124	American Institutions			3
9.500	Elements of Supervision	3		
PE 180/190	Physical Education	1		
PE 180/190	Physical Education		1	
PE 180/190	Physical Education			1
		18	16	17

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

### One-Year Certificate Program

#### Water/Wastewater Treatment Plant Operator

Program starts winter term and lasts four quarters.

Course No.	Course Title	W	Sp	S	F
6.185	W/WWTPO I	10			
6.186	W/WWTPO II		10		
6.187	W/WWTPO III				10
4.202	Math II	4			
4.204	Math III		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.

### 6.101

#### Introduction to Environmental Technology

3 class hrs/wk 3 cr. F

Survey of environmental problems. Includes water, sewage, solids waste management, swimming pool sanitation, vector borne diseases and environmental control.

### 6.114

#### Aquatic Microbiology

6 class hrs/wk 4 cr. Sp

Characteristics of microorganisms associated with wastewater and surface water samples. Microorganisms and their use as indicators of water quality. Microbiological tests associated with wastewater and surface water samples.

### 6.115

#### Basic Protozoology

4 class hrs/wk 2 cr. W

Microbiology, as applied to wastewater and surface water samples. Emphasis on examination, identification, and ecology of protozoa.

### 6.151

#### Collection and Pre-Treatment

6 class hrs/wk 4 cr. F

Introduction to the processes within a wastewater treatment plant and its collection systems and pre-treatment. Co-requisite: Enrollment in 6.551.

### 6.152

#### Primary/Secondary Sedimentation/Digester Operational Control Processes

6 class hrs/wk 4 cr. W

Primary clarifiers and the equipment used in sludge removal. 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 centrifuge. Sludge disposal methods, including land application and incineration. Prerequisite: 6.151 & 6.551.

### 6.153

#### Introduction to Activated Sludge and Trickling Filters

6 class hrs/wk 4 cr. Sp

Develops understanding of the operations of activated sludge and trickling filter treatment plant processes. Disinfection as it is related to water and wastewater, and operations and maintenance of equipment used in disinfection. Prerequisite: 6.152 & 6.552.

### 6.154

#### Process Interaction

4 class hrs/wk 4 cr. F

Includes wastewater treatment process interaction and total systems design. Prerequisite: 6.153 & 6.168.

### 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. Prerequisite: 6.154.

### 6.163

#### Introduction to Potable Water Systems

6 class hrs/wk 4 cr. F

A general view of potable water systems includes: need and use of water; characteristics of water; physical; chemical; bacteriological; and radiological. A study of the laws and agencies governing water use and quality; water treatment for removal of nuisance and harmful materials; distribution systems.

6.164

**Water Sources**

6 class hrs/wk 4 cr. W

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. W

Installation, operation, and maintenance of water distribution systems. Prerequisite: 6.163.

6.166

**Water Purification Systems**

6 class hrs/wk 4 cr. Sp

Theory and operation of water purification including: mixing; sedimentation; coagulation and flocculation; filtration (via single and mixed media); water softening; removal of nuisance organisms and materials. Prerequisite: Basic Chemistry and Intro. to Potable Water Systems.

6.168

**In Plant Practicum**

40 class hrs/wk 16 cr. Sp

Practicum consisting of full time work in a wastewater or water treatment plant. Skills and knowledge developed in prerequisite courses combined with on-the-job training by both plant supervisory personnel and LBCC visiting instructors. Prerequisite: Consent of instructor.

6.173

**Basic Aquatic Chemistry**

5 class hrs/wk 4 cr. Sp

Performance of following tests on wastewater and surface water samples: settleable solids, suspended and volatile solids, pH, dissolved oxygen, biochemical oxygen demand, chlorine residual, and temperature. Prerequisite: Basic Chemistry II.

6.174

**Intermediate Aquatic Chemistry**

5 class hrs/wk 4 cr. F

Performance of following tests on wastewater and surface water samples: chemical oxygen demand, sludge tests—volatile, suspended, and settleable solids, sludge volume index, sludge density index, sludge age, total acidity, alkalinity, volatile acids, and chlorine requirement. Prerequisite: Basic Aquatic Chemistry.

6.175

**Advanced Aquatic Chemistry**

5 class hrs/wk 4 cr. On Demand

Continuation of Intermediate Aquatic Chemistry. Testing of wastewater and surface water samples, including: ammonia nitrogen, nitrate and

nitrate ion, Kjeldahl nitrogen (organic and total), grease, pH, conductivity, dissolved oxygen (by meter), and BOD ultimate (Warburg procedure). Prerequisite: Intermediate Aquatic Chemistry.

6.180

**Wastewater Mechanics I**

6 class hrs/wk 3 cr. Sp

Equipment used in a treatment plant, including identification of component parts of the equipment from drawings, disassembling and reassembling pumps, flow level measuring devices and chlorinators. Prerequisite: Concurrent enrollment in Introduction to Activated Sludge and Trickling Filters.

6.181

**Wastewater Mechanics II**

4 class hrs/wk 2 cr. F

Setting up parts inventory and extensive preventive maintenance file systems. Air compressors and their role in equipment operations. A major mechanical term project is assigned. Prerequisite: Wastewater Mechanics I.

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. (In-plant practicum the same.) Also includes sanitary microbiology, sanitary chemistry, and a mechanical lab.

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.

6.235

**Applied Hydraulics**

4 class hrs/wk 4 cr. W

Practical Applied Hydraulics enabling the student to use and understand common flow charts for flow and head loss calculations in simple water distribution and sewage collection systems. Prerequisite: Technical Math I.

9.650

**Water Treatment**

3 class hrs/wk 3 cr.

Needs and uses of water, effect of water quality standards, laws

affecting water use and quality, and agencies involved. Special attention to waterborne disease and need for water treatment.

**9.651**  
**Water Sources**  
3 class hrs/wk 3 cr.

Location, development, and operation of ground and surface water sources. Includes surface water storage and intake structures.

**9.652**  
**Water Treatment Facilities**  
3 class hrs/wk 3 cr.

Theory, operation, and maintenance of water treatment facilities. Includes mixing and sedimentation, flocculation, coagulation, filtration, softening, removal of iron and manganese, control of odor and taste, chemical feed equipment, and diatomaceous earth filtration.

**9.653**  
**Distribution Systems**  
3 class hrs/wk 3 cr.

Installation, operation and maintenance of water distribution systems.

**9.654**  
**Disinfection and Fluoridation**  
3 class hrs/wk 3 cr.

Theory of disinfection via chlorine, ozone, ultra-violets, etc.; safety in handling disinfecting chemicals; operation and maintenance of disinfecting equipment; operation and maintenance of fluoridation equipment.

**9.655**  
**Special Water Treatment**  
3 class hrs/wk 3 cr.

Operational theory of special treatment techniques, such as desalting, reverse osmosis, control of corrosion and radioactivity, and disposal of treated waste sludge.

**9.656**  
**Wastewater Treatment**  
3 class hrs/wk 3 cr.

History of treatment, laws and agencies involved in wastewater treatment, construction, operation, and maintenance of sanitary sewage collection systems.

**9.657**  
**Primary Treatment**  
3 class hrs/wk 3 cr.

Theory, operation and maintenance of flow management devices, grit grinding and removal, primary sedimentation, and anaerobic digesters.

**9.658**  
**Secondary Treatment II**  
3 class hrs/wk 3 cr.

Theory, operation and maintenance of the activated sludge sewage treatment process.

**9.658**  
**Secondary Treatment I**  
3 class hrs/wk 3 cr.

Theory, operation, and maintenance of sewage lagoons and trickling filters.

**9.659**  
**Secondary Treatment II**  
3 class hrs/wk 3 cr.

Theory, operation, and maintenance of the activated sludge sewage treatment process.

**9.660**  
**Advanced Waste Treatment**  
3 class hrs/wk 3 cr.

Advanced waste treatment systems, including phosphorus removal, ammonia removal, reverse osmosis, desalting, and physical chemical treatment.

**9.661**  
**Management of Water & Wastewater Systems**  
3 class hrs/wk 3 cr.

Types of governmental entities that operate water and wastewater systems. Special attention to records, budgets, supervisory training, safety programs, rates, emergency planning and public relations.

**9.662**  
**Practical Hydraulics**  
3 class hrs/wk 3 cr.

Relationship of pressure, force, flow, and head loss in both closed and open conduits.

**9.663**  
**Sludge Handling**  
3 class hrs/wk 3 cr.

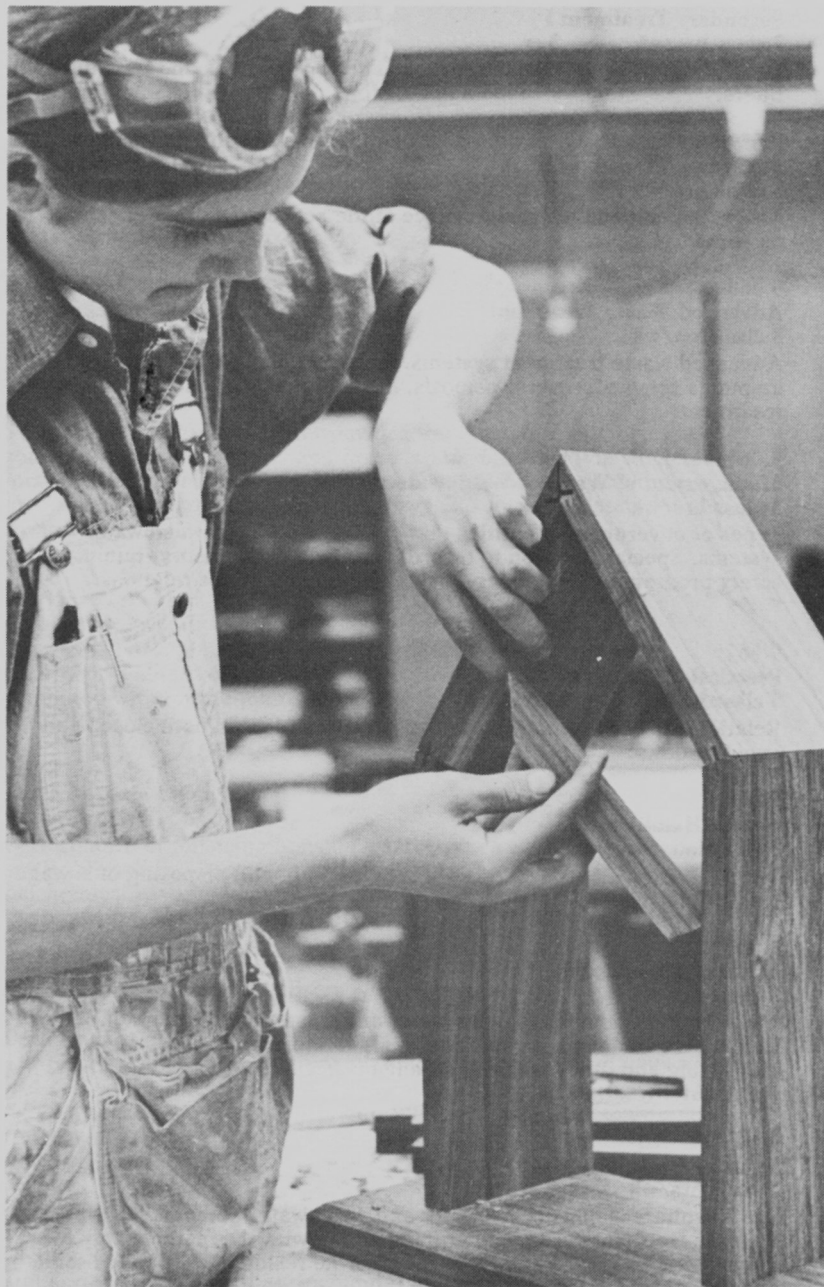
Various systems of concentrating, conditioning, and disposing of sewage sludge and solids.

**9.664**  
**Sanitary Microbiology**  
3 class hrs/wk 3 cr.

Basic sanitary microbiology for water and wastewater personnel. Emphasis 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.

Basic sanitary chemistry for water and wastewater personnel. Emphasis on basic laboratory skills and familiarization with the methodology for the analysis of pH; alkalinity; BOD; chlorine residual; suspended solids and hardness.



# community education division

The Community Education Division provides a broad range of course offerings to the Community: Vocational-Technical; General education; recreational; cultural; lower division credit (at off-campus centers).

Course offerings are designed to meet the educational needs of local populations and in all classes learning and skill development is emphasized.

Courses are developed by the staff in cooperation with local citizen advisory committees and at the request of local citizen groups.

**Director:**

Mike Patrick

**Staff:**

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

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 and Cascadia. Mona Waibel, Coordinator.

The Lincoln County Center is located at 169 S.W. Coast Highway in Newport in the basement of Central Elementary School. The Lincoln County Center serves the areas of Lincoln City, Newport, Siletz, Toledo, Eddyville, Waldport, Fisher, and Yachats. In-district fees on LBCC campus are available to Lincoln County residents. For more information on these fees contact the Lincoln County Center by phone 265-2283. Harry R. Earles, Coordinator.

## **non-credit and credit classes**

The Community Education Division offers many 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 better serve the community needs.

The Albany Center is located on the main LBCC campus in the College Center Building and serves the general populations of Albany, Tangent, Shedd, Halsey and Brownsville. Mike Patrick, Director.

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. Orville Zielaskowski, 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, Director.

## **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 and keeping 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 program is for the student over 18 who wishes to obtain his/her high school diploma. There are two options: (1) diploma is granted by the high school or (2) diploma is 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 disadvantage or handicap, are unable to benefit from the regular college curriculum. The training programs are developed for each individual to help himself reach his 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.

## **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. Specific course descriptions are available in the Community Education Apprenticeship office at the Lebanon Center, 1715 E. 5th Street, Lebanon. Phone: 258-5346.

## **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 teachers aides on all school levels, office jobs, a need for 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**

Persons 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 can 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

Homemaking 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 homemaking classes are non-credit and the student should refer to the class schedule for specific classes.

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.

The following is a partial listing of homemaking and parent education credit classes. Contact the Homemaking/Parent Education coordinator with suggestions for other types of classes.

**0.511**  
**Crafts for Adults to Use With Children**  
2 class hrs/wk 1 cr

Includes a wide variety of arts and crafts techniques. Emphasis on craft samples and media, not finished products.

**0.511**  
**Creative Art for Adults Who Work With Children**  
3 class hrs/wk 2 cr

A series of workshops, each focused on one or two types of creative activities which children enjoy and also have educational potential; a broad range of things to do with children ages 5-12.

**0.694**  
**Behavior Modification Workshop for Parents**  
3 class hrs/wk 2 cr

Use of the didactic approach, discussion, and practice to help parents pinpoint one or two problem behaviors, take baselines, then introduce change techniques. Progress charted and reported for feedback (corrective and supportive).

**0.841**  
**Get Your Money's Worth**  
5 week class/2 class hrs/wk 1 cr

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

**0.841**  
**Investment and Insurance**  
5 week class 1 cr

Successful money management, involving importance and hazards of a plan for success, including basic success formulas, compound interest, tax shelter annuity, and coordination of TSA with financial plans.

**0.853**  
**Managing Your Life**  
5 week class/3 hrs/wk 1 cr

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

**0.890**  
**Matching Test to Activities for Preschoolers**  
3 class hrs/wk 2 cr

Test and subtests appropriate and relevant to performance of pre-school, kindergarten and first grade children. To distinguish between test objectives so as to meet the needs of individuals or groups tested. To administer and score tests, as well as to choose the appropriate material necessary for the success and academic enrichment of the child.

**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 semester; emphasis on the child's emotional growth, effective communication skill, approaches to problems at school, and the family meeting as aids to raising a responsible child.

**0.891**  
**Living with your Preschooler or Kindergartener**  
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.

**0.894**  
**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.

**0.901**  
**You and Your Teen**  
3 class hrs/wk 2 cr

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

9.005

**Creative Ways of Teaching Children**

3 class hrs/wk 3 cr

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

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.

## credit classes and occupational supplementary courses

9.001

**Grievance Handling/Arbitration**

2 class hrs/wk 1 cr

Proper procedures for grievants and supervisors in preparing, investigating, handling, and settling grievances and evaluating necessities in preparing for participation in arbitration proceedings.

9.003

**Public Relations, How are Yours?**

3 class hrs/wk 2 cr

Designed primarily for business people that want to learn how to improve their public relations.

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, transparencies, 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 Scientist**  
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      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      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).

**9.230**  
**Commercial Salmon Fishing**  
3 class hrs/wk      2 cr

Familiarization with and improvements of methods and equipment, for any person interested in the commercial salmon fishing industry.

**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 successfully 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; sales aids and tools; sales letters, records; handling objections; 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 vales 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 land-lord-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 further 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.

9.304

**School Safety Development**

3 class hrs/wk 3 cr

Eye safety, fire, hearing, housekeeping, lifting, etc., depending on class inclination; could include bicycle safety, playgrounds, etc.

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 skills, using small tools, minor equipment, practice in forcible entry, use of masks, and breathing equipment. Team skills used in ground operations including hose and ladder evolutions, salvage, overhaul, rescue and fire attack.

9.311

**Firefighting Skills B**

3 class hrs/wk 2 cr

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

9.440

**Eye Care Professional Assistant I**

3 class hrs/wk 3 cr

Lecture and participation of assistants presently employed in basic aspects of working in office of an optometrist or ophthalmologist.

9.500

**Elements of Supervision**

3 class hrs/wk 3 cr

A basic introductory course covering in general terms the total responsibilities of a supervisor in industry, such as organization, duties, human relations, grievance, training, rating, promotion, quality-quantity control, and management-employer relations.

9.546

**Basic Sales Methodology**

6 week class 2 cr

Introduction to sales techniques with emphasis on technique rather than motivation of the sales force.

9.611

**Printing Methods I**

3 class hrs/wk 2 cr

Introduction to printing methods; silk screen, gravure, dry offset and letterpress. Emphasis on letterpress and offset. Lectures, films, field trips to print shops and in-plant demonstration, familiarization with letterpress and offset operations from reception of job order to finished product.

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. Full use of budgeted telephone dollars.

9.743

**Income Tax Preparation**  
3 class hrs/wk 3 cr

Explanation of Federal Income Tax laws. Importance of adequate and suitable financial records. Special emphasis on helping taxpayer compute required reports and taxes due.

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.

9.816

**Livestock/crop Science Seminar**  
12 class hrs 1 cr

A short course involving a series of pertinent livestock and forage topics. Distinguished authorities on these topics will be invited to make presentations in person or by tele-communication lecture system.

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.

9.818

**Horsemanship and Horse Husbandry**  
3 class hrs/wk 3 cr

Selection and care of the horse including health, nutrition, reproduction, housing. Use of the horse including safety, training, performance, equipment, and review of literature.



9.819

**Livestock Breeding**

3 class hrs/wk 3 cr

Fundamental breeding practices and their use; biological and physiological phenomena involved in understanding the breeding and selection of animals; use of the tools of selection, cross-breeding, and inbreeding by the breeder.

9.828

**Tractor Safety**

12 class hours/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 hours/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**

1½ class hrs/wk 2 cr

Basic duties of a laboratory animal technician, including husbandry and management of laboratory animals.

0.519

**Photography**

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-lose conflict resolution are an integral part of the course.

0.688

**Attitude Awareness**

3 class hrs/wk 3 cr

Theory and practice in human dynamics; relate learning to interpersonal relations in family, with friends, on the job. Working group projects to develop better self image, self acceptance, tolerance for individual differences. Communication, problem solving and conflict resolution.

**Beekeeping I**

3 class/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.

**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.

# administration and staff

## lbcc administration

**Raymond J. Needham**, President  
**Adams, O.R.**, Dean of Instruction  
**Archibald, A. Lee**, Dean of Students  
**Farnell, Vernon E.**, Dean of Business Affairs  
**Carnahan, D. Jon**, Director of Admissions and Registrar  
**Cheney, Kenneth D.**, Director of Humanities & Social Services Division  
**Clark, Philip V.**, Director of Business & Industrial Division  
**Dixon, Barbara J.**, Assistant to Dean of Instruction  
**Jean, Raymond A.**, Director of Facilities  
**Liles, Jack V.**, Administrative Assistant to the President  
**Maier, William D.**, Director of Accounting Services  
**McClain, H. Richard**, Director of Allied Health & Physical Education Division  
**Miller, Robert A.**, Director of Student Activities  
**Scott, Peter C.**, Director of Science & Technology Division  
**Siebler, William**, Director of Learning Services Division  
**Talbott, Robert D.**, Director of Guidance Services

## faculty

**Alvin, John**, Welding; B.S., Oregon State University; State of Oregon Welding Certifications; 7 years journeyman welding experience.  
**Andreason, Regina**, Sociology-Psychology; B.A., Northern Illinois University.  
**Arasmith, Everett**, Wastewater Technology; A.A., Oregon Institute of Technology.  
**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.  
**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.

**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.  
**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.  
**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.  
**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.  
**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.  
**Connors, Gerald**, Business Management; B.A., Park College; M.B.A., University of Oregon.  
**Cope, Marian**, Study Skills; A.A., B.S., Montana State University.  
**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, John**, Farm Records Management; B.S., Ed.M., Oregon State University.  
**Dallman, Charles**, Food Services; Cooking Certificate, Laney Community College; Community College Teaching Certificate-Food Services, California; B.A., University of Connecticut.

**Day, Henry**, Construction Technology; 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.

**Felton, James**, Wastewater Technology; A.S., Linn-Benton Community College.

**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, LeRoy**, Small Engine Repair; Attended University of Wisconsin, Montana State University, Northern Montana College, University of Montana.

**Hazel, Dorothy**, Business Skills; B.S., University of South Dakota; M.B.A., University of Denver; Ed.D., University of Kentucky.

**Hysmith, Eugene**, Auto Body Repair; Long Beach City College, Lane Community College; 22 years industrial experience.

**Irvin, Jean**, Allied Health & Physical Education; B.A., Slippery Rock State College; M.A., Ohio State University.

**Johnson, Hal**, Agriculture-Business; B.S., M.S., Washington State University.

**Kimpton, Verlund [Butch]**, Physical Education & Allied; B.S., M.S., University of Oregon.

**Kraft, John R.**, Chemistry; B.A., Willamette 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.

**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.

**Mann, Charles**, Reading; B.S., M.A., Oregon State University.

**May, Don**, Wastewater Technology; B.A., M.S., University of Idaho.

**McCraw, Virginia**, Associate Degree Nursing; R.N., Mercy Hospital, Nampa, Idaho; B.S., University of Oregon.

**Meyers, Dianne**, Associate Degree Nursing; R.N., Contra Costa College; B.S.N., San Francisco State; M.S.N., Loyola University.

**Meyrick, Nancy**, Community Education, ABE/GED, B.A., Eastern Oregon College.

**Miller, Carolyn**, Community Education, Assistant Coordinator, Special Programs Experience.

**Miller, David**, Drafting; B.S., M.Ed., Oregon State University.

**Miller, J. Daniel**, Business Management; B.S., Milton College, Wisconsin.

**Miller, Raymond**, Guidance Counselor; B.A., California State College at Los Angeles; M.S., University of Oregon.

**Mills, Anne**, Nursing Assistant; R.N., St. Mary's Hospital, Minneapolis, Minnesota; B.S., St. Louis University; M.S., Oregon State University.

**Minnick, Donald**, Language Arts; B.A., Cornell College; M.A., State University of Iowa.

**Montgomery, Maribel**, Psychology; B.A., M.A., University of California, Berkeley.

**Moos, Bruce**, Animal Technology; B.S., Fresno State; Vocational Certificate, University of California at Davis.

**Moran, James**, Data Processing; B.S., Montana State University; M.S., Utah State University; C.D.P. (Certified Data Processor).

**Moreira, Joyce**, Business Skills; B.S., M.Ed., Oregon State University.

**Morgan, Gerald**, Dental Assistant; U.S. Air Force.

**Morgan, Michael**, Mathematics; B.S., Oregon College of Education; M.S., Oregon State University (on leave-of-absence, 1976-77).

**Movius, Edward**, Business; Sales and public relations experience.

**Nelson, Sandra Z.**, Art; B.A., Kearney State College; M.A., University of Northern Colorado.

**Osterlund, Blair**, Counseling Psychologist; B.S., University of Washington; M.S., University of Oregon; Ph.D., University of Missouri.

**Otto, Richard**, Guidance Counselor; B.S., M.S., Oregon State University.

**Paulson, Jacqueline**, Associate Degree Nursing; R.N., B.S., B.A., M.A., University of Washington.

**Perkins, Raymond D.**, Physical Science and Mathematics; B.A., M.Ed., Central Washington State College; M.S., Oregon State University.

**Pond, Keith**, Automotive Technology; Air Force Mechanics School; Master Technician Certificates, Ford Motor Company; MTC Board; Ford & General Motors Training School Certificates.

**Rasmussen, Steve**, Physical Science and Mathematics; B.S., University of Utah; M.S., Oregon State University.

**Reed, Wallace**, Mathematics; B.S., M.A., Oregon State University.

**Reynolds, James**, Drafting; B.S., B.A., M.A., California State University.

**Ross, Robert**, Biology; B.S., M.S., University of Oregon.

**Rossberg, Stephen A.**, Speech-Drama; B.A., University of Minnesota; M.S., Kansas State Teachers College.

**Ruppert, Gary**, Music; B.A., California State University, Sacramento; M.M., University of Oregon.

**Schreiber, Jean**, Human Services; B.S., University of Oregon; Public Administration Certificate, University of Oregon.

**Snyder, Paul**, Media Specialist; B.S., Portland State University; M.S., Oregon College of Education.

**Spiker, Jennifer**, Journalism and English; B.A., Hastings College; M.S., Kansas State University.

**Stewart, Elwyn**, Welding; State of Oregon Welding Certification; Eugene Vocational School; Industrial Welder Apprentice 4-yr. Certificate.

**Swearingen, Dell**, Mathematics; B.S., Oregon College of Education; M.S., University of Oregon.

**Sweet, William T.**, Creative Writing; B.A., University of Oregon; M.F.A., University of Oregon.

**Thorton, Larry**, Auto Body Repair; Associate Degree, University of Oregon; Training school certificates from General Motors, Chevrolet, Buick, Pontiac, Oldsmobile, Cadillac, Ford Motor Divisions; DeVilbiss Paint School; Martin-Senour Paint School.

**Tobey, Eugene**, Art; A.A., College of Eastern Utah; B.F.A., M.F.A., Utah State University.

**Vincent, Michael**, Heating, Air Conditioning and Refrigeration; A.S., Los Angeles Trade Technical College.

**Walczak, Albert**, Business Skills; B.S., Portland State College; M.Ed., Oregon State University.

**Wallace, Warren**, Counseling Psychologist; B.S., Clarion State College; M.Ed., D.Ed., Pennsylvania State University.

**West, Ann Marie**, Guidance Counselor; B.A., M.S., California State University.

**West, Richard**, Performing Arts; B.S., Oregon State University; M.M., University of Oregon.

**Williams, Barbarajene**, Language Arts; B.S., University of Wisconsin; M.A., Arizona State University.

**Wood, Adella**, Associate Degree Nursing; R.N., Trinity Hospital School of Nursing, Minot, North Dakota; B.S.N., University of Missouri; M.N., University of Oregon Health Science Center.

**Wood, Dennis**, Welding; Engineering Major, San Jose City College, Peralta Junior College, Chabot College, U.C. Berkeley, Apprentice Welder.

**Wooley, John**, Environmental Technology; B.S., M.S., Oregon State University; Environmental Protection Agency Water Pollution Control.

**Wright, Dwain**, Graphic Communications; A.A., Pierce Junior College; B.S.P.A., Woodbury College; M.A., University of California at Los Angeles.

**Wright, Edward**, Mathematics; B.S., Western Montana State College; M.S., Western Washington State University.

## professional support staff

**Gilson, Mel**, Coordinator ABE/GED, Disadvantaged & Handicapped

**Green, Judith**, Coordinator of Student Clubs and Organizations

**Jordan, Wilfred A.**, Coordinator of Lebanon Center and Apprenticeship Training

**Lambert, Rita A.**, Coordinator of Financial Aids

**Ruckman, Stan**, Assistant Director, Learning Services

**Shelton, Stephen M.**, Manager of Data Systems

**Smith, Derwood**, Purchasing Agent

**Wren, Patricia A.**, Coordinator of Public Information

**Zielaskowski**, Coordinator of Benton Center

## mid-management

**Brown, Marc**, Evening Supervisor of College Center

**Creighton, Dennis**, Coordinator of Veterans Affairs

**Cripe, Sue**, Assistant Registrar

**Hurst, Doug**, Manager of Food Services

**Scheffler, Clarice**, Bookstore Manager

**Tsukamaki, Diane**, Assistant Coordinator of Financial Aids

**Waibel, Mona**, Coordinator of Sweet Home Center

## classified staff

**Adams, Cheryll**, Learning Services

**Andrews, Susan**, Learning Services

**Annicker, Virginia**, Data Processing

**Ballweber, Jake**, Facilities

**Barclay, Janice**, Facilities

**Beal, Coleen**, Dean of Instruction's Office

**Bell, Ron**, Facilities

**Bennett, Rosemary**, Admissions & Career Information

**Benson, Verla**, Admissions & Career Information

**Bergeman, Rich**, Public Information

**Bilyou, Ken**, Facilities

**Boyd, Lynn**, Public Information

**Brewer, Lynette**, Community Education, Sweet Home

**Brummitt Lucy**, Learning Services

**Burres, Carol**, Switchboard

**Casis, Sally**, Learning Services

**Chamberlin, Pat**, College Center



Chambers, Martha, Bookstore  
Chase, Anna, Parent/Child Laboratory  
Clark, Jill, Business Office  
Clark, Kathy, Learning Services  
Clausen, Karlen, Science & Technology  
Clifton, Mary, Facilities  
Connell, Claude, Facilities  
Corn, Lee, Facilities  
Curtis, Glenda, College Center  
Davies, Wanda, Business & Industrial  
DeLair, Carolyn, College Center  
Ebbs, Linda, Science & Technology  
Ehrhard, Paul, Science & Technology  
Engstrom, Carol, Business & Industrial  
Fargher, Ina, Learning Services  
Farrington, Annie, Humanities & Social Services  
Fields, Freddie, Facilities  
Ford, Albert, Facilities  
Fredrickson, Bob, Facilities  
French, Jane, Community Education  
Glaser, Barbara, Business Office  
Goetzinger, Iris, Facilities  
Graham, Duane, Facilities  
Graves, Billy, Facilities  
Graves, Terenia, Facilities  
Gray, Alice, Business Office  
Gupton, Dick, Facilities  
Gurke, Carl, Facilities  
Harrington, Harry, Facilities  
Harris, Bill, Facilities  
Harris, Ruth Ann, Community Education  
Haynes, Don, Facilities  
Heaton, Leroy, Science & Technology  
Heins, Jean, Business & Industrial  
Heinis, Corilee, Bookstore  
Henderson, Ivan, Facilities  
Herrold, Paulette, Allied Health & P.E.  
Hiner, Marena, Learning Services  
Hoard, Lila, Business & Industrial  
Horton, Louis, Data Processing  
Hulshof, Bill, Business Office  
James, Donna, Admissions & Registration  
Jimmerson, Sue, Admissions & Registration  
Johnson, Lousie, Parent/Child Laboratory  
Jordan, Nadine, Business Office  
Keith, Judy, Guidance Services  
Kerns, Betty, Facilities  
Kimpton, Ford, Allied Health & P.E.  
Kloping, Paul, Science & Technology  
Knabe, Elsie, College Center  
Kramer, Mary Jo, Community Education, Lebanon Center  
Ledbetter, Donna, President's Office  
Leader, Hope, Community Education  
Lieberman, David, Facilities

Lieberman, Marilyn, Data Processing  
Lindsay, Larry, Facilities  
Loe, Shirley, College Center  
Long, Jim, Data Processing  
Maybry, Charley, Facilities  
Mack, Sally, Science & Technology  
Maier, Anne, Purchasing Office  
Marler, Pauline, Business Office  
Matheson, Linda, Community Education, Lebanon Center  
McAlpine, Judy, Facilities  
McCloy, Bert, Facilities  
McKaig, Cathy, Learning Services  
McKenna, Nora, Learning Services  
Melillo, Anita, Community Education  
Miller, Joan, Science & Technology  
Mills, Tom, Learning Services  
Mulholland, Joy, Health Services  
Nichols, Betty, Business Office  
Norris, Carolyn, President's Office  
Nunnemaker, Nancy, Bookstore  
Orsi, Margaret, Dean of Students Office  
Patton, May, Placement  
Paull, Richard, Learning Services  
Pearson, Clarence, Facilities  
Pfel, Mel, College Center  
Phillips, Jim, Facilities  
Peterson, Dorothy, Financial Aids  
Pomazel, Andy, Veterans' Affairs  
Postma, Betty, Dean of Instruction's Office  
Preston, James, Learning Services  
Rasor, Jean, Science & Technology  
Reid, Carol, Veterans Affairs  
Rogers, Wanda, Admissions & Registration  
Ross, Jane, Learning Services  
Roth, Doris, Science & Technology  
Schmidt, Diane, Humanities & Social Services  
Selfridge, Georgia, Admissions & Career Information  
Smith, Connie, Guidance Services  
Spence, Joe, Facilities  
Staats, Molly, Admissions & Registration  
St. Dennis, Kay, Business Office  
Steele, Lorraine, Community Education  
Subert, John, Learning Services  
Thompson, Chris, Learning Services  
Transue, Debbie, Business Office  
Trent, Irene, Placement  
Wagner, Nancy, Learning Services, leave-of-absence '76-77  
Wallace, Sally, Community Education, Benton Center  
Wenger, Lee, Facilities  
White, Joan, Learning Services  
Winkler, Dottie, Allied Health & P.E.  
Wyman, Barbara, Business & Industrial

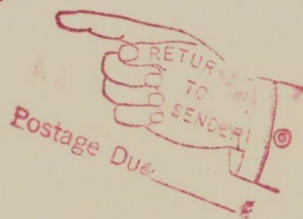
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