

Lane Community College



Catalog 70/71

LANE COMMUNITY COLLEGE

ARCHIVES

FILE COPY

(DO NOT CIRCULATE)

10	General Information
11	Admission Procedures
12	Costs
16	Programs
18	Aerospace
21	Business
35	Data Processing
36	Electronics
45	Fine and Applied Arts
49	Food Technology
50	Health and Physical Education
54	Home Economics
58	Industrial Technology
69	Language Arts
73	Mass Communications
81	Mathematics
84	Mechanics
97	Nursing
101	Paradental-Paramedical
111	Performing Arts
113	Science
120	Social Science
138	Special Programs
140	Adult Education
142	Developmental Education
143	Special Training Programs
146	Board of Education
146	Administration
147	Faculty
157	Counselors
159	Index

Academic Calendar 1970-71

SUMMER TERM 1970

June 8-19	Summer Term registration
June 22	Classes begin
July 4	Independence Day holiday
July 17	Four-week session ends
August 14	Eight-week session ends
September 7	Labor Day holiday
September 11	Twelve-week session ends

FALL TERM 1970

July 15-September 25	Registration
September 28	Classes begin
November 11	Veteran's Day holiday
November 26-29	Thanksgiving holiday
December 19	Fall Term ends

WINTER TERM 1970-71

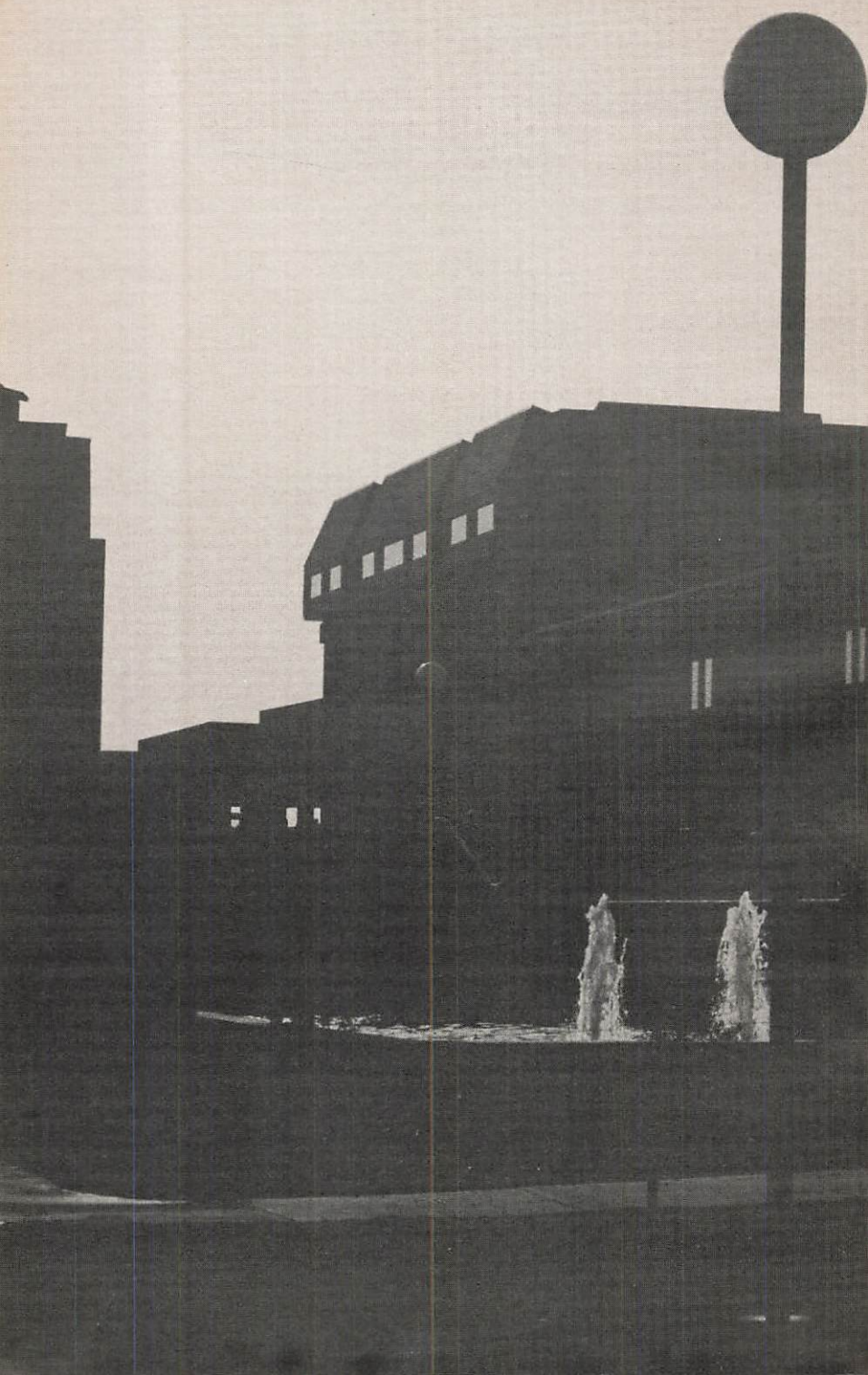
December 14-31	Registration
January 4	Classes begin
March 20	Winter Term ends

SPRING TERM 1971

March 15-26	Registration
March 29	Classes begin
May 31	Memorial Day holiday
June 12	Spring Term ends

SUMMER TERM 1971

June 7-18	Registration
June 21	Classes begin
July 5	Independence Day holiday
July 16	Four-week session ends
August 13	Eight-week session ends
September 10	Twelve-week session ends



Lane Community College is a two-year, co-educational institution built to serve the 210,000 residents of Lane County and small parts of adjacent Linn, Benton, and Douglas Counties. Founded on October 19, 1964, it has grown into a multi-million dollar institution offering the community at large a tremendous number of programs in a wide variety of fields. Its new 158 acre campus—an ultramodern complex set in the rolling foothills just south of Eugene, Oregon—was dedicated by the governor on October 11, 1969.

As an open door institution, Lane strives to help each member of the community achieve a greater degree of personal development. The primary emphasis is on providing each member of the community who applies with a post high school program designed to meet his own individual needs. In addition to programs in occupational training and the liberal arts fields, the College provides credit and noncredit opportunities in general and remedial education, counseling and guidance in vocational and educational planning, programs in Adult Education and an Apprenticeship program. The College also makes available various facilities and sponsors activities to meet the cultural needs of the community.

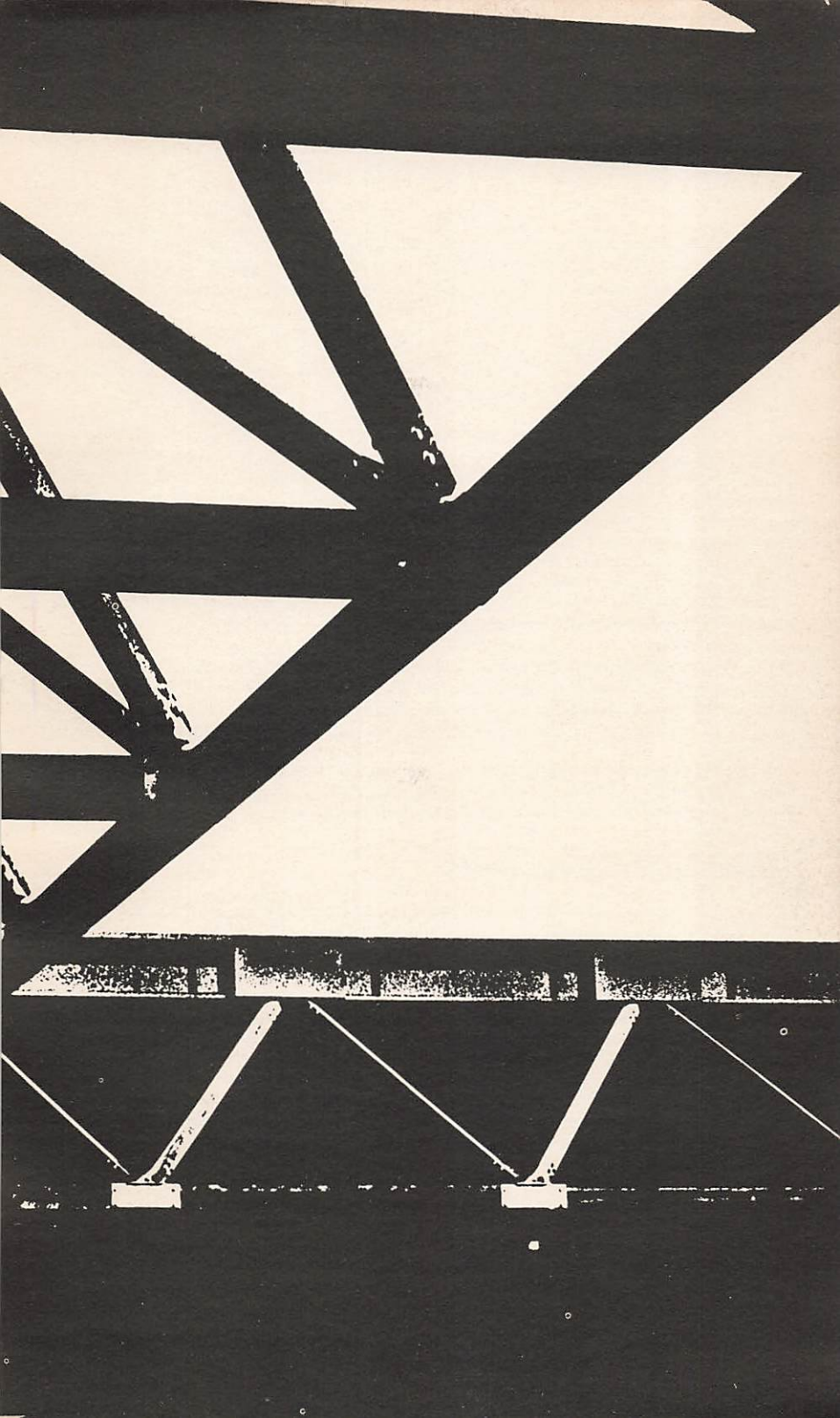
Widely acclaimed for its highly individualized approach to education, its innovative programs, its low student/counselor and student/instructor ratios and its modern equipment and facilities, Lane maintains a year round program for more than 19,000 full and part-time students, and employs a full and part-time staff of more than 600.

Lane's 1969 - 70 operating budget of \$4.8 million was underwritten in the main by tuition and state and federal funds. Approximately one-fifth of the operating expense was raised through local property taxes.

The College operates under a local, elected Board of Education, and is directly assisted in its planning for the future by 22 advisory committees, made up of more than 300 of the area's community leaders.

General Information





Admission Procedures

Admission and registration for Fall Term can be accomplished as late as several days after classes begin, but those who desire convenient course and time schedules find it wise to seek admission and to register during July or August.

Application forms are available each Spring at counseling offices in each of the high schools in the College District, and they're available year round at the LCC Admissions Office.

The only rigid general entrance requirement is that applicants be beyond high school age. In order to review qualifications, however, the College must have the completed application for admission and the high school transcript, if any. Applicants who have taken post-high school training at other institutions must file transcripts regarding that work. Evidence of receipt of the equivalency certificate must be submitted where appropriate. Applicants who have taken tests such as the College Entrance Examination Board Test or the American Testing Examination must file test results with the Admissions Office. LCC does not require testing at entrance, except for admission into special programs.

A complete physical examination is required of all students enrolled for 10 or more credit hours or any physical education class. Forms for this exam are available at the Admissions Office; they must be signed by a physician and returned to the Admissions Office before registration.

At the time of admission to the College, the student is required to make a non-refundable \$10 tuition deposit, which is credited toward tuition if the student enrolls at LCC the following term.

Special Requirements

Those entering college transfer programs must be high school graduates or have a high school equivalency certificate. The latter may be earned by receiving a qualifying score on the General Educational Development Test, which may be taken at LCC's Counseling Center. Several programs in electronics and engineering require a significant background in mathematics. Those enrolling should be high school graduates and/or earn satisfactory scores on qualifying examinations. Those entering occupational programs must be 18 years of age or older and must, in the judgment of the Administration, be able to profit from instruction. (Students less than 18 years of age may be admitted with the mutual approval of their high school principal and LCC.) Since enrollment in occupational programs is limited by the facilities available, in-District students are admitted on a first-come, first-serve basis. Admission to vocational programs is limited to students living in the College District until June 1, after which time admission of all applicants is considered in order of the date of application.

Special Admission Procedures for Selected Programs

The Dental Hygiene, Dental Assistant, Associate Degree Nursing, Practical Nursing, Inhalation Therapy, Electronic Engineering Technician, and Civil and Structural Engineering Technician programs have special procedures for admission. As in all programs at LCC, the candidate must

first meet the minimum requirements for admission as a regular student. (See above). In the **Associate Degree Nursing, Licensed Practical Nursing, Inhalation Therapy, Dental Hygiene, and Dental Assistant** programs, it is necessary to:

1. Make application before March 1 to be considered for the following fall enrollment.
2. Submit high school and, if applicable, college or post-high school transcripts upon request.
3. Submit three letters of reference upon request (Lane Community College forms must be used).
4. Successfully complete the pre-entrance examination.
5. Be available for a personal interview.
6. Successfully complete high school Chemistry and Algebra, or the equivalent, within five years of admission date for the Dental Hygiene, Inhalation Therapy and Associate Degree Nursing programs.

In **Electronics Technology** and **Civil and Structural Engineering Technology**, it is necessary to successfully complete the Engineering Physical Science Aptitude Test (EPSAT). Preparation in high school Math and Physics is recommended.

In the **Radio Broadcasting** program, it is necessary to:

1. Have an interview and reading audition with the department chairman or a counselor.
2. Have a background in Speech, Drama, Music and Typing if planning to enter radio programming and production.
3. Have a background in Math, Physical Science and Typing if planning to enter radio engineering.

In the **Apprenticeship** program, it is necessary to:

1. Furnish evidence of completion of high school by presenting a transcript or the equivalent. The student should have earned at least a "C" average in high school.
2. Arrange an interview with the State Bureau of Apprenticeship and Training, Third Floor, State Office Building, Eugene.
3. Complete the General Aptitude Test Battery (GATB) at the State Employment Office, Eugene.

Special Student Status

In special cases, exceptions to the above procedures may be granted. Requests are to be submitted in writing to the Dean of Students.

Costs

Tuition

Tuition and special fees must be paid in full at the time of registration unless other arrangements have been made. Payment of such fees entitles the student to a student body card, the use of all college facilities and other student privileges.

In-District Tuition *	Ten credit hours or more	\$ 60.00/term
	50 miles or more from school	30.00/term
	40-49 miles from school	35.00/term
	30-39 miles from school	45.00/term
	Nine credit hours or less	6.50/credit hr.

8 Costs

Out-of-District but In-State Tuition	Ten credit hours or more	130.00/term
	Nine credit hours or less	14.00/credit hr.
Out-of-State Tuition	Ten credit hours or more	469.00/term
	Nine credit hours or less	47.00/credit hr.
International Student Tuition	Ten credit hours or more	485.00/term
	Nine credit hours or less	49.00/credit hr.

*The District includes Lane County, the Monroe Elementary District, and the Harrisburg Union High School District.

DETERMINATION OF RESIDENCE

In-District

An in-District student is one who meets at least one of the following conditions:

1. Married and a resident of the College District at least six months prior to first registration. (Time spent as a full-time student in a collegiate institution does not count towards meeting the six-month residence requirement.)
2. Over age 21 and a resident of the College District at least six months prior to first registration. (Time spent as a full-time student in a collegiate institution does not count towards meeting the six-month residence requirement.)
3. A minor whose parents or legal guardians are bona fide residents of the College District.
4. A minor whose domicile is independent of his legal guardian. Such a person qualifies for the in-District enrollment fee on presentation of an affidavit stating that he established his domicile in the College District six months prior to his first registration and that he was not a full-time student at a collegiate institution during that period.

Out-of-District

Those whose homes or permanent addresses are outside of the Lane Area Education District, regardless of temporary residences established in the District, are classed as out-of-District students.

Out-of-state

Any student whose permanent address is outside Oregon is classed as an out-of-state student.

International

A student who is not a citizen of the United States is classified as an International student.

Special Fees

Some courses, such as welding and science labs, require the use of special materials and/or fragile equipment. They are made available to the student at a rate of \$5 to \$10 per term, payable at registration. There is a basic Physical Education fee of \$3 per term; instruction in some sports such as skiing, swimming, and golf require the payment of an additional fee.

Miscellaneous Fees

Audit fee	\$ 4/credit hour
Credit by examination	\$ 3/credit hour

Insurance

Group insurance is available through the College at the time of registration. Information is available at the Business Office.

Late Registration

Students are assessed a late fee of \$1 per day for each class day after classes begin. There is no admittance after the seventh calendar day without permission of the Dean of Students.

Student activities fee	\$2/term for full-time students 1/term for part-time students
------------------------------	--

Transcript charge

No charge for reasonable requests. Order in person or by written request through the Registrar's Office.

Tuition Deposit

A \$10 non-refundable tuition deposit is required and will apply toward tuition. The Administration may waive this requirement for hardship cases.

Books, Supplies, and Tool Kits

Students can expect to pay from \$5 to \$10 for books for each course. In addition, many vocational programs require \$50 to \$150 tool kits. Specific information regarding costs in various programs is available through the Counseling Center.

Typical average yearly expenses, excluding room and board, transportation and personal expenses:

Tuition	\$180
Books	80
Special and Miscellaneous Fees	25
	<hr/>
	\$285

Refunds

Those withdrawing from the College prior to the fifth week receive a full refund of tuition, less the \$10 registration fee. Those withdrawing after that date receive no refund.

Activities

Clubs and Organizations

Present clubs and campus organizations include the Fellowship of Christian University Students, the Flying Titans, Campus Crusade for Christ, ESP Club, the Outdoor Club, Black Student Union, Water Ski Club, Chess Club, Americans for a Peaceful World and Phi Theta Kappa.

Students are encouraged to organize new clubs and special interest groups compatible with the aims of the College.

Athletics

As a member of the Oregon Community College Athletic Association, LCC conducts a number of intercollegiate activities for men, including cross-country, soccer, basketball, gymnastics, wrestling, track and tennis.

10 Facilities

Basketball competition for women is conducted on an extramural basis. Through a separate program of intramural sports, LCC provides an opportunity for every student to participate in sports as frequently as his or her interests, abilities and time will permit. The intramural program provides a full schedule of individual and team sports, utilizing the College's two gymnasiums and more than 30 acres of playing fields, baseball diamonds, archery ranges and tennis courts.

Publications

The College newspaper, **The Torch**, offers articles about the faculty, student body and campus events, in addition to the usual newspaper features. Distributed free, it is a major link between the student body and student government.

The College yearbook is **The Titan**.

Campus Events

Each year the student/staff committee on Convocations and Public Events schedules six all-College convocations. Speakers and entertainers of general interest appear without cost to the students, offering a variety of programs. The Performing Arts Department produces three plays annually, and the College's various departments often sponsor special speakers and activities in conjunction with their own programs.

Student Government

A student senate of elected officers and representatives meets regularly to plan LCC student activities and to coordinate student programs with other Oregon community colleges. In addition, student/staff committees assume an active and definite role in virtually every area of the College's operation.

Radio

The College operates station KLCC-FM which provides students and people of the district with modern music programs, talk shows, specials, and information and notices pertinent to campus life.

Facilities

The Center Building, around which much of the campus activity centers, houses the majority of student service facilities, including the Bookstore, the Library-Learning Resource Center, the Study Skills Center, and the restaurant and cafeteria. Also located there are the Admissions Office, counselors' offices, classrooms, study areas and faculty offices.

Bookstore

Students will find the majority of the materials needed for class work in the College Bookstore, including texts, tool kits for occupational programs, paperback books and a variety of school supplies.

Restaurant and Cafeteria

The restaurant and cafeteria offer an extensive menu of nourishing, well-prepared foods in pleasant, open surroundings. Facilities are available for a quick snack or for formal dining.

Library-Learning Resource Center

The College's Library-Learning Resource Center subscribes to more than 300 periodicals and newspapers and has holdings in excess of 22,000 volumes. Its unique Information Retrieval System makes available programmed instruction in a number of courses and video and audio taped replays of various college functions and activities, and selected state and

national events. As a center for many types of instructional material, the LRC centrally locates books, magazines, newspapers, pamphlets, motion pictures, phonograph records, tapes, filmstrips, illustrations, maps, charts, prints and models. Important reference works, time-saving indexes, files of vocational guidance materials, and a collection of catalogues from universities and colleges throughout the nation further complement a total information center which serves both students and faculty.

In addition, the LRC maintains an audiovisual department which supplies faculty members with graphics, audio and video tapes, photographs, printed materials and other teaching aids for instructional support.

The continued expansion and development of library and learning resource materials forms an integral part of the College's instructional program. The Center itself offers an inviting, convenient, quiet place for reading, studying and research.

Study Skills Center

The Study Skills Center offers programmed course work and tutorial assistance to help students overcome academic weaknesses and improve their learning techniques and study habits in a private, "no classroom" atmosphere.

Services

Counseling

One of LCC's greatest assets is its large staff of student counselors. These experienced men and women are constantly available to help students plan toward maximum self development. Counselors help students plan their academic programs, register for and withdraw from classes, locate jobs and housing, secure financial assistance, and make personal adjustments. They are always ready to assist with answers to any of the major and minor questions arising in the daily pursuit of an education. Counselors, too, will provide students with information regarding military service and help international students to get settled at the College.

Financial Assistance

The College maintains a number of financial aid programs to help students eliminate, reduce or defer the cost of their college education. Scholarships are awarded by the Board of Education, private individuals and service clubs. The Federal Government makes both loans and grants available, and work study programs are available through the College. In addition, various departments within the College occasionally hire students. Work study programs generally pay \$1.50 to \$1.75 per hour. Students with questions about these programs should contact the Financial Aids Counselor.

Housing

There are no resident facilities at the College. A list of student housing available nearby is on file in the Admissions Office. The College assumes no responsibility in negotiating housing agreements; these arrangements are the student's responsibility.

Testing

The College does not require general entrance testing for most of its programs. Many types of tests, however, are available upon request.

Academic Information

GLOSSARY OF TERMS

Familiarity with these few basic terms will enhance understanding of the following material.

Auditing refers to non-credit, non-graded participation in a class.

Credits are granted in recognition of work successfully completed in specific courses. For lecture courses, one hour credit is granted for one hour attendance in class per week. A student can expect to spend two or three hours in a laboratory class for one unit credit.

Credit Load refers to the number of credits for which a student registers. The average load for a full-time student is 12-15 credits. Part-time students carry less than 10.

A **Course** is any class or subject (e.g. English, Biology, Drafting) for which a student may register. All courses which accrue credit toward a vocational degree have four numbers. Those which are transferable to four year colleges are identified with letters and three digits.

A **Full-time Student** is anyone carrying ten or more credit hours of work. It is important to note that the definition of a full-time student varies with different institutions. The Selective Service Board and the Social Security Administration, for example, define a full-time student as one carrying 12 credit hours of work.

Laboratories are classes in which most of the work is done during the class session.

A **Program** is a group of courses arranged to provide vocational or professional training leading toward a degree or certificate of completion.

A **Sequence** is a series of courses which are closely related to each other. They are usually numbered consecutively.

A **Term**, or quarter, is, approximately, an eleven week period of study. Fall Term begins toward the end of September and lasts until mid-December. Winter Term begins around the first of January and lasts until roughly March 15. Spring Term begins at the end of March and lasts until the middle of June. Summer Term begins in the middle of June and lasts until about the first of September.

EXAMINATIONS

Students are responsible for taking final examinations as they are listed in the exam schedule issued at the beginning of each term. Midterm examinations are given at the discretion of the instructor.

GRADING

Grades are earned in credit courses and are recorded in each student's permanent record.

A—Indicates superior work, initiative, and originality.

B—Indicates highly satisfactory performance of assigned work.

C—Indicates adequate or average performance of assigned work.

D—Indicates barely passing work with little or no initiative displayed.

F—Indicates course failure, or failure to take a final exam.

P—Indicates "pass."

NP—Indicates "no pass."

I—Indicates "incomplete." This is given when, for a justifiable, approved reason (serious illness, or an agreement between the student and faculty member), a student does not complete all requirements of a course within a term. The student is obligated to complete the requirements within the following year if he wishes to receive credit for the course.

W—Indicates approved withdrawal from a course.

GPA

The grade point average (GPA) is based on the assignment of points to course grades. An "A" earns four points, "B" three points, "C" two points, "D" one point, "F," "I," "P," and "NP" no points. The points allowed for the grade are multiplied by the number of credit hours earned in that course. The total points earned for all courses are added and then divided by the total number of credit hours to get the GPA.

Pass—No Pass

In courses designated as unrelated to the major field, a student may elect to enroll as a candidate for "pass" or "no pass" rather than a letter grade. When they deem it appropriate, instructors may assign "pass-no pass" students the letter grade "A" but no grade lower. No more than 16 credit hours of "pass" grades may be applied toward LCC degree requirements. Students who accumulate fewer than 45 credit hours over four terms may not enroll for more than 12 hours of "pass" grades.

"Pass-no pass" courses to be applied toward occupational programs are designated by departments concerned.

HONORS LISTS

Honors lists are published at the end of each term. Full-time students receiving GPAs of 3.50 and above are named to the President's List. Those earning 3.00 to 3.49 are named to the Dean's List.

AUDITING

Students may request enrollment in classes as auditors if space is available.

CREDIT BY EXAMINATION

Students who believe themselves masters of material to be covered in a given course, by virtue of previous training or work experience, should initiate the procedure for securing credit through a counselor.

ADVANCED PLACEMENT

Some students complete college-level work in high school under the Advanced Placement Program sponsored by the College Entrance Board. Those who receive satisfactory grades in examinations administered by the Board may, on admission to the College, be granted credit toward an Associate Degree.

NON-CREDIT COURSES

About 200 non-credit courses are offered to help students prepare for college work or simply to enrich their backgrounds. These courses are offered through the Study Skills Center and the Department of Adult Education. Check the course lists under those departments.

TRANSFER CREDITS

Work satisfactorily completed at other Oregon public colleges is normally

14 Academic Information

accepted for credit toward degrees at LCC. Likewise, credit earned at LCC is transferable to other state colleges and universities. Recommended programs for transfer students appear in department descriptions.

ATTENDANCE

Faculty members usually announce an attendance policy for each class. Those enrolling late should obtain attendance rules from each instructor.

LATE ENROLLMENT

Students may enroll for a course as late as seven calendar days after a term begins. Late enrollment is arranged through a counselor.

UNSATISFACTORY WORK

Instructors may drop students from classes without penalty if, within the first seven weeks of a term, they demonstrate insufficient preparation for the subject content of the course. A student may also be dropped for persistent absence or neglect of class assignments.

WITHDRAWAL FROM CLASS

A student may withdraw from a class without an adverse grade through the seventh week of a term. After that date, he may withdraw without penalty if he has the approval of the instructor.

ACADEMIC PROBATION

A student receiving less than a 2.00 GPA any term may be placed on academic probation. If a student receives less than a 2.00 GPA for two consecutive terms, he is asked to work with a counselor to develop a program in which he will be more apt to succeed. Probation is lifted when one's grades for the past term and the cumulative GPA are 2.00 or above.

SCHEDULE OF CLASSES

A Schedule of Classes is distributed prior to the beginning of each term. It contains the calendar for the term, information on registration and testing, a list of classes offered, and the time and places where classes will be held.

DEGREES, CERTIFICATES AND DIPLOMAS

Associate of Arts Degree

The A.A. Degree is awarded to students who satisfy the following requirements:

1. Complete a minimum of 93 term hours of college transfer courses with a cumulative grade point average of not less than 2.00.
2. Include in the program the following: English Composition, 6 hours; Physical Education (unless excused by the Academic Council), 5 hours; Health, 2 hours; and a year sequence in Science and/or Math, Social Science and Language or Literature.
3. Establish a major by taking a second-year sequence in either the Liberal Arts or in a Science.
4. Attend at least two terms, including the last term, and earn at least 24 credit hours at LCC.
5. Meet any special departmental requirements.

Associate of Science Degree

The A.S. Degree is awarded to students who satisfy the following requirements:

1. Complete the required courses and credit hours prescribed for any structured occupational program of at least 93 term hours.

2. Attend at least two terms, including the last term, and earn at least 24 credit hours at LCC.
3. Earn a cumulative grade point average of not less than 2.00.
4. Receive approval of the Academic Council for minor deviations from specific course requirements.

Certificates and Diplomas

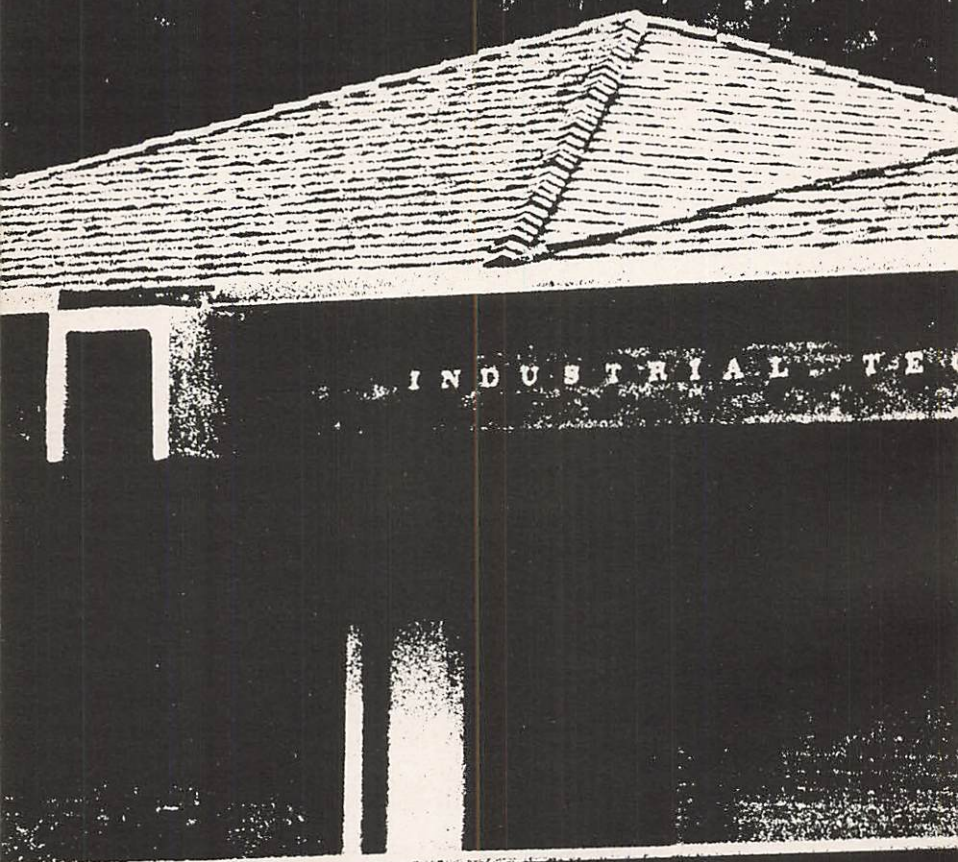
A diploma is awarded to the student who does not meet the requirements for the A.A. or A.S. Degree but who has completed any 93 hours of credit courses with a cumulative GPA of not less than 2.00 and who has attended LCC at least two terms, including the last term, and who has earned at least 24 credit hours at LCC.

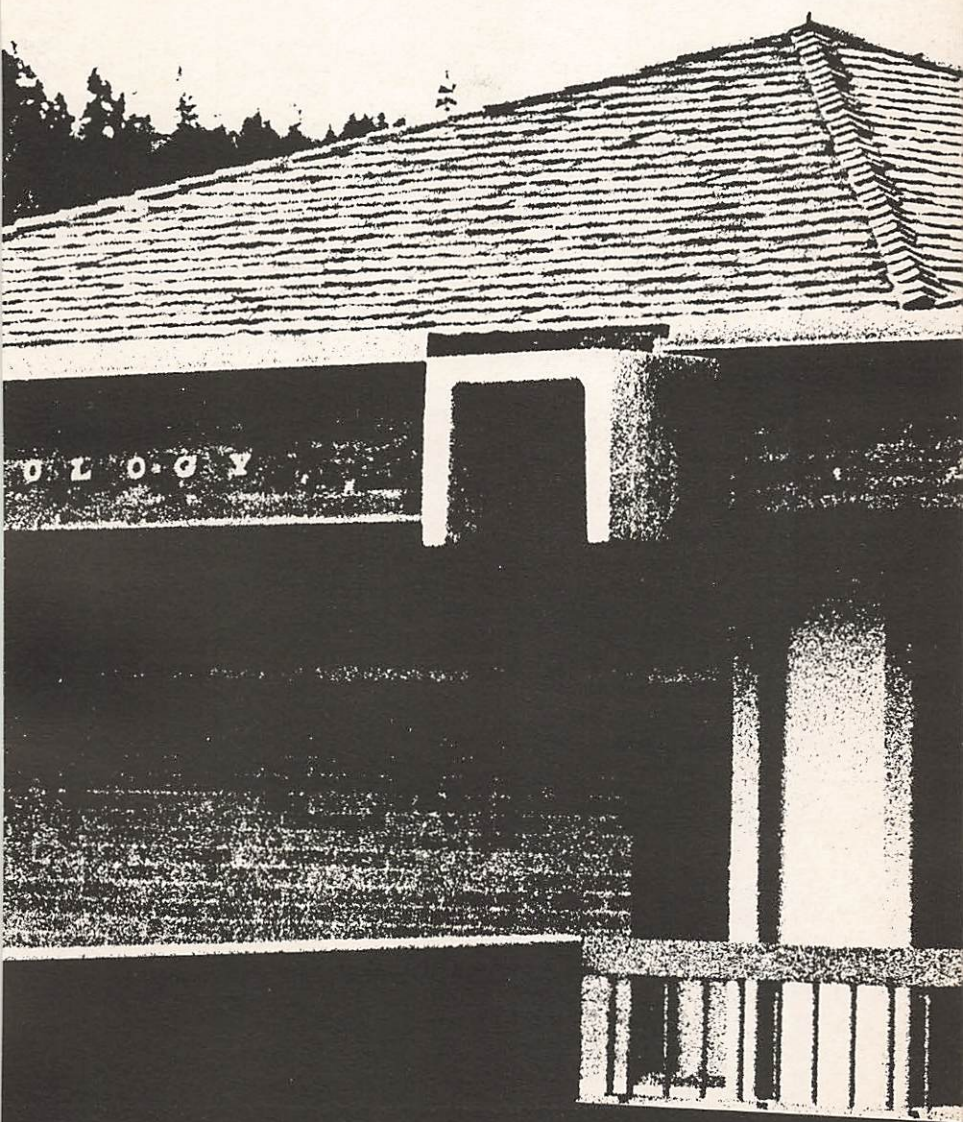
The satisfactory completion of a course, courses, or prescribed program is recognized by the Administration through the awarding of a transcript, letter of referral, competency certificate, completion or other evidence. Specific awards are dependent upon the nature of the programs and the decision of the Administration and Faculty.

ACADEMIC COUNCIL

The Academic Council is a committee of staff and students appointed by the President. It has the responsibility of interpreting or waiving academic regulations and of considering appeals by students. The Council handles such matters as permission to take early examinations, change recorded grades or carry excess units. Petitions for such privileges are submitted through a counselor or the Dean of Students.

Programs





Aerospace

Chief Pilot: Marvin J. Hovland

Faculty: Irvin Allen, Ronald W. Kluth

Flight Technology

TWO YEAR ASSOCIATE DEGREE

Students prepare for employment as business aircraft pilots, airline pilots, or flight instructors. Combining Flight and business training also opens other avenues of employment. Pay is \$750 per month and up.

The exacting nature of the course is such that applicants must comply with all Federal Aviation Agency (F.A.A.) requirements for each rating sought. Applicants must be counseled prior to acceptance and only those who can reasonably be expected to succeed will be accepted. Students must have FAA Class II Medical Certificate. Class vacancies total 50.

Fee costs for this program are \$500 each term. Students will fly a total of 200 hours in various aircraft and graduate with a commercial license and instrument rating. Total fee costs are \$3000.

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Flight Orientation	3-3		
Introductory & Basic Flight** (25 dual, 25 solo hours)	8-4		
Flight Theory, Private Pilot	3-3		
Aerophysics	5-4		
Mathematics II, III or Math 95, 102	3-3	3-3	
Air Navigation		3-3	
Aviation Meteorology		3-3	
Aerodynamics		3-3	
Flight Intermediate I** (10 dual, 25 solo hrs)		7-3	
Physical Education 180/190		3-1	
Aircraft & Engines Structures Theory			3-3
Flight Intermediate II** (10 dual, 30 solo hours)			7-3
Radio Aids & Communications			3-3
Health Education			2-2
Communications Skills I or Wr 111			3-3
Aircraft Development			3-3
	22-17	22-16	21-17

*H-hours, C-credits

**Flight Intermediate I or II may be made up during the summer.

Second Year	F H-C*	W H-C	S H-C
Advanced Commercial Pilot Ground School	3-3		
General Aviation Safety	3-3		
Flight Intermediate III** (10 dual, 25 solo hours)	7-3		
Aircraft Systems	3-3		
Communications Skills II or Wr 112	3-3		
American Institution or American Government	3-3		
Flight Intermediate IV** (10 dual, 30 solo hours)		7-3	
Air Transportation		3-3	
Airline Management		3-3	
Introduction to Business		4-4	
Electives***		3-3	
Flight Advanced I (10 hours flight)			6-3
Survey of Data Processing			3-3
Business Law			3-3

Fundamentals of Speech, Sp 111
Salesmanship

3-3

3-3

22-18

20-16

18-15

*H-hours, C-credits

**These courses contain a total of 382 clock hours in which student must complete 200 flight hours with the remainder being used for ground instruction and pre-flight preparation and post-flight debriefing.

***Recommended electives are Applied Economics, Human Relations I, Introduction to Psychology, Fundamentals of Speech.

COURSES

- 6.401 Flight Orientation** (3 class hrs/wk) 3 credits
Introductory aviation technology: Basic applications of aerophysics, theory of flight, aircraft standards and specifications, use of technical manuals, basic airframe construction, hydraulic systems, and weight and balance fundamentals.
- 6.403 Aircraft Development** (3 class hrs/wk) 3 credits
An informative, historical survey of the effect of manned flight. The development of aircraft, milestones in aviation, noted pioneers, and the socioeconomic impact of flight upon modern civilization.
- 6.405 Flight Theory, Private Pilot** (3 class hrs/wk) 3 credits
Principles of flight, basics of air traffic control, weather facts, navigational procedures, and airplane operation pertinent for the private pilot. Upon completion of this course the student should have sufficient knowledge to take the FAA Written Examination for the Private Pilot Certificate. This constitutes the final examination.
- 6.407 Aerophysics** (3 class, 2 lab hrs/wk) 4 credits
Introduction of physics, physical terms and the basis for physical laws in practical application to aeronautics. Laws of motion, gas laws, electromagnetism, basic principles of electrical circuits, hydraulics, and pneumatics.
- 6.409 Air Navigation** (3 class hrs/wk) 3 credits
Basic elements of air navigation; fundamentals and practical application of pilotage and dead reckoning; use of plotter, computer, aerial charts, and FAA publications pertinent to flying. Prerequisite: Flight Theory, Private Pilot.
- 6.411 Aviation Meteorology** (3 class hrs/wk) 3 credits
Meteorological phenomena affecting aircraft flight; basic concepts of aviation meteorology; analysis and use of weather data for flight planning and safe flying; interpretation of U.S. Weather Bureau maps, reports, and forecasts. Prerequisite: To be concurrent with Air Navigation.
- 6.413 Aerodynamics** (3 class hrs/wk) 3 credits
Analysis of the physics of flight, including the application of basic aerodynamics to the wing and airfoil; and the analysis of lift and drag components relative to the wing plan-form and airplane performance. The application of aerodynamic effect of turbojet engines involving principles of propulsion.
- 6.415 Aircraft and Engine Structures** (3 class hrs/wk) 3 credits
Fundamental principles of aircraft engines, including engine theory, materials and methods of construction, lubricants systems, induction systems, and superchargers. General engine operating on airframe structures, purpose types and construction of airframe.
- 6.417 Radio Aids and Communication** (3 class hrs/wk) 3 credits
Basic radio fundamentals as used by the pilot. A description and practical use of various radio aids to safe aerial navigation. Prerequisite: Air Navigation.

20 Aerospace

- 6.419 Air Transportation** (3 class hrs/wk) 3 credits
Development and present status of air transportation, federal legislation, characteristics, and classification of air carriers; the organization and functions of the FAA and the Civil Aeronautics Board.
- 6.421 General Aviation Safety** (3 class hrs/wk) 3 credits
Fundamentals essential to safe flight; instruments used and the evaluation and interpretation of their indications. Weight and balance problems are given consideration; also the Federal Aviation Regulations pertaining to safe flight. Prerequisite: Flight Theory, Private Pilot.
- 6.423 Aircraft Systems** (3 class hrs/wk) 3 credits
Theory of the operation of aircraft systems. Prerequisite: Aircraft and Engine Structures.
- 6.425 Advanced Commercial Pilot Ground School** (3 class hrs/wk) 3 credits
Preparation for the FAA Commercial Pilot examination and Instrument Rating examination by bringing into focus all the previous areas of instruction; emphasizes newest methods and procedures in flight. Prerequisites: All the Flight theory classes offered in Terms I through III or approval of the Flight Technology Screening Committee.
- 6.427 Airline Management** (3 class hrs/wk) 3 credits
The functions of management in airline operation, air carrier familiarization effects of federal regulations, organization, accounts; industrial, financial, and economic implications relative to decision making. Prerequisite: Air Transportation.
- 6.431 Introductory and Basic Flight** (3 class, 5 lab hrs/wk) 4 credits
25 Dual-25 Solo hours.
An introduction to flight through actual flying experience in modern, safe, fully-equipped aircraft. 25 hours dual flight instructions and 25 solo flight with 20 hours in oral instruction and debriefing. This program exceeds the FAA minimum to qualify for Private Pilot rating; required first phase for students in the two-year associate degree program terminating with Commercial Pilot and Instrument Pilot with multiengine or flight instructor.
- 6.433 Flight Intermediate I** (2 class, 5 lab hrs/wk) 3 credits
10 Dual-25 Solo hours.
First of four phases of flight training in preparation for the FAA Commercial Pilot Certificate. A total of 70 hours of instruction; 10 hours dual flight, 25 hours solo flight, and 35 hours of oral instruction and debriefing. Prerequisite: Introductory and Basic Flight or Private Pilot certificate, and permission of Flight Technology Acceptance Committee.
- 6.435 Flight Intermediate II** (2 class, 5 lab hrs/wk) 3 credits
10 Dual-30 Solo hours.
Second phase of flight training, continuation of Flight Intermediate I. Total of 70 hours of instruction: 10 hours dual flight, 30 hours solo flight, and 30 hours of oral instruction and debriefing. Instrument flight training is emphasized. Prerequisite: Flight Intermediate I or equivalent flight experience as determined by the Flight Technology Acceptance Committee.
- 6.439 Flight Intermediate III** (2 class, 5 lab hrs/wk) 3 credits
10 Dual-25 Solo hours.
Continuation of training for Commercial Pilot Certificate. Prerequisite: Flight Intermediate II or equivalent flight experience as determined by the Flight Technology Acceptance Committee.
- 6.441 Flight Intermediate IV** (2 class, 5 lab hrs/wk) 3 credits
10 Dual-30 Solo hours.
Final phase of Flight Training in preparation for Commercial Pilot with Instrument Rating. Prerequisite: Flight Intermediate III.

6.443 Flight Advanced (2 class, 4 lab hrs/wk)**3 credits**

10 Dual hours.

Students have the option of selecting Multi-engine, Flight Instructor, or Instrument Flight Instructor training to complete the flight program. Each course provides 60 hours instruction, 10 dual flight hours, and 50 hours of oral preparation and debriefing. Prerequisite: Valid Commercial Pilot with Instrument Rating Certificate.

For course descriptions of the following, refer to indicated department:

Mathematics II, III or Math 95, 102	Mathematics
Physical Education 180/190	Health & P.E.
Health Education	Health & P.E.
Communications Skills I or Wr 111	Language Arts
Communications Skills II or Wr 112	Language Arts
American Institution	Social Science
American Government	Social Science
Introduction to Business	Business
Survey of Data Processing	Data Processing
Business Law	Business
Fundamentals of Speech	Mass Communications
Salesmanship	Business

Business

Chairman: John Kreitz

Faculty: Richard D. Arnold, Maurine Bayes, James W. Cox, Richard H. Eno, James D. Evans, Robert Johnson, Edith A. Jones, Millie Hartstrom, Marilyn Haugan, Gary O. Rholl, Ruth Thygesen, Sue W. Trautwein, Gordon Wehner

Accounting/Clerical

ONE YEAR CERTIFICATE PROGRAM & TWO YEAR ASSOCIATE DEGREE PROGRAM

More than 1.1 million U. S. citizens are bookkeepers. And more are needed. Typical duties of an accountant are these: Keeps records of financial transactions of establishment: Verifies and enters details of transactions as they occur or in chronological order in account and cash journals from items, such as sales slips, invoices, check stubs, inventory records, and requisitions. Summarizes details on separate ledgers, using adding machine, and transfers data to general ledger. Balances books and compiles reports to show statistics, such as cash receipts and expenditures, accounts payable and receivable, profit and loss, and other items pertinent to operation of business. Calculates employee wages from plant records or timecards and makes up checks or withdraws cash from bank for payment of wages. May prepare withholding, Social Security, and other tax reports. May compute, type, and mail monthly statements to customers. May complete books to or through trial balance. May operate calculating and accounting machines.

CURRICULUM

First Year

	F	W	S
	H-C*	H-C	H-C
Typing I, II	5-3	5-3	
Accounting I, II, III	4-3	4-3	4-3
Business English I, II	3-3	3-3	

22 Business

Business Math I	3-3		
Business Environment	3-3		
Business Machines I		3-3	
Survey of Data Processing		3-3	
Elective			3-3
Business Communications			3-3
Personal Development-Dynamics			3-3
Office Management			3-3
	<hr/> 18-15	<hr/> 18-15	<hr/> 16-15

Second Year

	F	W	S
	H-C	H-C	H-C
Tax Accounting	3-3		
Sociology 204, 205	3-3	3-3	
Ec 201, 202, 203 Principles of Economics	3-3	3-3	3-3
Elective	3-3	3-3	3-3
Elective	3-3		3-3
Physical Education	3-1	3-1	3-1
Basic Cost Accounting		3-3	
Business Law		3-3	
Principles of Accounting BA213			3-3
Human Relations II			3-3
	<hr/> 18-16	<hr/> 18-16	<hr/> 18-16

*H-hours, C-credits

Clerk/Typist

ONE YEAR CERTIFICATE PROGRAM

Is designed to prepare the student for employment of a general nature in typical office activities. The courses provided may also serve to prepare the student for civil service examinations in various clerical fields. A certificate of training is issued upon completion of at least 45 term credits.

CURRICULUM

	F	W	S
	H-C	H-C	H-C
Typing I, II, III	5-3	5-3	5-3
Business English I, II, III	3-3	3-3	3-3
Business Math I	3-3		
Office Procedures I, II	4-3	4-3	
Elective	3-3		3-3
Filing & Records Management		3-3	
Business Machines I, II		3-3	3-3
Personal Development-Dynamics			3-3
	<hr/> 18-15	<hr/> 18-15	<hr/> 17-15

Business Administration and General Studies-Business

COLLEGE TRANSFER

This program, if successfully completed, will permit a student to transfer into any of the major programs in business administration offered by institutions of the Oregon State System of Higher Education, or the general studies program in business at EOC, 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

	F	W	S
BA 101 Introduction to Business or BA 125 Bus. Env.	3-4		
SP 111 Fundamentals of Speech		3	
Mathematics ¹	4	4	4
Wr 111, 112 English Composition ²	3	3	
Social Science Sequence ³	3	3	3
Physical Education	1		1
Personal Health		2	
Electives			3-4
	<hr/> 15-16	<hr/> 15	<hr/> 14-12

Sophomore Year

	F	W	S
Ec 201, 202, 203 Principles of Economics	3	3	3
BA 211, 212, 213 Principles of Accounting ⁴	3	3	3
BA 226 Business Law (UO, OSU, EOC)	3		
BA 232 Introduction to Business Statistics (UO, PSU, EOC, SOC)		3	
Literature or Science sequence ⁵	3-4	3-4	3-4
Electives to bring total hours to 93 ⁶	2-6	2-6	5-6
Physical Education	1	1	1
	<hr/> 16	<hr/> 16	<hr/> 16

Total: 93 hours

This program is limited to 93 credit hours because four-year institutions, as a usual practice, require that any credit earned after the completion of 93 hours of acceptable college work be earned at a four-year institution.

¹Students should enroll in mathematics according to placement test scores. Students planning to transfer to UO or OSU should complete mathematics through Mth 200. Eight hours of mathematics is adequate for students transferring to SOC.

²Students planning to transfer to OSU or PSU should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO, EOC, or SOC should complete Wr 111, 112.

³Students planning to transfer to OSU should complete Hst 101, 102, 103 History of Western Civilization; students planning to transfer to SOC, PS 201, 202, 203 American Governments or Hst 201, 202, 203 History of the United States. PSU recommends Phil 201 Problems of Philosophy, 202 Elementary Ethics, and 203 Elementary Logic. Students planning to attend EOC should take Hst 101, 102, 103 History of Western Civilization.

⁴All students, including those planning to transfer to UO, should complete entire accounting sequence. Because of variations among institutions in order and timing of material covered, students should not attempt to transfer mid-way through the sequence.

⁵Students planning to transfer to OSU should select a science or mathematics sequence appropriate to their minor. Recommended are Ch 201, 202, 203 General Chemistry, which is required in many minors, and Mth 200, 201, 202, 203 Calculus with Analytical Geometry which meets the requirements in the applied mathematics minor. (see OSU catalog). Students planning to transfer to SOC should complete World Literature or Introduction to Literature. Students transferring to UO should complete a literature sequence meeting UO group requirements. PSU students should complete literature, foreign language, or other arts and letters sequence.

⁶Students planning to transfer to PSU should take BA 214 Business Communications and, if available, BA 221, 222, 223 Production, Finance, Marketing; those planning to transfer to SOC, BA 214 and Mus 201 Introduction to Music and Its Literature; those planning to transfer to EOC, BA 214, Mus 201, and AA 201 Survey of Visual Arts.

Business Education

University of Oregon

Students should complete programs outlined above for business administration, substituting a literature sequence meeting UO group requirements for the social science sequence in the freshman year and completing Psy 201, 202 instead of the literature sequence indicated in the sophomore year. Students should enroll in skill courses in typing and shorthand ac-

24 Business

cording to placement, completing work through SS 223 Applied Stenography. (No credit is given for beginning typewriting).

Oregon State University

Students should complete the transfer program outlined for secretarial science, being sure to include Psy 201, 202 General Psychology and Sp 111 Fundamentals of Speech.

Portland State University

Students should complete the following program:

Freshman Year

	F	W	S
Wr 111, 112 English Composition	3	3	
Sp 111 Fundamentals of Speech			3
BA 211, 212, 213 Principles of Accounting	3	3	3
Mathematics according to placement	4	4	4
Phl 201 Problems of Philosophy	3		
Phl 202 Problems of Philosophy		3	
Typing according to placement and/or electives	2	2	2
Physical Education	1	1	
Personal Health			2
	<hr/> 16	<hr/> 16	<hr/> 14

Sophomore Year

	F	W	S
Ec 201, 202, 203 Principles of Economics	3	3	3
Psy 201, 202 General Psychology	3	3	
Arts and letter sequence (literature, foreign language, music, art)	3	3	3
BA 214 Business Communications			3
Stenography according to placement	3	3	3
Physical Education	1	1	1
Electives (BA 221, 222, 223 Production, Finance, Marketing, if available)	3	3	3
	<hr/> 16	<hr/> 16	<hr/> 16

Southern Oregon College

Eastern Oregon College

Freshman Year

	F	W	S
Wr 111, 112 English Composition	3	3	
GS 101, 102, 103 General Biology			
or			
GS 104, 105, 106 Physical Science			
or			
Mathematics, 12 hours (EOC)			
Literature sequence	3	3	3
Sp 111 Fundamentals of Speech		3	
Mus 201 Introduction to Music and Its Literature	3		
or			
AA 201 Survey of Visual Arts			
Typing according to placement and/or electives	2	2	2
Physical Education	1	1	1
Personal Health			2
	<hr/> 16	<hr/> 16	<hr/> 11

Sophomore Year

	F	W	S
Hst 201, 202, 203 History of the United States or PS 201, 202, 203 American Governments	3	3	3
Ec 201, 202, 203 Principles of Economics	3	3	3
Psy 201, 202 General Psychology	3	3	
Stenography according to placement	3	3	3
Physical Education	1	1	1
Mus 201, or AA 201	3		
Electives to bring total to 93 hours		2-3	5-6
	16	15-16	15-16

Key Punch

If a person wishes to take only a key punch sequence he is not required to take the other courses listed but they are highly recommended.

First Term

English I	3
Accounting I	3
Business Machines I	3
Typing I	3
Key Punch I	3

Second Term

English II	3
Accounting II	3
Office Procedures I	3
Survey in Data Processing	3
Key Punch II	3

Middle Management

TWO YEAR ASSOCIATE DEGREE PROGRAM

The middle management program is a two-year training program culminating with the Associate of Science degree. The student takes a series of core courses, then earns the balance of his credit by choosing among a variety of available electives, to earn a total of 93 credit hours.

The First Year

During the first year, students concentrate on the core program, which provides a concrete foundation of general business and economic concepts. This background gives the student the necessary understanding of the overall business environment. It qualifies him to select the functional area in which he wishes to concentrate during his second year. He also takes courses in communications and the humanities to improve his competence in interpersonal relationships, a definite asset in any business occupation.

First Year

	F H-C*	W H-C	S H-C
Wr 111 English Composition	3-3		
BA 211 Principles of Accounting	3-3	3-3	3-3
BA 125 Business Environment	3-3		
Business Mathematics	3-3		
Sociology 204, 205	3-3	3-3	
Physical Education	3-1	3-1	3-1
Fundamentals of Speech Sp 111		3-3	
Business Law BA 226		3-3	

26 Business

Business Math/Statistics		3-3	
Business Communications BA 214			3-3
Marketing BA 223			3-3
Techniques of Business Decisions			3-3
Social Psychology Psy 215			3-3
	<hr/>	<hr/>	<hr/>
*H-hours, C-credits	18-16	18-16	18-16

Second Year	F	W	S
	H-C	H-C	H-C
Principles of Economics Ec 201, 202, 203	3-3	3-3	3-3
Introduction to Management Information Systems BA 111	3-3		
Human Relations II	3-3		
Health	3-3		
Elective	3-3	3-3	3-3
Finance BA 222		3-3	
Elective		3-3	3-3
Elective		3-3	3-3
Seminar Occupational Development			3-3
	<hr/>	<hr/>	<hr/>
	15-15	15-15	15-15

Sales and Marketing

ONE YEAR PROGRAM

This curriculum provides a general and semi-professional background for individuals to enter a business sales position. It is adaptable to the needs of individuals who want a fundamental knowledge and techniques of merchandising. This knowledge may be applied to a number of merchandising pursuits in retail, service, or specialty selling.

First Year	F	W	S
	H-C	H-C	H-C
Business English I, II	3-3	3-3	
Accounting I, II	4-3	4-3	
Business Math I	3-3		
Typing I	5-3		
Retailing	3-3		
Business Math/Statistics		3-3	
Business Machines I		3-3	
Advertising		3-3	
Business Communications BA 214			3-3
Personal Development-Dynamics			3-3
Fundamentals of Speech Sp 111			3-3
Elective			3-3
Salesmanship BA 238			3-3
	<hr/>	<hr/>	<hr/>
	18-15	16-15	15-15

Secretarial

ONE YEAR CERTIFICATE PROGRAM & TWO YEAR ASSOCIATE DEGREE PROGRAM

Opportunities abound in the clerical field, which employs 11 million Americans. Seventy per cent of them are women. The U. S. Department of Labor estimates that 300,000 new jobs open each year. Here in Lane County about 600 jobs are available annually.

Nearly 20 per cent of available clerical jobs are for stenographers and secretaries.

The following are descriptions of typical stenography and secretarial jobs as reported in the Department of Labor's **Dictionary of Occupational Titles**. Stenographer. Takes dictation in shorthand or correspondence, reports, and other matter, and transcribes dictated material, using typewriter. Performs variety of clerical duties except when working in stenographic pool. May transcribe material from sound recordings.

Secretary girl Friday; secretarial stenographer. Schedules appointments, gives information to callers, takes dictation, and otherwise relieves officials of clerical work and minor administrative and business detail. Reads and routes incoming mail. Locates and attaches appropriate file to correspondence to be answered by employer. Takes dictation in shorthand or on Stenotype machine and transcribes notes on typewriter, or transcribes from voice recordings. Composes and types routine correspondence. Files correspondence and other records. Answers telephone and gives information to callers or routes call to appropriate official and places outgoing calls. Schedules appointments for employer. Greets visitors, ascertains nature of business, and conducts visitors to employer or appropriate person. May or may not take dictation. May arrange travel schedule and reservations. May compile and type statistical reports. May supervise clerical workers. May keep personnel records. May record minutes of staff meetings.

Applicants should have had courses in typing and other secretarial and business subjects in high school, along with English.

First Year	F H-C*	W H-C	S H-C
Typing I, II, III	5-3	5-3	5-3
Shorthand/Transcription I, II, III	5-3	4-3	4-3
Business English I, II, III	3-3	3-3	3-3
Business Mathematics	3-3		
Office Procedures I, II, III	4-3	4-3	4-3
Business Machines I, II		3-3	3-3
	20-15	19-15	19-15

*H-hours, C-credits

Second Year	F H-C	W H-C	S H-C
Advanced Transcription I, II, III	4-3	4-3	4-3
Principles of Economics Ec 201	3-3		
Business Environment BA 125	3-3		
Elective (non-business)	3-3		
Sociology Soc 204, 205	3-3	3-3	
Physical Education	3-1	3-1	3-1
Filing and Record Management		3-3	
Business Law BA 226		3-3	
Elective (business)		3-3	3-3
Business Communications BA 214			3-3
Human Relations I			3-3
Personal Development/Dynamics			3-3
	19-16	19-16	19-16

Secretarial Science

COLLEGE TRANSFER

This program is recommended for students who plan to transfer to the major program in secretarial science or business education at Oregon State University.

28 Business

Freshman Year

	F	W	S
Wr 111, 112 English Composition	3	3	
SS 111, 112, 113 Stenography ¹	3	3	3
SS 121, 122, 123 Typing ¹	2	2	2
BA 101 Introduction to Business Literature or science sequence	4		
Physical Education	3-4	3-4	3-4
Personal Health	1		1
Electives	2	2-3	5-6
	16-17	15-16	14-16

Sophomore Year

	F	W	S
Ec 201, 202, 203 Principles of Economics	3	3	3
BA 211, 212, 213 Principles of Accounting	3	3	3
SS 211, 212, 213 Applied Stenography	3	3	3
PS 201 American Governments (secretarial science majors)	3		
Hst 203 History of the United States (secretarial science majors)			3
Psy 201, 202 General Psychology and Sp 111 Fundamentals of Speech (business education majors)	3	3	3
BA 224 Business Communications	3		
Physical Education	1	1	1
Electives to bring total to 93 hours		2-5	2
	17	15	15

Total: 93 hours

¹Students who have had previous training in stenography and typing should enroll in classes commensurate with their abilities.

COURSES

- 2.502 Advanced Transcription I** (4 class hrs/wk) 3 credits
 Stenographic work on a production basis with emphasis on comprehensive reading of notes in thought sequence and sustained transcription practice. Aims at coordinating skills and speed of typing, shorthand, and English essentials. Prerequisite: 2.107 or SS 113 or 80 wpm.
- 2.504 Advanced Transcription II** (4 class hrs/wk) 3 credits
 Dictation of unfamiliar material at levels accepted by business. Study of terminology in special areas such as legal, medical, and other specified areas. Prerequisite: Advanced Transcription I, 2.502 or 90 wpm.
- 2.506 Advanced Transcription III** (4 class hrs/wk) 3 credits
 Designed to train students for production work while allowing specialization in professional and industrial fields such as legal, engineering, medical, etc. Transcription of material dictated from these special areas. Prerequisite: Advanced Transcription II, 2.504 or 100 wpm.
- 2.314 Advertising** (3 class hrs/wk) 3 credits
 Detailed examination of the purposes, preparation, placement and analysis of the various types of advertisements within each of the media such as television, radio and the newspaper. The relative merits of several media are then explored. The course involves practice in the planning and analysis of complete advertising campaigns and their coordination with other marketing strategies. Prerequisite: Marketing BA 223, 2.223 or Retailing or equivalent.
- 1.506 Applied Economics** (3 class hrs/wk) 3 credits
 Principles involved in the operation of the American economic system. Role of business and industry in the total economy. Basic economic principles are applied to the relationship of employer and employees. Topics

considered include historic trends, business organization, price and competition, imperfect competition, and monopoly, price levels, business cycles, taxation, labor unions, management association, labor-management relations, labor legislation, and social and private security.

- SS 211, 212, 213 Applied Stenography** (3 class hrs/wk) 3 credits each
Advanced principles and phases; dictation and transcripts covering vocabularies of representative business; legal forms, newspaper and magazine articles. Prerequisite: SS 113, 123 or equivalent.
- 2.110 Accounting I** (3 class, 1 lab hrs/wk) 3 credits
Introduction to basic principles of bookkeeping and accounting; the bookkeeping cycle; journals and ledgers, special journals and subsidiary ledger and financial statements.
- 2.111 Accounting II** (3 class, 1 lab hrs/wk) 3 credits
The bookkeeping and accounting cycle as it applies to the combination journal; payroll accounting, payroll taxes applying to the employer, depreciation and disposal of fixed assets, and principles for the recording of bad debts. Prerequisite: Bookkeeping and Accounting I.
- 2.112 Accounting III** (3 class, 1 lab hrs/wk) 3 credits
Introduction to accounting principles as applied to departmental and partnership accounting; controls and records, corporation accounting, and manufacturing accounting. Prerequisite: Bookkeeping and Accounting II.
- 2.215 Basic Cost Accounting** (3 class hrs/wk) 3 credits
This course is designed to analyze methods of detailed and specific identification of cost elements within the business enterprise. Of particular concern are job order, process, and standard cost accounting systems and their related theory. The major emphasis is on principles, techniques, and managerial use of cost accounting data, and the use of budgets and performance reports, as they relate to cost accounting.
- BA 214 Business Communications** (3 class hrs/wk) 3 credits
Extensive practice in writing effective letters and reports. A study of mechanics, principles, tone, and effectiveness will enable him to achieve desired results. The planning, organizing and writing of reports presented so that the student may advance progressively from simple problems to the more complex reports required in the business world.
- 1.120 Business English I** (3 class hrs/wk) 3 credits
A practical approach to effective expression in business and in industry, which provides training in the four areas of communication: Vocabulary expansion, spelling improvement, developing of desirable attitudes and techniques. A complete streamlined course in the grammar of business communication, oral and written, is begun in this unit.
- 1.122 Business English II** (3 class hrs/wk) 3 credits
Continues with training in the grammar of business communications, vocabulary development, and spelling improvement. Correct usage of punctuation, capitalization, abbreviations, and figures is included in this unit, as well as an introduction to writing craftsmanship and skill.
- 1.124 Business English III** (3 class hrs/wk) 3 credits
Continues the study of writing craftsmanship and skill, with emphasis on the writing of effective business letters, memorandums, reports, and other written communications. Speech and informal personal communications are also studied.
- BA 125, 2.125 Business Environment** (3 class hrs/wk) 3 credits
The business organization's role and responsibility in society. The interrelationships of major functional areas of business. The study of the systems approach to management process with the intention of orienting the student in the field of business and to help him determine his field of major concentration. (No credit if credit is received for Introduction to Business, BA 101)

30 Business

- BA 226 Business Law** (3 class hrs/wk) 3 credits
The framework of the law as it affects the businessman; how the law operates and is enforced in business. Course would be valuable to both the business and non-business student because of its emphasis on practical aspects of the framework of the law and its relation to society and business.
- 2.519 Business Machines I** (2 class, 1 lab hrs/wk) 3 credits
Opportunity for intensive practice on the basic functions of the ten-key adding machine, the printing calculator, the electronic calculator, and the rotary calculator. The business math principles learned in Business Math I are applied and solved through the use of the machines. The student can compare and better understand the capacities of each of the machines and can acquire job-entry level skills in their use. Prerequisites: Business Mathematics I, 2.206.
- 2.521 Business Machines II** (2 class, 1 lab hrs/wk) 3 credits
Particular attention is given to stenographic dictating and transcribing machines. Practice in planning layouts, cutting stencils and masters for use in duplicating copy and the use of photographic and electronic reproductive devices is covered. Students study the use of letter guides, screening plates, and correction and patching devices. Prerequisites: Business Math, 2.206; Typing I, 2.101.
- 2.206 Business Mathematics** (3 class hrs/wk) 3 credits
A brief but comprehensive review of basic mathematics with special emphasis on decimals, fractions, and percentages, and familiarizes him with business math problems and terminology. The business applications, introduced in this course include financial statements, reconciliation of bank statements, invoices, trade and cash discounts, markup, simple interest, and credit costs.
- 2.210 Business Mathematics/Statistics** (3 class hrs/wk) 3 credits
Solution of business problems requires a knowledge of a range of quantitative methods. This course expands 2.206 by presenting the student with business problem quantitative techniques in algebra and statistics. The following topics are typical of the course content: Algebra—grouping, factoring, linear equations in one and two unknowns, ratio/proportion, progressions, logarithms. Statistics—collection of data, averages, dispersions, probability, various distributions. Prerequisite: Business Mathematics, 2.206 or equivalent.
- 2.500 Business Records and Reports** (3 class hrs/wk) 3 credits
Business reports needed for pricing, accounting records, profit and loss statements, reports for local, state, and federal governments in such matters as Social Security, withholding taxes, industrial accident, and licensing requirements. Information is also included on salary records, employee records, procedures for making out orders, charges, billings, inventory control, and other administrative details.
- 2.508 Filing and Records Management** (3 class hrs/wk) 3 credits
Rules and principles of indexing, filing, establishing and maintaining a filing system, and training in the various methods of filing such as alphabetical, numerical, subject, geographic, Variadex, Soundex, and Kardex.
- 2.402 Financial Institutions** (3 class hrs/wk) 3 credits
Financial institutions operating in the American economy. History and analysis of the economic significance of the major financial institutions that serve the consumer, the government, and the business community. Prerequisite: Finance, BA 222, 2.222.
- BA 222, 2.222 Finance** (3 class hrs/wk) 3 credits
Problems encountered in the financial management of the business or

ganization. The emphasis is on the decision making area of managerial finance. The student is initially exposed to the finance function and elements of financial analysis and control. Planning and forecasting of future needs and directions are stressed. Units on budgeting; short-, intermediate-, and long-term financing; debt vs. equity financing for optimal capital structure; sources, uses, and the flow of funds. Prerequisite: Principles of Accounting BA 212.

- 2.412 Investments** (3 class hrs/wk) 3 credits
Investment alternatives available to the private investor. Units covered include the determination of investment objectives and the establishment of a sound individual program and portfolio, the selection and analysis of corporate securities, the securities markets and their operation.
- BA 101 Introduction to Business** (3 class, 1 lab hrs/wk) 4 credits
Business organization, operation and management intended to orient the student in the field of business and to help him determine his field of major concentration. (No credit if BA 125 has been completed.)
- BA 232 Introduction to Business Statistics** (3 class hrs/wk) 3 credits
Elementary statistics techniques to aid decision making in the business environment. Emphasis is on statistical inference, probability, sampling, estimation, and hypothesis testing. Problem solution by electronic digital computer is featured. Other topics such as operations research may be introduced. Prerequisite: Math 106 (Elementary Calculus or equivalent.)
- BA 111, 1.111 Introduction to Management of Information Systems**
(3 class hrs/wk) 3 credits
Contemporary and projected future business information processing systems. Overview of the hardware; i.e., unit records and digital computer equipment. The artificial languages used in solving problems in business data processing systems. Emphasis on the involvement in management decision making in a job definition, equipment solution, and systems design.
- 2.607 Keypunch Operation I** (5 class hrs/wk) 3 credits
Familiarization with the IBM card, interpretation of punched holes in card. Introduction of the 026 and 029 card punch. Operational functions and keyboard of both numeric and alphabetic. The purpose and use of functional keys. Methods of duplication and error correction of the card punch. Use and development of program drum card.
- 2.608 Keypunch Operation II** (5 class hrs/wk) 3 credits
Use of multiple punch key, familiarization of actual programs written in various programming languages and the necessary keys they punch. Additional program codes; such as, left zero print, alternate program feature, purposes and operation of verifier. Prerequisite: Keypunch Operation I.
- 2.606 Management Data Processing** (3 class hrs/wk) 3 credits
Overview of the equipment used in punched card (unit record) and computer data processing. Major areas of data processing that involve management decision making: job definition—the determination of whether or not an organization would benefit by a data evaluation of available systems with respect to present and future organizational requirements; and systems design—the development and evaluation of master plans for the implementation of equipment.
- 2.224 Manpower Management** (3 class hrs/wk) 3 credits
Personnel management course. Special attention is given to human behavior, recruitment, selection, placement, employee development, wages and salaries, and labor-management relations. Current practices and policies are emphasized.
- 2.318 Market Analysis and Segmentation** (3 class hrs/wk) 3 credits
Examination of the different types of markets that exist in our economy,

32 Business

how these markets may be identified, the analysis and preparation of products for presentation, and the analysis of projected and perceived product and brand images. Prerequisite: Marketing, BA 223, 2.223.

- BA 223, 2.223 Marketing** (3 class hrs/wk) 3 credits
Role of Marketing in our socio-economic system. Emphasis upon market problem solving and decision making required by Management. Sales promotion critically analyzed and promotional methods evaluated. The course is designed as a background course for those students specializing in marketing and for those students in business and other divisions that will be taking only one course in the field. Both groups are provided with comprehensive treatment of Marketing as it operates in American industry today. Prerequisite: BA 125, or BA 101.
- 2.518 Office Management** (3 class hrs/wk) 3 credits
Principles and successful practices used in getting office work accomplished. The effective solution of office management using both quantitative and non-quantitative analysis.
- 2.517 Office Management Insurance Adjusters** (3 class hrs/wk) 3 credits
The objective of this course is to provide insurance adjusters with a basic understanding of office equipment capabilities and limitations. It will combine basic mathematics with application on calculating machines to accounting and appraisal problems. The general function of the business machine and an understanding of their application will be stressed. The student will become familiar with the use of transcribing equipment for dictation. Practice in planning layout and the duplication of materials on various machines, such as the offset printer, ditto and mimeograph machines, will be presented. The rules and principles of indexing, filing, establishing and maintaining a filing system will be presented.
- 2.512 Office Procedures I** (3 class hrs/wk) 3 credits
Introduction to the secretarial profession, secretarial typewriting and duplicating, secretarial communications responsibilities, and use of transmittal services. Prerequisite: Typing I, concurrently.
- 2.514 Office Procedures II** (3 class hrs/wk) 3 credits
This course is a continuation of Office Procedures I. It covers secretarial management of records; handling travel and meeting arrangements; collecting, processing, and presenting business data; financial and legal aspects of secretarial work; and preparing for a professional future. Prerequisite: Office Procedures I.
- 2.516 Office Procedures III** (3 class hrs/wk) 3 credits
Specialization in office procedures related to such areas as medicine, law, science, and executive professions. Preparation of forms and reports related to these areas and building of specialized vocabularies. Prerequisite: Office Procedures II.
- 2.116 Personal Development/Dynamics** (3 class hrs/wk) 3 credits
Importance of social and business behavior taught through the presentation of text and workbook material and the visitations of guest speakers. Individual work in such areas as weight control, voice and personality problems. Etiquette will deal with such social graces as dining out, table manners, travel information, tipping, making of reservations. Money management, homelife, problems of city living, job applications and interviews.
- BA 218, 2.114 Personal Finance** (3 class hrs/wk) 3 credits
Savings and investment opportunities available to the American consumer. Emphasis on personal budgets, real estate ownership, wise use of consumer credit, credit institutions, social security, stock market, mutual funds, and individual tax and estate planning. The course designed for non-business, vocational, and college transfer students and for business students wishing an additional course beyond beginning finance.

- BA 211, 212, 213, 2.213 Principles of Accounting** (3 class hrs/wk) 3 credits each
Introduction to field of accounting; technique of account construction; preparation of financial statements; application of accounting principles to practical business problems; proprietorship studies from standpoint of single owner, partnership, and corporation.
- BA 221, 2.221 Production** (3 class hrs/wk) 3 credits
An introductory analysis as to allocation of productive resources, i.e., capacity, control, authority and productivity. A survey of the development of modern industry and scientific management, and introduction to the operating principles of production. Production techniques as related to many types of industries including service organizations such as hospitals. Prerequisite: BA 213 and BA 232 or equivalent.
- 2.320 Real Estate** (3 class hrs/wk) 3 credits
Introduction to real estate. Includes the economic, social and legal basis of real estate transactions, factors of property rights, taxation, real estate instruments, finance and property ownership.
- 2.315 Retailing** (3 class hrs/wk) 3 credits
This course is designed to be a study of retail strategy and structure. A management approach is utilized on the subject matter with emphasis on the role of the supervisor involved with day-in and day-out tasks of getting retail work done. Special emphasis is placed upon details of the job and how to prepare for any eventuality.
- 2.410 Risk and Insurance** (3 class hrs/wk) 3 credits
Concepts of risk, probability, and insurance; role of insurance in the management of risk. An examination of the underlying legal principles and common elements of most insurance contracts. Special emphasis on the role of insurance from the viewpoint of the consumer; business and personal applications of the major types of property and liability insurance, and life and health insurance with emphasis on the underlying economic need each is designed to meet.
- BA 238, 2.238 Salesmanship** (3 class hrs/wk) 3 credits
Role of sales as an integral part of the total marketing function. The application of selling to the behavioral science is included with special emphasis on sales psychology, sales techniques and the fundamental principles of sales communications.
- 2.316 Salesmanship** (3 class hrs/wk) 3 credits
Human relations, characteristics of the customer, buying motives, approach, presentation, demonstration, overcoming objections and excuses, closing the sale, and objective selling. Each student is given the opportunity to develop a sales approach for presentation and analysis in class.
- 2.509 Seminar in Occupational Development** (3 class hrs/wk) 3 credits
Operations of local business firms, the occupations therein, practical experience in working with management. It is each student's responsibility to meet independently with the management of a specific organization, prepare a detailed report and personally conduct his class on a tour through the vital parts of the organization. Prerequisite: Sixth-quarter standing.
- 2.105 Shorthand and Transcription I** (3 class, 2 lab hrs/wk) 3 credits
Introduction of theory of Gregg Shorthand, Simplified, including the alphabet, brief forms, phrasing and abbreviating principles.
- 2.106 Shorthand and Transcription II** (2 class, 2 lab hrs/wk) 3 credits
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. Ability to produce mailable letters is developed. Prerequisite: Shorthand and Transcription I, 2.105 or 40 wpm.

34 Business

- 2.107 Shorthand and Transcription III** (2 class, 2 lab hrs/wk) 3 credits
Further development of speed and accuracy in dictation and transcription. Intensive practice in refining shorthand skills and in producing mailable letters. Personal qualifications covered. Prerequisite: Shorthand and Transcription II, 2.106 or 60 wpm.
- 2.580 Small Business Management** (3 class hrs/wk) 3 credits
Role, organization and operation of small business in the American Society. Emphasis upon the spirit of free enterprise and problems of the small merchant in meeting competition.
- SS 111, 112, 113 Stenography** (5 class hrs/wk) 3 credits each
Theory of shorthand; practical application in sentence and paragraph dictation. SS 121, 122, 123 must be taken concurrently unless the student has had the equivalent. Students with one year of high school shorthand may receive credit for SS 111 only upon recommendation of the instructor.
- 2.550 Supervisory Management (non-business)** (3 class hrs/wk) 3 credits
Organizational objectives and supervisory functions and practices of the first-line administrative personnel. Emphasis on situational thinking by use of case or incident study of problems affecting foremen and administrative personnel. A review of basic concepts of influence, attitude, morale, and motivation, with emphasis on the role of the first-line supervisor in problems of communication, control, inter-group conflict, disciplinary action, reorganization and union-management dispute. A course for non-business majors.
- 2.214 Tax Accounting** (3 class hrs/wk) 3 credits
This course is designed for both personal and vocational value. Studied and analyzed are the various forms and record-keeping techniques required by the Internal Revenue Service, tax laws, exemptions and deductions, and tax planning. Individual, business and professional, partnership, and corporate income tax returns are all considered in detail. A special section of the course is devoted to methods of minimizing income taxes.
- 2.232 Techniques of Business Decisions** (3 class hrs/wk) 3 credits
Concepts of probability expected value, and utility theory; basic sampling techniques, random variables, and probability distributions; basic concepts of opportunity loss and costs of uncertainty determined by incremental analysis and subjective probability; basic concepts of binomial sampling, conditional, joint, and marginal probability, statistical decision rules and their error characteristics. Methods of evaluating decision in terms of expected loss and remission of probabilities in light of new information. Prerequisite: Math 2.210 (Algebra or Elementary Statistics) or equivalent.
- 2.101 Typing I** (2 class, 3 lab hrs/wk) 3 credits
Introduction to typewriter and operation; mastery of keyboard through alphabet typing exercises and the development of the touch system.
- 2.102 Typing II** (1 class, 4 lab hrs/wk) 3 credits
Development of speed and accuracy; introduction to various styles of business letter, and the typing of envelopes and tabulated material. Miscellaneous office procedures. Prerequisite: Typing I, 2.101 or 30 wpm.
- 2.103 Typing III** (1 class, 4 lab hrs/wk) 3 credits
Preparation of business reports, legal forms and duplicating materials. Intensive speed and review drills to increase speed and accuracy to employment level. Prerequisite: Typing II, 2.102 or 45 wpm.
- 2.104 Typing, Personal** (2 class, 3 lab hrs/wk) 3 credits
For students desiring to extend their present typing abilities for personal or occupational needs, and for those desiring to remedy typing deficiencies, with an end result of improvement in degree of typing skills according to individual interest. The course includes projects in correspondence,

themes, outlines, tabulations, reports, and speed and accuracy development. Prerequisite: Knowledge of keyboard.

SS 121, 122, 123 Typing (1 class, 4 lab hrs/wk) 2 credits

Theory and practice; drills of all kinds; punctuation and mechanical arrangements of business correspondence, legal forms; tabulating, manuscripts, modern business forms; straight copy timings; training and electrical typewriters. Students who have had one year of typing may receive credit for SS 121.

For course descriptions of the following, refer to indicated department:

Survey of Data Processing	Data Processing
Sociology	Social Science
Physical Education	Health & P.E.
Human Relations	Social Science
English Composition	Language Arts
Fundamentals of Speech	Mass Communications
Social Psychology	Social Science
Health	Health & P.E.
Principles of Economics	Social Science

Data Processing

Director: Floyd A. Wilkes

Faculty: James Cox, Charles Lamb, William Madill, Jerry Nehring

Data Processing

The data processing department serves a dual role in the college. A two year training program is provided leading to the Associate of Science degree. The course work is designed to prepare students for jobs as computer programmers or as data processing machine operators. At the present time the demand for people trained for these jobs is greater than the supply. In addition to this instructional program, the department provides computer services for the administrative departments and the other instructional departments of the college. Because of this, the student is exposed to an operational data processing facility while having the opportunity to learn the field for himself. The department uses an IBM System 360-25 computer and various types of peripheral machines in performing both the instructional and administrative functions. Students have an opportunity to work directly on the computer to gain a first hand knowledge of both program writing and machine operation.

Students take about one-third of their work in the data processing department during which they study the 360 Assembler, COBOL, PL/1, and Report Program Generator languages. In addition, appropriate courses from the Business, Language Arts, Mathematics and Social Science departments will comprise approximately one-half of their program of study. These courses are designed to provide the student with a knowledge of the problems which he will be asked to solve and the environment in which he will work. The remainder of the time the student may select courses from the various departments of the college.

COURSES

2.623 Automated Systems & Procedures (3 class hrs/wk) 3 credits

Fundamentals of automated data systems and procedures. Techniques and principles of systems analysis, forms design and control, systems economics. Prerequisite: Second-year standing in Data Processing Curriculum.

36 Electronics

- 2.611 Computer Programming I** (3 class, 6 lab hrs/wk) 5 credits
Functions and capacities of computers; block diagramming and problem definition, introduction to the IBM 360 computer. Prerequisite: Unit Record Equipment II, or consent of instructor.
- 2.613 Computer Programming II** (3 class, 6 lab hrs/wk) 5 credits
Continued use of computers; instruction in tab and/or disk and magnetic storage media. Further applications of data processing language to various machines. Prerequisite: Computer Programming I, 2.611.
- 2.605 Computer Programming III** (3 class, 6 lab hrs/wk) 5 credits
Survey of general languages used in data processing and their applications. Provides specific problems oriented to language use. Prerequisite: Computer Programming II, 2.613.
- 2.610 Data Processing Field Projects** (30 hrs field work/wk) 10 credits
Practical work experience in business data processing. Production work in machine processes and basic functions of data processing. Supervision and conference sessions. Prerequisite: Three terms Business Data Processing curriculum completed.
- 2.625 Recent Developments in Data Processing** (3 class, 2 lab hrs/wk) 4 credits
Information on latest developments in data processing. Guest lecturers from leading manufacturers invited to present current and proposed changes in data processing. Visitations to businesses. Prerequisite: Sixth-term standing in Data Processing curriculum.
- 2.601 Survey of Data Processing** (3 class hrs/wk) 3 credits
Introduction to history, development and basic methods, techniques, and systems of manual, mechanical, and electronic data processing.
- 2.602 Unit Record Equipment I** (3 class, 2 lab hrs/wk) 4 credits
Basic machines used in data processing; use of the key punch, interpreter, sorter, collator, and reproducing punch. Prerequisite: Survey of Data Processing, 2.601.
- 2.604 Unit Record Equipment II** (2 class, 6 lab hrs/wk) 4 credits
Advanced instruction and practice on data processing machines; tabulating machine with and/or without the calculator. Projects using the various functions of data processing. Prerequisite: Unit Record Equipment I, 2.602.

Electronics

Chairman: Roger J. Hougum

Faculty: James R. Huntington, Darwin McCarroll, Ray Nott, L. C. Raynes, Richard J. Romanek

- 4.915 Radiotelephone Operators Preparation I** (3 class, 2 lab hrs/wk) 4 credits
This course, together with Radiotelephone Operators Preparation II, is designed to prepare the student for the FCC Second Class Radiotelephone Operators License. It includes:
Review of basic electrical theory and practice relating to transmitter operation, types and typical operating conditions of vacuum tubes and transistors, power supplies, indicating instruments, oscillators and study of questions similar to those used in FCC examinations. Prerequisite: Electronics I & II or equivalent or approval of instructor.
- 4.917 Radiotelephone Operators Preparation II** (3 class, 2 lab hrs/wk) 4 credits
This course, together with Radiotelephone Operators Preparation I, is designed to prepare the student for the FCC Second Class Radiotelephone Operators License. It includes:
Radio frequency amplifiers, transmitters and receivers, antenna systems, microwave equipment, troubleshooting techniques and study of questions

similar to those used in FCC examinations. Prerequisite: Radiotelephone Operators Preparation I or approval of instructor.

4.919 Radiotelephone Operators Preparation III (3 class, 2 lab hrs/wk) 4 credits
This course is designed to prepare the student for the FCC First Class Radiotelephone Operators License. It includes:

Advanced circuit theory, microphones, typical circuits, television techniques and standards, regulations governing the operation of broadcast transmitters and study of questions similar to those used in FCC examinations. Prerequisite: Radiotelephone Operators Preparation II, Second Class Radiotelephone License or approval of instructor.

Domestic Refrigeration Service

ONE YEAR PROGRAM

Education and training are provided to develop the skills, basic knowledge, proper attitudes, and appreciation for successful entrance and advancement in the field of domestic refrigeration.

The opportunity for employment in the appliance field upon completion of the complete two-year appliance service program is available in appliance servicing, appliance retail or distributor service (factory service) departments, general service repair shops, or in specialized service shops. Successful completion of school courses and work experience can lead to positions such as service manager, ownership, and/or management of an appliance repair business.

The Associate of Science Degree is awarded after completion of both the Home Appliance Service and Domestic Refrigeration Service programs. The curriculums may be taken in any order, but the preferred sequence is Home Appliance Service the first year and Domestic Refrigeration the second.

CURRICULUM

	F H-C*	W H-C	S H-C
Domestic Refrigeration I, II, III	5-5	3-3	3-3
Domestic Refrigeration I, II, III Lab	15-5	17-6	17-6
Machine Shop Orientation**	5-3		
Welding IA**	5-2		
Machine Shop Orientation**		5-3	
Practical Physics I (Heat, Sound, Light)		5-4	
Human Relations I**			3-3
Salesmanship			3-3
	<hr/> 30-15	<hr/> 30-16	<hr/> 26-15

*H-hours, C-credits

**These courses must be taken during the second year with Home Appliance Service, if Domestic Refrigeration Service has been taken the first year. The Domestic Refrigeration must be taken to meet the requirement for the Associate of Science Degree: Applied Economics (3 credits), Health Education (2 credits), Communications Skills II (3 credits). It is suggested that these courses be scheduled during the summer between the Appliance and Refrigeration sequences.

COURSES

3.606 Domestic Refrigeration I (5 class hrs/wk) 5 credits

3.607 Domestic Refrigeration I Lab (15 lab hrs/wk) 5 credits

Principles of refrigeration. Use of hand tools and their care, bending and flaring of copper tubing, silver soldering, theory of compressors, use of gauges and manifold assemblies.

38 Electronics

- 3.608 Domestic Refrigeration II** (3 class hrs/wk) 3 credits
- 3.609 Domestic Refrigeration II Lab** (17 lab hrs/wk) 6 credits
Effect of temperature and pressure on gasses and liquids; theoretical operation of expansion valves; floats and receivers, and condensers; purging systems of air and moisture; charging refrigeration systems; lubrication problems; testing the refrigeration system after repairs have been made. Prerequisite: Domestic Refrigeration I.
- 3.610 Domestic Refrigeration III** (3 class hrs/wk) 3 credits
- 3.611 Domestic Refrigeration III Lab** (17 lab hrs/wk) 6 credits
Types of compressors used in mechanical refrigeration systems, non-mechanical refrigeration systems, metering devices, supplementary system controls, electrical circuits in typical modern refrigeration units. Shop experience in repairing and servicing modern domestic refrigeration units. Prerequisite: Domestic Refrigeration II.

For course descriptions of the following, refer to indicated department:

Human Relations I	Social Science
Salesmanship	Business
Machine Shop Orientation	Mechanics
Welding IA	Industrial Technology
Practical Physics I	Science

Home Appliance Service

ONE YEAR PROGRAM

What was once a trade largely concerned with locating and replacing worn or broken parts has, in the space of just a few years, become one in which the serviceman must have a thorough mastery of electricity, basic electronics, and physical science.

Training for employment in the home appliance field is a combination of classroom study of theoretical principles and daily shop experience working with such domestic appliances as automatic washers, dishwashers, dryers, hot water heaters, water pumps, and electric stoves.

The Associate of Science Degree is awarded after completion of the sequence in domestic refrigeration service. The curriculums may be taken in either sequence, but the preferred sequence is home appliance service the first year and domestic refrigeration the second.

CURRICULUM

	F H-C*	W H-C	S H-C
Home Appliance Service I, II, III	5-5	3-3	3-3
Home Appliance Service I, II, III Lab	15-5	17-6	17-6
Electronics I, II**	5-4	5-4	
Electrical Drafting**			4-2
Mathematics II** (Algebra)	3-3		
Practical Physics II (Mechanics)		5-4	
Communications Skills I			3-3
	28-17	30-17	27-14

*H-hours, C-credits

**If a student elects to take Domestic Refrigeration Service sequence in his first year, these courses must be taken the first year. The Home Appliance Service courses must be taken to meet the requirement for the Associate of Science Degree: Applied Economics (3 credits), Health Education (2 credits), Communications Skills II (3 credits). It is suggested that these courses be scheduled during the summer, between the Appliance and Refrigeration sequences.

COURSES

- 3.600 Home Appliance Service I** (5 class hrs/wk) 5 credits
- 3.601 Home Appliance Service I Lab** (15 lab hrs/wk) 5 credits
Use of hand and machine tools and their maintenance, electrical meters and mechanical test equipment. Operation of basic electrical components used in modern appliances. Shop safety.
- 3.602 Home Appliance Service II** (3 class hrs/wk) 3 credits
- 3.603 Home Appliance Service II Lab** (17 lab hrs/wk) 6 credits
Work with mock-ups of appliance components to gain familiarity with their characteristics and operation. Trouble-shooting, repairing components. Introduction to modern home appliances. Prerequisite: Home Appliance Service I.
- 3.604 Home Appliance Service III** (3 class hrs/wk) 3 credits
- 3.605 Home Appliance Service III Lab** (17 lab hrs/wk) 6 credits
Diagnosis of both mechanical and electrical faults in such modern domestic appliances as washers, dryers, ranges, dishwashers, and waste disposals. Development of ability to locate cause of equipment malfunction by deduction and reasoning ability. Performing service operations on modern home appliances. Prerequisite: Home Appliance Service II.
- 4.920 Electronics I** (3 class, 2 lab hrs/wk) 4 credits
Electron theory of matter, electron movement, voltage and current relationships. Analysis of series, parallel, and series parallel circuits. Prerequisite: High school algebra or Mathematics II 4.202.
- 4.922 Electronics II** (3 class, 2 lab hrs/wk) 4 credits
Use of meters for measurement of voltage, current, power and resistance; alternating current. Relationship of AC to radio and audio frequency voltages and currents. Prerequisite: Electronics I.

For course descriptions of the following, refer to indicated departments:

Electrical Drafting	Industrial Technology
Math II	Mathematics
Practical Physics	Science
Communications Skills I	Language Arts

Electronics Technician (Communication)

TWO YEAR ASSOCIATE DEGREE PROGRAM

CURRICULUM

First Year

	F H-C*	W H-C	S H-C
Electrical Theory I, II (AC) & (DC)	5-4	5-4	
Engineering Problems I, II	2-2	2-2	
Technical Math I, II, III	4-4	4-4	4-4
Elective-General Education	3-3	3-3	
Communications Skills I, II	3-3	3-3	
Drafting I	4-2		
Electrical Drafting		4-2	
Vacuum Tube & Transistor Analysis			3-3
Vacuum Tube & Transistor Analysis Lab			3-1
Applied Physics I			5-4
Electrical Circuits			3-3
Electrical Circuits Lab			6-2
	<hr/> 21-18	<hr/> 26-16	<hr/> 24-17

*H-hours, C-credits

40 Electronics

Second Year	F H-C	W H-C	S H-C
Amplifier Circuits & Design	3-3		
Amplifier Circuits & Design Lab	6-2		
Applied Economics	3-3		
Electrical Math	4-4		
Transmission & Propagation of Waves	5-4		
Basic Control Room Practice	4-2		
Oscillator Circuits & Design & Lab		8-4	
Personal Health		3-3	
TV Circuits I, II		5-3	3-1
Transmitter Circuits I, II		5-3	6-4
Elementary Troubleshooting		5-3	
Microwaves			5-3
Control Room Equipment			5-3
Typical Receiver Circuits			4-3
	25-18	26-16	23-14

COURSES

- 6.221 Transmission and Propagation of Waves** (3 class, 2 lab hrs/wk) 4 credits
Principles involved in the transmission and propagation of electromagnetic radiation; application of these principles to practical problems; use of such instruments as the shielded bridge and field strength meter.
- 6.222 Basic Control Room Practice** (1 class, 3 lab hrs/wk) 2 credits
Operation of typical control room equipment and similar equipment used in two way communications; regulations concerning station identification, emergency messages and logs.
- 6.223 Transmitter Circuits I** (2 class, 3 lab hrs/wk) 3 credits
Circuits, theory, construction and practical operation of amplitude modulated transmitters; Master Oscillators, buffers, power amplifiers, amplitude modulation.
- 6.224 Transmitter Circuits II** (3 class, 3 lab hrs/wk) 4 credits
Circuits, theory, construction and practical operation of transmitters using other than amplitude modulation. F.M., single sideband, multiplex systems, color TV transmitters. Typical communications transmitters.
- 6.225 Elementary Troubleshooting** (2 class, 3 lab hrs/wk) 3 credits
Theoretical and practical aspects in location and repairing defects in electronic equipment. Techniques for sectionalizing equipment, analysis of symptoms, location and replacement of faulty components.
- 6.226 Control Room Equipment** (2 class, 3 lab hrs/wk) 3 credits
Study of the circuits and theory used in broadcast control room equipment and in similar equipment employed in two-way communications. Practical work in adjusting and testing such equipment. Construction and testing of subsection of such equipment.
- 6.227 Typical Receiver Circuits** (2 class, 2 lab hrs/wk) 3 credits
An introduction to typical circuits, principles of operation, and technical adjustments of radio receivers employed for the reception of audio, video, pulse or other forms of intelligence.

For course descriptions of the following, refer to indicated departments:

Engineering Problems I, II	Mathematics
Technical Math I, II, III	Mathematics
Communications Skills I, II	Language Arts
Electrical Drafting	Industrial Technology
Applied Physics I	Science
Applied Economics	Business
Electrical Math	Mathematics
Personal Health	Health & P.E.

Electronic Engineering Technician

TWO YEAR ASSOCIATE DEGREE PROGRAM

This program provides the basic principles of theory and lab work in the practical phases of electronics. This training is such as to prepare the beginning technician for understanding and knowledge of a highly skilled aspect of electronics, so that he can work under the supervision of an engineer or the engineering departments where technical competency is needed.

Satisfactory completion of the two-year program qualifies the person for employment as an electronic engineering technician, electronic instrument technician, electronic lab technician, guided missile technician, industrial electronic technician, microwave radio technician, and radio technician.

The rapid expansion of the electronic industry in this "space age" has created a great demand for engineering technicians in electronics. Opportunities and demand for employment in this field are greater than the supply of trained personnel and will continue at this rate because of the unusual expansion of the electronics industry. Job opportunities are available in government agencies involved in missile programs and space exploration. Automation developments in business and industry offer opportunities for trained technicians.

Applicants must have completed high school or the equivalent and should have successfully completed a course in Algebra. An entrance test must be passed.

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Electrical Theory (DC) I	5-4		
Electrical Theory (AC) II		5-4	
Engineering Problems I, II	2-2	2-2	
Technical Math I, II, III	4-4	4-4	4-4
Applied Physics I, II	5-4	5-4	
Communications Skills I, II	3-3	3-3	
Drafting I	4-2		
Electrical Drafting		4-2	
Practical Descriptive Geometry			4-2
Electrical Circuits			3-3
Electrical Circuits Lab			6-2
Vacuum Tube and Transistor Analysis			3-3
Vacuum Tube and Transistor Analysis Lab			3-1
	23-19	23-19	23-15
*H-hours, C-credits			
Second Year	F H-C	W H-C	S H-C
Oscillator Circuits and Design		2-2	
Oscillator Circuits and Design Lab		6-2	
Servo Systems	4-2		
Wave Generation and Shaping	5-3		
Electrical Math	4-4		
Applied Economics	3-3		
Television Circuits I, II		5-3	3-1
Industrial Electronics I, II		5-3	6-4
Amplifier Circuits and Design	3-3		
Amplifier Circuits and Design Lab	6-2		
Electronic Data Processing		3-3	
Health Education		2-2	
Advanced Electronic Circuits			5-3
Automation Systems			3-3
Microwaves			5-3
	25-17	23-15	22-14

42 Electronics

COURSES

- 6.200 Electrical Theory (DC) I** (3 class, 2 lab hrs/wk) 4 credits
Electronics on the basis of direct currents with an emphasis on contemporary techniques as a supplement to basic concepts. Principles of electron physics, currents, and factors affecting its magnitude, circuit analysis, phenomena of magnetism and electromagnetism, inductance, capacitance, and electrical measurement instruments. Prerequisite: High school algebra or equivalent.
- 6.202 Electrical Theory (AC) II** (3 class, 2 lab hrs/wk) 4 credits
A continuation of electrical theory on the basis of alternating currents with an emphasis on contemporary techniques as a supplement to basic concepts. Analysis of the sine wave, circuits with a sine wave input, and resonance. Prerequisite: Second-term standing or approval of department head.
- 6.204 Electrical Circuits** (3 class hrs/wk) 3 credits
- 6.205 Electrical Circuits Lab** (6 lab hrs/wk) 2 credits
Electrical theory with an emphasis on the analysis of the characteristics of complex waveform circuits. Prerequisite: Third-term standing or approval of department head.
- 6.210 Vacuum Tube and Transistor Analysis** (3 class hrs/wk) 3 credits
- 6.211 Vacuum Tube and Transistor Analysis Lab** (3 lab hrs/wk) 1 credit
Electrical characteristics of vacuum tubes and transistors; electron physics with emphasis on electron emission and fundamental transistor theory. Prerequisite: Third-term standing or approval of department head.
- 6.212 Oscillator Circuits and Design** (2 class hrs/wk) 2 credits
- 6.213 Oscillator Circuits and Design Lab** (6 lab hrs/wk) 2 credits
Single-phase rectifier circuits and filters with calculation of the ripple-factor. Introduces the fundamental feedback equation and covers positive and negative feedback.
- 6.214 Amplifier Circuits and Design** (3 class hrs/wk) 3 credits
- 6.215 Amplifier Circuits and Design Lab** (6 lab hrs/wk) 2 credits
Application of vacuum tubes and transistors in amplifier circuits. Analyzes the vacuum-tube amplifier into its basic and equivalent circuit, load-lines, distortion, and pentode and beam-power tube considerations. Analyzes transistor amplifiers in various circuit configurations and covers biasing methods. Transformer analysis, transformer-coupled amplifiers and R-C coupled amplifiers. Prerequisite: Fourth-term standing or approval of department head.
- 6.216 Advanced Electronic Circuits** (2 class, 3 lab hrs/wk) 3 credits
Current problems and opportunities with computers, communications, industrial controls, electronics, microwaves, and radar. Simulated problems of industry. Prerequisite: Sixth-term standing or approval of department head.
- 6.218 Industrial Electronics I** (2 class, 3 lab hrs/wk) 3 credits
Principles and applications of motors in industry; review of the principles of D-C motors and generators. A-C motors and generators, synchronous motors, 3 phase systems, circuit protective and switching equipment. Prerequisite: Fifth-term standing or approval of department head.
- 6.220 Industrial Electronics II** (3 class, 3 lab hrs/wk) 4 credits
Continuation of Industrial Electronics I with emphasis on the control of motors and power with electronic circuits and devices. Prerequisite: Sixth-term standing or approval of department head.

- 6.228 Television Circuits I** (2 class, 3 lab hrs/wk) 3 credits
Television systems, scanning and synchronization, composite video signal, frequency-modulation, television receivers and monitors, picture tubes, power supplies, video amplification, and deflection oscillator and amplifier circuits. Prerequisite: Fifth-term standing or approval of department head.
- 6.234 Wave Generation and Shaping** (2 class, 3 lab hrs/wk) 3 credits
Introduction to pulse techniques; historical development, typical applications, nomenclature, importance of pulse shapes, and responses of frequency-selective circuits to pulses. Prerequisite: Fourth-term standing or approval of department head.
- 6.235 Television Circuits II** (1 class, 2 lab hrs/wk) 1 credit
Closed circuit television systems, picture transmission, scanning process and the composite signal, camera tubes and circuits, camera video amplifier systems, camera sync and deflection generators. Prerequisite: Sixth-term standing or approval of department head.
- 6.236 Servo Systems** (1 class, 3 lab hrs/wk) 2 credits
Principles of servo and data transmission systems with emphasis on fundamentals. Elementary forms of control systems. Prerequisite: Fourth-term standing or approval of department head.
- 6.240 Electronic Data Processing** (3 class hrs/wk) 3 credits
Principles of electronic digital computers, application and programming of computers in business, industrial, and scientific organizations. Prerequisite: Fifth-term standing or approval of department head.
- 6.242 Microwaves** (2 class, 3 lab hrs/wk) 3 credits
Ultra-high frequencies to develop a good foundation for the development of wave-guides and microwave circuitry. Prerequisite: Sixth-term standing or approval of department head.
- 6.244 Automation Systems** (3 class hrs/wk) 3 credits
Techniques of automation. Basic concepts of automation and covers automatic controls, pneumatic control devices, hydraulic control devices, and electronic and electric control devices.

For course descriptions of the following, refer to indicated department:

Electrical Mathematics	Mathematics
Practical Descriptive Geometry	Industrial Technology
Engineering Problems I	Mathematics
Engineering Problems II	Mathematics
Technical Mathematics I	Mathematics
Technical Mathematics II	Mathematics
Technical Mathematics III	Mathematics
Applied Physics I	Science
Applied Physics II	Science
Drafting I	Industrial Technology
Electrical Drafting	Industrial Technology

Radio and Television Service

TWO YEAR ASSOCIATE DEGREE PROGRAM

Fundamentals of trouble-shooting, repair, alignment, adjustment of radio and TV receivers and citizens band transceivers are taught. Training is aimed at preparing a person for entry jobs in radio and television repair. Opportunities for employment in this field are offered in specialty radio and television repair shops, sales and service companies, commercial communications installation and service, wired music and installation service, television cable service, electronic equipment installers, radio and television wholesale and service, and factory service.

44 Electronics

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Fundamentals of Radio Service I	3-3		
Fundamentals of Radio Service I Lab	12-4		
Electrical Theory (DC) I, (AC) II	5-4	5-4	
Electrical Drafting	4-2		
Math II, III	3-3	3-3	
Radio Service II, III		3-3	3-3
Radio Service II, III Lab		12-4	12-4
Communications Skills I, II		3-3	3-3
Electronics III			5-4
Applied Economics			3-3
	<hr/> 27-16	<hr/> 26-17	<hr/> 26-17

*H-hours, C-Credits

Second Year	F H-C	W H-C	S H-C
Television Service I, II	3-3	3-3	
Television Service I, II Lab	12-4	12-4	
Slide Rule	2-1		
Practical Physics I, II	5-4	5-4	
Audio Systems		5-3	
Salesmanship		3-3	
Health Education			2-2
Television Service III			5-5
Television Service III Lab			10-3
Employer-Employee Relations	2-2		
Human Relations I			3-3
Business Records and Reports			3-3
	<hr/> 24-14	<hr/> 28-17	<hr/> 23-16

3.378 Fundamentals of Radio Service I (3 class hrs/wk) 3 credits

3.379 Fundamentals of Radio Service I Lab (12 lab hrs/wk) 4 credits

Various types of chassis and component parts; use of service manuals; supply sources. Instruction in use of vacuum tube voltmeters and tube-checkers. Basic hand tools and uses. Soldering, brazing and chassis sheet metal work. Prerequisite: Mathematics II, Electrical Theory I, and Electrical Drafting to be taken concurrently.

3.490 Radio Service II (3 class hrs/wk) 3 credits

3.491 Radio Service II Lab (12 lab hrs/wk) 4 credits

Tube types and construction, AC/DC power supplies, loudspeakers, audio output and amplifier stages, I-F and R-F amplifier, automatic volume controls, converters, mixers and oscillator stages, and radio antennas. Prerequisite: Fundamentals of Radio Service I, Electrical Theory II, and Mathematics III to be taken concurrently.

3.492 Radio Service III (3 class hrs/wk) 3 credits

3.493 Radio Service III Lab (12 lab hrs/wk) 4 credits

Various types of receivers, service procedures and problems. Transistors and other semiconductor devices. Fundamentals of electronic musical instrument servicing. Prerequisite: Radio Service II, Electronic Circuits taken concurrently.

3.494 Television Service I (3 class hrs/wk) 3 credits

3.495 Television Service I Lab (12 lab hrs/wk) 4 credits

Emphasis on actual servicing of television receivers. Substitution of parts; field servicing; voltage and power supplies; circuits. Prerequisite: Fourth-term standing or equivalent.

- 3.496 Television Service II** (3 class hrs/wk) 3 credits
- 3.497 Television Service II Lab** (12 lab hrs/wk) 4 credits
Continuation of Television Service covering: Video-amplifiers, picture tube circuits, construction and replacement; tuners, sound section and antenna types, installation and service notes. Prerequisite: Television Service I.
- 6.914 Television Service III** (5 class hrs/wk) 5 credits
- 6.915 Television Service III Lab** (10 lab hrs/wk) 3 credits
Modern television systems with emphasis on color fundamentals, the color picture tube, the deflection and convergence circuits. Receiver analyzed for troubles, alignment, and servicing. Use of color test equipment, and the setup and convergence of the set. Prerequisite: Television Service II.
- 4.924 Electronics III** (3 class, 2 lab hrs/wk) 4 credits
Introduction to vacuum tubes. Diodes, triodes, tetrodes, pentodes, and multi-element types; solid state devices; typical power circuits. Block diagrams of specialized applications including electronic organs, tape recorders, and stereo amplifiers. Prerequisite: Electronics II.
- 4.912 Audio Systems** (2 class, 3 lab hrs/wk) 3 credits
High fidelity systems, components, amplifiers, pickups and loudspeakers, AM and FM tuners, record players, tape recorders, inter-communication systems. Servicing audio systems. Prerequisite: Electronics III.

For course descriptions of the following, refer to indicated department:

Slide Rule	Mathematics
Applied Economics	Business
Business Records & Reports	Business
Electrical Drafting	Industrial Technology
Math II, III	Mathematics
Communications Skills I, II	Language Arts
Practical Physics I, II	Science
Salesmanship. 2.316	Business
Health Education	Health & P.E.
Employer-Employee Relations	Social Science
Human Relations	Social Science

Fine and Applied Arts

Chairman: Rosco Wright

Faculty: Thomas Blodgett, Terry Conrad, Bruce Dean, John Hauge, Ron Tore Janson, Edwin Koch, Bruce Wild

COURSES

- AA 195, 196, 197 Basic Design** (6 class hrs/wk) 2 credits each
Studio exercises in basic principles of design.
- AA 255 Ceramics** (6 class hrs/wk) 2 credits (6 hrs. max.)
Ceramics techniques and materials: throwing, molding, hand building; stacking, firing, and drawing kilns.
- AA 291 Drawing** (6 class hrs/wk) 2 credits each term (6 hrs. max.)
Training in observation and selection of significant elements. Registration permitted any term, but it is desirable that the work be started in the fall. One 3 hour studio period for each hour of credit. Maximum credit nine hours.

46 Fine and Applied Arts

- AA 290 Painting** (6 class hrs/wk) 3 credits each term (9 hrs. max.)
Instruction in the use of acrylic, oil, or other media. Registration permitted any term, but it is desirable that the work be started in the fall. Two hours of studio for each hour of credit. Maximum credit nine hours.
- AA 201, 202, 203 Survey of Visual Arts** (3 class hrs/wk) 3 credits each
A historical survey of the visual arts from prehistoric to modern times. Selected works of painting, sculpture, architecture, and other arts are studied in relation to the cultures producing them. Designed for both non-major and major students.
- AA 293 Elementary Sculpture** (2 class hrs/wk) 2 credits—6 max.
Introduction to materials. Elementary consideration of forms; technical and compositional exercises in a variety of materials.

Architecture, Interior Architecture, and Landscape Architecture

This program is recommended for those who plan to transfer in architecture, interior architecture, and landscape architecture to the University of Oregon. Students seeking admission to these professional programs must have grade-point averages of not less than 2.50. Those successfully completing the program with the required GPA, will be prepared to enter programs in interior and landscape architecture at the sophomore level. Students transferring into the professional program in architecture will need to complete certain professional work (usually accomplished during the freshman year) after transfer, which may extend the time required to complete the professional program beyond the normal five-year period.

CURRICULUM

Freshman Year	F	W	S
Wr 111, 112, English Composition	3	3	
Hst 101, 102, 103 History of Western Civilization	3	3	3
Mathematics ¹ (all architectural students and landscape students who have not completed mathematics through Trigonometry in high school) or Science sequence (students not required to take mathematics)	4	4	4
AA 290 Painting or AA 291 Drawing	2-3	2-3	2-3
AA 201, 202, 203 Survey of the Visual Arts	3	3	3
Physical Education	1		1
Personal Health		2	
	<hr/> 16-17	<hr/> 16-17	<hr/> 13-14

Total: 49-52 hours

¹Students should enroll in mathematics at the level indicated by entrance examination scores. This requirement is met with 12 hours of mathematics number 101 and above.

Art and Applied Design

Recommended for students who plan to transfer in art to the University of Oregon, Oregon State University, Portland State University, or to a program in applied design at Southern Oregon College. Those who satisfactorily complete the program should complete requirements for a

baccalaureate degree with two additional years of work. (Students transferring to the University of Oregon must have a 2.50 grade-point average for acceptance into the major program in fine and applied arts.)

CURRICULUM

Freshman Year

	F	W	S
Wr 111, 112, English Composition ¹	3	3	
Art Courses:			
AA 195, 196, 197 Basic Design (all students)	2	2	2
AA 201, 202, 203 Survey of Visual Arts (9 hours, PSU; AA 204, 205, 6 hours, OSU)			
AA 291 Drawing (6 hours, PSC, SOC, OSU, 4 hr. UO)	2-7	2-7	2-7
AA 290 Painting, AA 255 Ceramics, or AA 293 Sculpture (8 hours, UO)			
Science sequence of 12 hours of mathematics ²	3-4	3-4	3-4
First year language (OSU)	4	4	4
Sp 111 Fundamentals of Speech, Mus 201			
Introduction Music and Its Literature and elective (SOC)	3	3	3
Literature sequence (UO - courses numbered 100-110 or 200-210)	3	3	3
Physical Education	1		1
Personal Health		2	
	<hr/> 15-16	<hr/> 15-17	<hr/> 15-13

Sophomore Year

	F	W	S
Literature sequence (PSU, SOC) ³	3	3	3
Second year foreign language (OSU)	4	4	4
Social science sequence ⁴	3	3	3
Second science or social science sequence	3-4	3-4	3-4
Art courses:			
AA 201, 202, 203 Survey of Visual Arts (9 hours, UO)			
AA 291 Drawing (6 hours, UO)			
AA 290 Painting, AA 255 Ceramics, AA 293 Elementary Sculpture OSU; 6 hours of painting, ceramics, or sculpture; PSU:	9-15	9-15	9-15
9 hours of painting or 6 hours of ceramics or sculpture; UO: 3 additional hours of course begun in freshman year; SOC: 3 hours each, painting, sculpture, ceramics			
Physical Education	1	1	1
Electives as necessary to bring total hours to 93			
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

¹UO and SOC: Wr 111, 112, OSU and PSU: Wr 111, 112 and elective.

²SOC: GS 101, 102, 103 or GS 201, 202, 203.

³SOC students should complete Introduction to Literature or World Literature.

⁴SOC: History of the United States or American Governments. OSU: history or philosophy sequence.

Art Education

Students planning to complete their baccalaureate degree programs at Portland State University or Oregon State University should complete the transfer program in art (see above), completing Psy 201, 202, General Psychology and Sp 111 Fundamentals of Speech, instead of the second science or social science sequence during the sophomore year. Students planning to transfer to the University of Oregon, Southern Oregon College, Oregon College of Education, or Eastern Oregon College should follow the program outlined below. Successful completion of the appropriate program will permit students to complete requirements for the baccalaureate degree in two additional years.

48 Fine and Applied Arts

CURRICULUM

Freshman Year

	F	W	S
Wr 111, 112 English Composition	3	3	
Literature Sequence	3	3	3
AA 195, 196, 197 Basic design	2	2	2
AA 201, 202, 203 Survey of Visual Arts (UO, OCE, EOC)	3	3	3
GS 104, 105, 106 Physical Science (SOC)	4	4	4
Studio art electives (drawing, painting, sculpture or ceramics—no more than 6 hours of each to be completed by the end of the sophomore year) ¹	4-5	3-4	4-8
Physical Education	3-4	3-4	3-4
	1	1	1
	<hr/> 15-16	<hr/> 15-16	<hr/> 12-13

Sophomore Year

	F	W	S
Psy 201, 202 General Psychology	3	3	
Sp 111 Fundamentals of Speech (SOC, EOC, OCE) ²			3
Second science sequence (hst 201, 202, 203 History of the United States recommended) ³	3	3	3
Science sequence ⁴	4	4	4
Studio art electives to bring total hours to 93	4-5	3-4	4-8
Physical Education	1		1
Personal Health		2	
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-19

Total: 93 hours

¹Approved transfer courses in water color, printmaking, or lettering may be substituted for painting, sculpture, or ceramics, if available.

²UO students should take 3 hours of studio art.

³UO recommends Anth 207, 208, 209 Introduction to Cultural Anthropology.

⁴GS 101, 102, 103 General Biology, GS 104, 105, 106 Physical Science, mathematics according to recommended placement. OCE students should complete 12 hours of mathematics, SOC students should complete GS 101, 102, 103 General Biology or second science sequence.

Art History

Recommended for students who plan to transfer in art history to the University of Oregon. A grade-point average of not less than 2.50 is required.

Freshman Year

	F	W	S
Wr 111, 112 English Composition	3	3	
First-year language (French or German) ¹	4	4	4
Hst 101, 102, 103 History of Western Civilization	3	3	3
Studio arts (drawing, painting, sculpture or ceramics)	3-4	3-4	3-4
Physical Education	1		1
Personal Health		2	
	<hr/> 14-15	<hr/> 15-16	<hr/> 11-12

Sophomore Year

	F	W	S
Second-year language	4	4	4
Literature sequence	3	3	3
Science sequence or 12 hours of math	3-4	3-4	3-4
AA 201, 202, 203 Survey of the Visual Arts	3	3	3
Studio arts (drawing, painting, sculpture or ceramics)	2	2	2
Physical Education	1	1	1
	<hr/> 16-17	<hr/> 16-17	<hr/> 16-17

¹Students must complete language requirements in French or German. No other language is acceptable.

Food Technology

Manager: Merlin Ames

Faculty: Penney Burtraw, Peggy Hanson, Lon Humphries, Henning Melvej, Audrey Parker, Horace Pendergrass, Melvin Pfel

Food Technology

A program in food preparation designed to prepare individuals for entry into three specialized Food Service occupations. Students completing course offerings in these areas will have the necessary background and work experience to qualify for immediate job assignment within food service trades.

COURSES

- 3.500 Short Order Training** (10 class—30 lab hrs/wk) 20 credits
This course will prepare a student for employment in a short-order establishment; teaching him safety and sanitation; care and operation of kitchen equipment; menu planning; functions of work stations; storage of meats, vegetables and staple foods; and actual work experience in the college snack bar.
- 3.501 Restaurant Kitchen Training** (10 class—30 lab hrs/wk) 20 credits
Occupational preparation for employment in a restaurant. Student will be taught: care and operation of kitchen equipment; a la carte menu planning; functions of work stations, and preservation of foods. The student will have actual experience in the college restaurant dealing with preparation of breakfast and luncheon meals. Prerequisite: 3.500 or equivalent.
- 3.502 Institutional Food Preparation** (10 class—30 lab hrs/wk) 20 credits
Prepares a student for institutional food service employment. Student will be taught nutrition and menu planning; pertinent instruction in pantry operations; cold meat; acquire proficiency in steam cooking; fry cook; roast cook; broiler cook and vegetable cook; and actual experience in the college cafeteria. Prerequisites: Restaurant Kitchen Training or equivalent.

Agriculture

Suggested by the School of Agriculture of Oregon State University. The program, if successfully completed, will permit transfer into most of the major curricula offered by the School of Agriculture at the junior level, and completion of baccalaureate degree programs with an additional two years of study. Students who wish to pursue major work in fisheries, food science, and wildlife management should transfer at the end of the freshman year program.

Freshman Year	F	W	S
Wr 111, 112 English Composition	3	3	
Ch 201, 202, 203 General Chemistry ¹	4	4	4
Mth 101 College Algebra ²		4	
Mth 102 Trigonometry			4
Bot 201, 202 General Botany or Bi 101, 102, 103			
General Biology ³	4	4	0-4
Physical Education	1	1	
Personal Health			2
Electives ⁴	3-4		0-3
	<hr/> 15-16	<hr/> 16	<hr/> 16-17

50 Health and Physical Education

Sophomore Year

	F	W	S
Z 201, 202, 203 General Zoology ³ or electives ⁴	3	3	3
Ph 201, (202) General Physics ²	4	(4)	
Sp 111 Fundamentals of Speech Physical Education	1	1	1
Mth 200 Calculus with Analytic Geometry ²	4		
Electives ⁴		4-8	5
	15	15	15

Total 93 hours

¹Students not qualified to enroll in Ch 201, 202, 203 will complete Ch 101, 102, 103 and 241 before going on to Organic Chemistry.

²Students should register in mathematics at level indicated by placement test scores. Students planning to complete a curriculum option in agricultural science must complete mathematics through Mth 200 and two terms of physics.

³Students who elect to do their major work at OSU in agricultural economics, agricultural education, or food science and technology may take the General Biology sequence in lieu of Botany 201, 202 General Botany, Z 201, 202, 203 General Zoology, and Z 341 Genetics (Z 341 completed after transfer).

⁴Electives should be selected from the following areas: communications, humanities and social sciences, chemistry, mathematics, physics, and business.

Health and Physical Education

Chairman: Cecil M. Hodges

Faculty: John Bascom, Arthur E. Berwick, Carole Brubaker, Sharon Cochran, Delpha Daggett, George Gyorgyfalvy, Florence Goulding, Melvin Krause, Richard Newell, Robert Radcliff, Irvin Roth, Fred Sackett, Allen Tarpenning, Thomas Young

Health and Physical Education

Health and Physical Education offers programs and courses in health education, recreational activities, intramural sports and intercollegiate athletics.

The health education program attempts to influence student attitudes and behavior relating to individual and community health. Instructors seek out meaningful parts of medicine, psychology, physiology, sociology, economics and philosophy and integrate this knowledge to stimulate practical behavioral patterns designed to effect optimum efficiency and well-being. In the physical education programs a variety of activities are taught for physiological and recreational values. Courses include individual, dual and team sports and other activities designed to improve fitness, movement, and creative expression. Activities are scheduled for the skilled, unskilled and handicapped. To meet College requirements for an associate degree, five terms of physical education are required.

Majors in health, physical education and recreation must begin course work in professional activities during the freshman year if they are to complete a baccalaureate program in four years. Lower division professional courses are recommended for all students planning to transfer to teacher preparation programs offered by state system institutions. Intramural and intercollegiate athletics are an integral part of the physical education program. Both men and women students of all levels of ability are urged to participate.

The broad aim of the intramural program is to provide an opportunity for every student to participate in some type of competitive sports activity as frequently as his interests, ability and time will permit. The intramural program provides a full schedule of individual and team sports leading to school championships.

Intercollegiate athletics provide competitive opportunities for highly skilled students in selected sports with teams from other colleges. LCC is a member of the Oregon Community College Athletic Conference and the National Junior College Athletic Association. Teams compete in cross country, track, basketball, gymnastics, wrestling, soccer, swimming, tennis, baseball and volleyball.

HEALTH EDUCATION COURSES

- 1.605 Health Education** (2 class hrs/wk) 2 credits
Desirable mental and physical health practices as they relate to the individual and the community.
- HE 250 Personal Health** (3 class hrs/wk) 3 credits
Personal health problems of men and women with emphasis on implications of family life. Mental health, communicable diseases, degenerative diseases, nutrition.
- HE 251 Community Health** (3 class hrs/wk) 3 credits
Methods of handling health and sanitation problems in the community with special reference to water supply, food and milk sanitation, sewage disposal, insect and rodent control, air pollution, hospitals, nursing homes, and state and local officials and voluntary health agencies.
- HE 252 First Aid** (3 class hrs/wk) 3 credits
First aid and safety procedures—for individuals, schools, athletics, and civilian defense; meets certification standards of the American Red Cross for the standard and advanced First Aid card.
- 5.212 First Aid** (2 class hrs/wk) 1 credit
Standard first aid procedures and techniques. Upon successful completion of the course, a standard First Aid card may be secured.
- 5.213 First Aid** (2 class hrs/wk) 1 credit
Advanced first aid procedures and techniques; meets needs of special interest groups which have opportunity to give first aid care frequently in the course of daily routines. Upon successful completion of the course an American Red Cross Advanced First Aid card may be secured. Prerequisite: First Aid 5.212 or current Standard First Aid card.
- 5.214 First Aid (Emergency Care & Rescue)** (2 class hrs/wk) 1 credit
Medical self help training to help prepare for survival in time of disaster when the services of a physician or other allied health personnel are not available. Includes methods of first aid instruction and meets the certification standards of the American Red Cross for Instructors. Prerequisite: First Aid 5.213 or current Advanced First Aid card.

PHYSICAL EDUCATION ACTIVITIES

- PE 180, 190 Physical Education (Men and Women)** (3 class hrs/wk) 1 credit
A variety of activities taught for physiological and recreational values, designed to improve fitness, skills, movement and creative expression; as well as to create an awareness of the need for physical fitness throughout life. Activities are scheduled for the skilled, unskilled and handicapped.

Adaptive Activity (Men and Women)

Students with physical limitations or deviations are assigned to programs of adapted physical activity by a physician or departmental staff. Special section for restricted and corrective work.

52 Health and Physical Education

Archery (Men and Women)

Fundamental skills and techniques of target shooting, rules, care and selection of equipment.

Baseball (Men only)

Fundamentals, techniques of offensive and defensive play, rules, team play, and competition.

Badminton (Men and Women)

Fundamental skills of serving, strategy, play, rules and tournament play.

Basic Movement (Women only)

Analysis and development of physical potential. Designed to maintain figure, form fitness, and to increase knowledge and performance of basic sports skills.

Basketball (Men and Women)

Fundamentals, techniques of offensive and defensive play, rules, team play, and competition.

Body Building (Men only)

Use of weights and weight lifting equipment. A chart of progress and development is kept by each individual. Also, other conditioning methods are introduced.

Bowling—Beginning (Men and Women) (additional fee)

Fundamentals techniques, rules and social etiquette of bowling.

Bowling—Intermediate (Men and Women) (additional fee)

Perfection of straight ball delivery, introduction of hook and curve ball delivery, and tournament play.

Conditioning (Men and Women)

Primarily concerned with cardio-vascular development, variations in running, jogging, interval work, and wind sprints. Special programs of exercise and activities for men and women.

Contemporary Dance (Men and Women)

Fundamentals of dance movement (principles and practices of body movement and response to music); conditioning techniques; experience in elementary dance composition.

Cross Country (Men and Women)

A study and practice of the techniques of running. Individual and group competition.

Fencing (Men and Women)

Initial positions, techniques, attacking movements, and defensive movements; competition.

Field Hockey (Women only)

Fundamental skills and techniques, as well as rules and team play.

Flag Football (Men only)

Fundamental skills, development of team play and competition.

Folk Dance (Men and Women)

Fundamentals and patterns of folk and square dancing.

Golf (Men and Women) (additional fee)

Fundamentals, techniques, rules, social etiquette.

Gymnastics (Men and Women)

The techniques involved in controlled muscular movement, using various types of gymnastic apparatus.

Handball (Men only)

Fundamental techniques and rules; singles and doubles competition.

Personal Defense (Men and Women)

Techniques and fundamentals.

- Skiing—beginning** (Men and Women) (additional fee)
Selection and use of equipment, flat turning, walking, climbing, straight running position, open and closed skiing, traverse position, turning and side slipping.
- Skiing—intermediate** (Men and Women) (additional fee)
Continuation of the sequence for beginning skiing. Student is guided to parallel skiing as rapidly as time permits.
- Soccer** (Men only)
Fundamentals, techniques of offensive and defensive play, strategy, rules, team play.
- Softball** (Men and Women)
Fundamentals, rules, and team play.
- Swimming—beginning** (Men and Women)
Orientation to water, introduction to prone and supine float, front crawl, back crawl, breast stroke, side stroke, and elementary diving.
- Swimming—intermediate** (Men and Women)
Development of the front crawl, breast stroke, back stroke, survival swimming, turns, and endurance.
- Swimming—advanced** (Men and Women)
Perfection of all strokes, water games, diving, and life-saving techniques.
- Swimming—lifesaving** (Men and Women)
Basic skills of life saving; leads to American Red Cross certification in Senior Lifesaving.
- Tennis** (Men and Women)
Theory and practice in tennis skills, strategy, and application of rules.
- Track** (Men and Women)
Fundamentals, rules, theories, and training in track and field events.
- Volleyball** (Men and Women)
Individual and team play, rules, and strategy.
- Wrestling** (Men only)
Fundamentals, techniques, rules and competition.

PREPROFESSIONAL COURSES

- PE 131 Introduction to Health, Physical Education and Recreation**
(3 class hrs/wk) 3 credits
Professional orientation; basic philosophy and objectives; professional opportunities and qualifications in each of the areas and sub-areas.
- PE 194 Professional Activities** (6 class hrs/wk) 2 credits
(women) Instruction and practice in specific teaching techniques and basic skills. One activity per term. Fall: Field sports. Winter: Basketball, tumbling, basic movement. Spring: Track & field.
- PE 294 Professional Activities** (6 class hrs/wk) 2 credits
(women) Instruction and practice in specific teaching techniques and basic skills. One activity per term. Fall: Gymnastics. Winter: Contemporary dance, volleyball. Spring: Folk, Square, social dance.
- PE 195 Professional Activities** (6 class hrs/wk) 2 credits
(men) Instruction and practice in specific teaching techniques and basic skills. One activity per term. Fall: Fundamentals of movement, games. Winter: Gymnastics. Spring: Track, field.
- PE 295 Professional Activities** (6 class hrs/wk) 2 credits
(men) Instruction and practice in specific teaching techniques and basic skills. One activity per term. Fall: Field sports. Winter: Aquatics. Spring: Folk, square, social dance.

Physical Education—Health and Physical Education

Students who wish to become physical education or health and 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 a baccalaureate program 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 will permit transfer into 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.

Freshman Year

	F	W	S
Wr 121 or 111, 112 English Composition and electives ¹	3	3	3
Bi 101, 102, 103 General Biology ² or Z 201, 202, 203 General Zoology	3-4	3-4	3-4
PE 194/195 Professional Activities	2	2	2
PE 131 Introduction to Health, Physical Education, and Recreation	3		
Sp 111 Introduction to Speech		3	
HE 252 First Aid			3
Literature sequence (UO, OSU, OCE, SOC, EOC)	3	3	3
Phl 201, 202, 203 Problems of Philosophy, Elementary Ethics, Elementary Logic (PSU)	3	3	3
	14-15	14-15	14-15

Sophomore Year

Ch 101, 102, 103; 104, 105, 106; or 201, 202 203 General Chemistry ³	3-5	3-4	3-4
PE 294/295 Professional Activities	2	2	2
Psy 201, 202, 203 General Psychology ⁴	3	3	3
Social science sequence ⁵	3	3	3
HE 250 Personal Health (UO, OSU, OCE, SOC, EOC)	2-3		
FN 225 Nutrition		3	
Wr 222 English Composition and/or electives to bring total hours to 93 ⁶	2-3	2-3	5-6
	16-17	16-17	16-17

Total: 93 hours

¹OSU recommends that students complete three terms of English Composition (Wr 111, 112, 113) before transfer if available.

²PSU and OCE students should take Bi 101, 102, 103 General Biology.

³EOC students may substitute GS 104, 105, 106 Physical Science.

⁴EOC and OSU require only Psy 201, 202.

⁵SOC students should complete either Hst 201, 202, 203 or PS 201, 202, 203.

⁶UO and PSU students who do not have satisfactory placement scores should complete Mth 10 Elementary Algebra (noncredit course) prior to transfer; SOC students should complete Art 201 Survey of Visual Arts and Mus 201 Introduction to Music and Its Literature.

Home Economics

Chairman: Gladys Belden

Faculty: Jeanne Armstrong, Joann Ellingson, Lilian Heilpern, Kathryn Honey, Marcia King, Eleanor Latterell

The Home Economics Department offers programs and classes in three categories:

College Transfer

Classes required of students planning to major in home economics; may also be taken by students in other disciplines. All of these classes are functional, planned to meet the every day needs of students.

Occupational

Programs and classes designed to be of particular value to those planning to enter employment in some home related occupation. These programs may include classes which can be transferred to a four-year school, if the student decides to continue his education. Many classes are of general interest and all are open to all students.

General Education

These classes do not carry college transfer credit, but are planned to improve the personal and/or family life of any student, regardless of his occupational goals. Some of these classes are presently offered in Adult Education.

Associate of Arts in Home Economics

Students who complete this program graduate with a A.A. degree. They may also transfer the total program to OSU as the first two years of a home economics major.

CURRICULUM**First Year**

	F	W	S
Math 95 ¹	4		
Home Ec 101 Introduction to Home Economics	1		
Wr 111, 112 English Composition		3	3
AA 195, 196 Basic Design	2	2	
FL 222 Marriage Preparation		2	
FL 223 Family Living		2	
CT 211 Clothing Selection			3
Literature or Language sequence	3	3	3
Science ²	4	4	4
Physical Education	1	1	
Personal Health			2
	<hr/> 15	<hr/> 17	<hr/> 15

Second year

	F	W	S
Hst 101, 102, 103 History of Western Civilization	3	3	3
Social Science ³	6	6	6
Physical Education	1	1	1
CT 210 Clothing Construction	3		
FL 225 Child Development		3	
CT 250 Textiles			3
FN 225 Nutrition	3		
Elective		3	
Sp 111 Fundamentals of Speech			3
	<hr/> 16	<hr/> 16	<hr/> 16

¹Unless exempt.

²Laboratory sequence in physical or biological science area: Physical sciences—Chemistry, Physical Science, Physics; Biological sciences—General Biology, Botany, Microbiology, Physiology, Zoology.

³Two sequences selected from two of the following: Psychology, Sociology, Economics.

TRANSFER COURSES**FL 225 Child Development (3 class hrs/wk) 3 credits**

Physical, intellectual, and social-emotional development of the child, age birth through six, with some emphasis on prenatal influences. Observations in the preschool.

CT 210 Clothing Construction (6 class hrs/wk) 3 credits

Beginning course in college sequence. Includes principles of selection, construction and fitting, management problems in use of time and equipment.

56 Home Economics

- CT 211 Clothing Selection** (3 class hrs/wk) 3 credits
Artistic, economic and psychological factors affecting selection of clothing for adults. Practical course for majors and non-majors.
- FL 223 Family Living** (2 class hrs/wk) 2 credits
Reading and discussion on selected topics concerning marriage and relationships in the beginning family.
- FN 218, 0.504 Food Preparation** (1 class, 4 lab hrs/wk) 3 credits
For students **not** majoring in home economics. Basic principles of food preparation, meal planning, and table service are discussed and practiced in the laboratory.
- HEc 101 Introduction to Home Economics** (1 class hr/wk) 1 credit
Orientation course for majors in Home Economics. Open to any interested person. Home economics as a field of study, including history, philosophy and job and career opportunities.
- FL 222 Marriage Preparation** (2 class hrs/wk) 2 credits
Reading and discussion organized around topics of personal concern selected by the students, including interpersonal relationships; changing sexual standards; love vs. infatuation; engagement and marriage.
- FN 225 Nutrition** (3 class hrs/wk) 3 credits
The science of nutrition applied to daily life. Newer scientific investigations; optimal diet for health; present day problems.
- CT 250 Textiles** (4 class hrs/wk) 3 credits
Properties, identification, selection, use and care of textile fibers and fabrics for clothing and home furnishings.

Child Care Services

ONE YEAR CERTIFICATE PROGRAM (One term training program for Living Room Day Care is also available.)

This program will prepare students for such occupations as day care aides; kindergarten or primary teachers' aides; nursery school assistant; foster parent or family day care mother. It is also an extremely useful program for parents, volunteers, and others interested in young children. Individual courses may be elected by students in other programs.

By choosing the college transfer alternatives, a student may prepare to continue to professional preparation in early childhood education.

CURRICULUM

	F H-C	W H-C	S H-C
Introduction Child Care Services	3-3		
Child Care and Guidance	4-2		
Introduction to Child Development	3-3		
Child Nutrition and Health		3-3	
Seminar—Child Care Worker I, II, III	2-2	2-2	2-2
Supervised Participation I, II, III	12-5	12-5	12-5
Creative Activities for Children		3-3	
Communication Skills I or Speech I		3-3	
Early Childhood Curriculum			3-3
Child in the Family			3-2
Elective			3-3
	24-15	23-16	23-15

COURSES

- 7.102 Child Care and Guidance** (1 class, 3 lab hrs/wk) 2 credits
General principles of care for the young child based on recognizing needs

of children; guiding children's activities; use of play material; understanding behavior and setting limits.

- 7.104 Introduction to Child Care Services** (3 class hrs/wk) 3 credits
An orientation and overview of job opportunities, including:
a. Survey of types of care for pre-school children—philosophy and objectives, programs, physical facilities for various kinds of group care.
b. State and agency standards and requirements.
c. Personal characteristics of child care workers.
d. Relations with employers, peers, children, and parents.
- 7.105 Introduction to Child Development** (3 class hrs/wk) 3 credits
Study of the child, infant through pre-school, with some attention to pre-natal influences. Physical, emotional, intellectual, and social development at each stage are observed and discussed. Effects on children of adults attitudes and actions are stressed. Case problems from child care center used as illustrations.
- 7.107 Child Nutrition and Health** (3 class hrs/wk) 3 credits
Nutrition needs and food habits of the young child with practical application to the day care setting. Includes menu planning for the center. Childhood diseases, first aid procedures, good health habits. Dietician and nurse cooperating.
- 7.109, 7.110, 7.111 Seminar—Child Care Worker** (2 class hrs/wk) 2 credits each
This course will be led by a team consisting of instructors and the Child Development Center Coordinator. It will deal with the problems of the students in their roles as workers in the Child Development Center and as students and homemakers. Special attention will be given during first term to adjusting to the multiple role of the employed person. In subsequent terms, increasing emphasis will be placed on getting and keeping a job.
- 7.112, 7.113, 7.114 Supervised Participation** (5-12 class hrs/wk) 2-5 credits each
Work in the Child Development Center in increasingly responsible activities, under the direction of coordinator and instructors. One term will involve planning and helping to prepare meals and snacks under supervision of dietician and cook. Some experience in cooperating centers in the community will be provided during second and/or third terms.
- 7.115 Creative Activities for Children** (3 class hrs/wk) 3 credits
Examination and experimentation with play materials and activities that promote creativity in the young child—art, music, dramatic activities.
- 7.117 Early Childhood Curriculum** (3 class hrs/wk) 3 credits
Evaluation of various methods and materials currently used in pre-school programs. Practice in planning programs for a day for various groups.
- 7.118 Child in the Family** (3 class hrs/wk) 2 credits
Importance of family structure to the child. Responsibility of care center to strengthen child-family relationship.
- 0.502 Fashion Fundamentals** (3 class hrs/wk) 3 credits
Designed to help the student to make the most of her personal appearance through study and experimentation with color, design, accessories, and cosmetics. Psychosocial aspects of clothing, and fashion as an occupational field are included.
- 0.503 Food For Weight Control** (1 class, 2 lab hrs/wk) 2 credits
An opportunity for those with weight problems (overweight) to learn to adjust their calorie intake to meet their own energy needs within the framework of the normal diet. Laboratory provides for testing recipes, food combinations, and various means for making special diets attractive. "Enrollment in P.E. 180, Adaptives, is recommended in conjunction with this course.

58 Industrial Technology

- 7.100 Introduction to Food Service Work** (2 class hrs/wk) 2 credits
This course is designed to acquaint the student with the many facets of food service work and to teach some of the basic principles governing proper food handling. Enough basic material is presented so as to enhance the students' present value as a lower-echelon food service employee. The course is an effective introduction to a two-year vocational program for food service supervisors.

Industrial Technology

Chairman: Carl A. Blood

Faculty: Robert T. Allen, Chester Aubrey, Robert L. Gault, O. Jed Merrill, Gerald A. Meier, John N. Phillips, John W. Shuster, Adrian W. Vaaler, Jonathan West

Building Materials Management

TWO YEAR ASSOCIATE DEGREE PROGRAM

This program prepares students for careers which utilize a knowledge of building construction techniques and materials, and blueprint reading. A typical job is selling building and construction equipment and supplies. Part of the training is acquired on the job with college credit given for supervised work experience in the industries.

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Machine and Tool Maintenance	5-3		
Construction Practices I, II		10-5	10-5
Communications Skills I or Wr 111	3-3		
Communications Skills II or Sp 111		3-3	
Communications Skills III			3-3
Mathematics I, II, III	3-3	3-3	3-3
General Education Electives or Technical Math	4-4	4-4	4-4
Practical Physics I	5-4		
Introduction to Fabrication Practices II		5-3	
Drafting Fundamentals	5-2		
Architectural Drafting		5-2	
Blueprint Reading for Construction I			5-3
Employer-Employee Relations			2-2
	25-19	30-20	27-20
*H-hours, C-credits			
Second Year	F H-C	W H-C	S H-C
Construction Material Sales I, II, III	15-5	15-5	15-5
Business Math	3-3		
Construction Codes		2-2	
Construction Estimating			2-2
Marketing	3-3		
Advertising		3-3	
Salesmanship			3-3
Business Records and Reports	3-3		
Business Machines I	3-3		
General Education Electives		4-4	3-3
Technology Electives**		2-2	3-3
	27-17	26-16	26-16

**Enough of the electives must be from general education to qualify the student for the Associate of Science Degree.

COURSES

- 6.122 Construction Codes** (2 class hrs/wk) 2 credits
Various codes specifying the standards of construction and the installation of electrical and plumbing fixtures. Building codes and the function of government units (state and local) charged with the administration and inspection of building construction. Prerequisite: Second-year standing or approval of department head.
- 6.110 Construction Estimating** (2 class hrs/wk) 2 credits
Development of skills in estimating the amount and cost of materials required and labor cost involved in various types of construction. Prerequisite: Fifth-term standing or approval of department head.
- 4.058 Construction Materials Sales I** (15 class hrs/wk) 5 credits
Supervised on-the-job experience in the area of marketing, business records and reports and in the operation of business machines.
- 4.060 Construction Materials Sales II** (15 class hrs/wk) 5 credits
Supervised work experience in the area of advertising and display. Prerequisite: Construction Materials Sales I.
- 4.062 Construction Materials Sales III** (15 class hrs/wk) 5 credits
Supervised work experiences in the area of salesmanship. Prerequisite: Construction Materials Sales II.
- 4.051 Construction Practices I** (3 class, 7 lab hrs/wk) 5 credits
Materials and methods common to structural form in construction industries: aggregate, stone, steel, glass, plastic, gypsum, and wood.
- 4.052 Construction Practices II** (3 class, 7 lab hrs/wk) 5 credits
Use and methods of supplementary material common to construction practices; insulative, acoustical, finish, protective, decorative and hardware.
- 4.160 Drafting Fundamentals** (5 lab hrs/wk) 2 credits
Basic concepts and basic skills. Study of instruments used, layouts for drawings, lettering, freehand sketching, the alphabet of lines, geometric construction, three view drawings, isometric drawings, intersections and developments, and blueprint reading.
- 4.050 Machine and Tool Maintenance** (2 class, 3 lab hrs/wk) 3 credits
Background information and experience using machine tools common to construction practices. Relationship of use and maintenance of hand tools, portable power tools, and production machines to occupational practices in construction and fabrication industries.

For course descriptions of the following, refer to indicated department:

Communications Skills I, II, III	Language Arts
English Composition, Wr 111	Language Arts
Fundamentals of Speech, Sp 111	Mass Communications
Mathematics I, II, III	Mathematics
Technical Math	Mathematics
Practical Physics I	Science
Employee-Employer Relations	Social Science
Business Math	Business
Marketing	Business
Advertising	Business
Salesmanship	Business
Business Records and Reports	Business
Business Machines I	Business

Construction Technology

TWO YEAR PROGRAM

This program prepares the student to enter one of the many fields in the construction industries. Typical positions are construction materials and equipment salesmen, inspectors, estimators, quality control technicians. Persons entering employment in these areas have the background neces-

60 Industrial Technology

sary for ultimate promotion into supervisory positions. The curriculum consists of a year of common study and laboratory experience, and a second year of specialized options.

These options are designed to prepare the student for work as a technician with an Associate of Science Degree. The program also provides transfer ability into a variety of Bachelor of Technology programs at Oregon Technical Institute.

Study and laboratory experiences aim to establish a balance between fundamental theory and its practical application. To achieve balance, the student studies mathematics, physics, communications skills, psychology, and business and supplements it by second year on-the-job experiences. These experiences correlate theory to practical work application.

Second Year

Second year specialization is offered in the areas of welding, building and General Construction, and building materials management. See description of these programs to follow. Development of additional programs is anticipated in production, and quality control, and concrete.

This program is in a state of reorganization. The revised programs will be ready for the Fall Term, 1970. Information will be in the hands of the counselors for scheduling purposes.

Civil and Structural Engineering Technician

This program is in a state of reorganization. The revised program will be ready for the Fall Term 1970. Information will be in the hands of the counselors for scheduling purposes.

Engineering

COLLEGE TRANSFER COURSES

GE 101, 102, 103 Engineering Orientation (2 class hrs/wk) 2 credits each

Problem solving and math indoctrination; the overall viewpoint regarding problems of development in civilization, the objective questioning and critical approach to technological problems. Contemporary approach to solutions is made by the use of Fortran programming using the IBM 360 for solutions.

Preferably, these courses should be consecutive, beginning with GE 101. The first term familiarizes the student with engineering terminology and mastery of the use of the slide rule. The emphasis shifts toward computer training in Fortran and the use of a data control computer and the OS3 console. Prerequisites: Math 101, 102.

GE 115 Graphics (3 class hrs/wk) 3 credits

Fundamental principles of the language. Three two-hour laboratory periods.

SUGGESTED TRANSFER CURRICULUMS

Four and Five Years

Students whose high school records and entrance examination scores show high ability in science and mathematics and readiness to begin calculus may complete the following first-year program in engineering at the community college and transfer to the School of Engineering at Oregon State University ready to begin the second year of professional engineering studies.

Freshman Year—First-Year Engineering

	F	W	S
GE 101, 102, 103 Engineering Orientation	2	2	2
Mth 200, 201, 202 Calculus with Analytic Geometry	4	4	4
Ph 207, 208, 209 Introductory Classical Physics	4	4	4
Ch 104, 105, 106 General Chemistry (chemical or electrical engineering majors) or social science or humanities sequence (agricultural, civil, general, mechanical engineering and engineering physics major)	3-4	3-4	3-4
Wr 111 English Composition	3		
Elective			2-3
Physical Education	1		1
Personal Health		2	
	<hr/> 17-18	<hr/> 15-16	<hr/> 16-18

Total: 48-52 hours

Students who are not ready to begin the program outlined above will need to begin their college studies with a year of pre-engineering. This year, and the first year of engineering, may be completed at the community college. Three years of engineering studies at Oregon State University will be required to complete a baccalaureate program in engineering, for a total of five years (one year pre-engineering, four years engineering).

Freshman Year—Pre-Engineering

	F	W	S
Mth 95 Intermediate Algebra ¹	4		
Mth 101 College Algebra		4	
Mth 102 Trigonometry			4
Ch 104, 105, 106 General Chemistry (chemical and electrical engineering majors) or social science or humanities sequence (agricultural, civil, general, and mechanical engineering and engineering physics majors) ²	3-4	3-4	3-4
Wr 111, 112 English Composition	3	3	
Electives	3-4	3-4	5-6
Physical Education	1	1	
Personal Health			2
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

Sophomore Year—First-Year Engineering

	F	W	S
GE 101, 102, 103 Engineering Orientation	2	2	2
Mth 200, 201, 202 Calculus with Analytic Geometry	4	4	4
Ph 207, 208, 209 Introductory Classical Physics	4	4	4
Social science or humanities sequence	3	3	3
Physical Education	1	1	1
Electives	0-3	0-3	0-3
	<hr/> 14-17	<hr/> 14-17	<hr/> 14-17

Total: 87-93 hours

¹Students should begin work in mathematics at the level indicated in placement tests. If possible, the entire sequence Mth 200, 201, 202, 203 should be completed before the end of the sophomore year.

²Or Ch 101, 102, 103 and 241.

Forest Technician**TWO YEAR ASSOCIATE DEGREE PROGRAM**

This curriculum provides education and training to qualify a person as a forest technician. A forest technician is competent to handle intermediate responsibilities between those appropriate to the skilled worker and those of the professional forester. He directs the former under the supervision of the latter; in other words, he sees that plans prepared by professional foresters are efficiently executed. Students completing the program with 100 credits or more are placed as Forest Technicians with the state and federal agencies, and private forest product and logging operations.

62 Industrial Technology

There are several electives included in this program and the student may take special work in his particular field of interest. Wildlife, recreation, log scaling, timber cruising, surveying, timber sale administration, reforestation, etc., are some examples of possible options in which the student may specialize by counseling with his major instructor.

A high school graduate who completes this curriculum would be qualified to work for the U.S. Forest Service as a forestry aide, usually at the GS-4 level. The salaries for other employers would be comparable.

Previous forestry experience and completion of the two year technician program would qualify the graduate for a higher rating. Technician level work starts with the GS-5 rating. Applicants must have completed high school or the equivalent, and should have successfully completed courses in algebra and trigonometry. The applicant should have demonstrated an interest in outdoor camping or woods experience, and be capable of hard, vigorous, physical and mental activity. All major area courses below must be taken in the order given unless permission to vary is granted by the major instructor.

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Communications Skills I, II, III	3-3	3-3	3-3
Mathematics II, III	3-3	3-3	
Human Relations I	3-3		
General Forestry	3-3		
Drafting I	4-2		
Fire Protection and Control	4-3		
Power Equipment and Safety		6-3	
Silvicultural Practices		6-3	
Plane Surveying I, II		6-3	6-3
Tree Identification			6-3
Forest Recreation			6-3
Elective-General			3-3
Engineering Problems			2-2
	<hr/> 20-17	<hr/> 24-15	<hr/> 26-17

*H-hours, C-credits

Forest job experience during the summer between the first and second years requires 30+ hours a week for five credits.

Second Year	F H-C	W H-C	S H-C
Forest Mensuration I	6-3		
Forest Protection	3-3		
Forest Products	4-2		
Forestry Surveying	6-3		
Elective-General	3-3		
Applied Economics	3-3		
Forest Mensuration II		6-3	
Supervisory Management		3-3	
Forestry Records & Reports		3-3	
Forest Contracts		6-3	
Elective-General		3-3	
Health Education		2-2	
Logging Planning			12-6
Forestry Specialized Studies			10-5
Senior Project			3-3
Introduction to Information Systems			3-2
	<hr/> 25-17	<hr/> 23-17	<hr/> 28-16

COURSES

- 6.640 Fire Protection and Control** (2 class, 2 lab hrs/wk) 3 credits
 Forest fire behavior, ignition; spread of forest fires and factors by which they are influenced; methods of fire prevention and suppression; forest

fire control organizations and equipment, transportation, communications, and the operation of forest fire equipment. Prerequisite: General Forestry taken concurrently.

- 6.635 Forest Contracts** (2 class, 4 lab hrs/wk) 3 credits
Basic principles of a forest contract, field trips to show how the contracts are enforced through regular in-the-forest inspection. Forestry Records and Reports taken concurrently.
- 6.660 Forest Job Experience** (minimum of 30 hrs/wk) 5 credits
On-the-job training and experience under supervision of the college and employer. Prerequisite: Consent of instructor.
- 6.625, 6.626 Forest Mensuration I, II** (2 class, 4 lab hrs/wk) 3 credits each
A general course in forest measurements starting with log scaling, log grading and cruising methods. Necessary theory and practical work in each field. Prerequisite: Completion of all prior required courses.
- 6.636 Forestry Specialized Studies** (2 class, 8 lab hrs/wk) 5 credits
On-the-job training in whatever specialty the student is interested. It may be any subject in forestry, and the student will spend two hours a week with the instructor and one full eight hour day in field work. This may be on a project in company with other students on the same specialty field, one day a week. Prerequisite: To be arranged with Forestry instructor. Completion of all prior required courses.
- 6.605 Forest Products** (1 class, 3 lab hrs/wk) 2 credits
Forest products and how they are produced. Visits made to major-wood-using industries, their materials and methods studied in class.
- 6.641 Forest Protection** (3 class hrs/wk) 3 credits
Elementary forest diseases, natural weather damage, and the animal damage. Systems discussed for identification purposes; prevention or cures that are known. Prerequisite: Second-year standing.
- 6.633 Forestry Records and Reports** (3 class hrs/wk) 3 credits
Reports for appraisal, accounting records, profit and loss statements; for local, state, and federal governments in such matters as Social Security, withholding taxes, industrial accidents, licensing requirements, billings, inventory control, and other administrative details. Prerequisite: Completion of all prior required courses. Forest Contracts to be taken concurrently.
- 6.656 Forest Recreation** (2 class, 4 lab hrs/wk) 3 credits
All phases of recreational forest usage from the aesthetic needs of man for wilderness to the business management needed in areas of high density usage such as a marina. The sociology of forest users and the methods used for planning and maintenance of recreational facilities.
- 6.628 Forest Surveying** (2 class, 4 lab hrs/wk) 3 credits
Forest surveying with emphasis on aerial photos and topographic surveying; and covering the public land surveys. Prerequisite: Surveying I and II, second-year standing.
- 6.601 General Forestry** (3 class hrs/wk) 3 credits
Total field of Forestry—a survey of the jobs and resources involved.
- 6.632 Introduction to Information Systems** (1 class, 2 lab hrs/wk) 2 credits
Use of computers in the business world. Preparing raw data, methods of reporting computed data, and general use of machine records with application to forestry records. Prerequisite: Completion of all prior required courses. Logging planning to be taken concurrently.
- 6.631 Logging Planning** (4 class, 8 lab hrs/wk) 6 credits
Field procedures necessary in logging planning. An undeveloped tract of land will be studied from acquisition to prepared road system and logging plan with road engineering practices. Prerequisite: Introduction to Information Systems to be taken concurrently.

64 Industrial Technology

- 6.621 Power Equipment and Safety** (2 class, 4 lab hrs/wk) 3 credits
 Basic first aid course and industrial safety as it applies to logging and forest products. Basic operation and maintenance of transportation, and small engine driven equipment. Coordinated with silvicultural practices, which must be taken concurrently. Prerequisite: General Forestry and Fire Control.
- 6.650 Senior Projects** (3 class hrs/wk) 3 credits
 Special study of activity in field of Forest Technology or related subjects. Prerequisite: Permission of instructor, Forestry Specialized Studies to be taken concurrently.
- 6.615 Silvicultural Practices** (2 class, 4 lab hrs/wk) 3 credits
 Basic theory of Silviculture, a general understanding of the growth principles and cutting methods for commercial forest species. Laboratory work in determining of sample area, selection, marking and thinning operation. Coordinated with power Equipment, which must be taken concurrently. Prerequisite: General Forestry and Fire Control.
- 6.645 Tree Identification** (2 class, 4 lab hrs/wk) 3 credits
 Ecology and identification of trees and shrubs, including Western commercial timber species and many of the native non-commercial types.

For course descriptions of the following, refer to indicated department:

Communications Skills I, II, III	Language Arts
Mathematics II, III	Mathematics
Human Relations I	Social Science
Applied Economics	Social Science
Supervisory Management	Business
Health Education	Health & P.E.

Forestry

The one-year preforestry program outlined below, if successfully completed, will prepare students to enter professional curricula in forestry offered by the School of Forestry at Oregon State University at the sophomore level. In the forestry curricula at Oregon State University, it is assumed that the high school preparation of each student has included the following: English, four years; mathematics, four years—including trigonometry and advanced algebra; chemistry, one year; physics, one year; graphics or mechanical drawing, one year. Students planning to enter a professional program of forestry at Oregon State University, or some other institution, would transfer immediately following completion of the one-year forestry program. Forestry is a complex and demanding profession. Students will find that the one-year preforestry program must be followed by at least three years at a professional school of forestry to complete baccalaureate degree requirements.

Freshman Year

	F	W	S
Bot 201, 202 General Botany	4	4	
Ch 104, 105, 106 General Chemistry	4	4	4
Mth 101 College Algebra ¹	4		
Mth 102 Trigonometry		4	
Mth 200 Calculus with Analytic Geometry			4
Wr 111, 112 English Composition	3	3	
GE 115 Graphics			3
Physical Education	1		1
Personal Health		2	
Sp 111 Fundamentals of Speech			3
	<hr/> 16	<hr/> 17	<hr/> 18

Total: 51 hours

¹Students should enroll in mathematics at level indicated by placement test scores. However, the usual pattern calls for completion of Math 200 by the end of the freshman year.

Technical Drafting

TWO YEAR ASSOCIATE DEGREE PROGRAM

Basic instruction and training in drafting techniques is offered, with additional specialized instruction on advanced techniques in such areas as machine drafting, electrical drafting, technical illustration, architectural drafting, and structural drafting. Related technical courses that give better understanding of planning and production methods are included. The program provides training for those planning to enter employment with industrial or business firms that need skilled technicians who can interpret engineering data and directions, and develop sketches, plans, working drawings and details for production work.

Opportunities for employment in this field are available in construction, industrial manufacturing plants, engineering firms, and city, county, state and federal agencies involved in planning construction projects.

CURRICULUM

First Year	F	W	S
	H-C*	H-C	H-C
Drafting I, II	4-2	4-2	
Mathematics II, III	3-3	3-3	
Practical Physics I, II, III	5-4	5-4	5-4
Introduction to Fabrication Practices I, II, III	5-3	5-3	5-3
Communications Skills I, II, III	3-3	3-3	3-3
Applied Economics	3-3		
Employer-Employee Relations		2-2	
Advanced Machine Drafting I			5-2
Electrical Drafting			4-2
Advanced Drafting Problems			5-3
	23-18	22-17	27-17

*H-hours, C-credits

Second Year	F	W	S
	H-C	H-C	H-C
General Ed Electives	2-2	2-2	2-2
Advanced Machine Drafting II, III	5-2	5-2	
Technical Math I, II, III	4-4	4-4	4-4
Engineering Problems I, II	2-2	2-2	
Structural Drafting	5-2		
Introduction to Specifications	3-3		
Industrial Safety	3-3		
Production Planning & Practices		5-4	
Health Education		2-2	
Architectural Drafting		5-2	
Project Drafting			10-4
Metals Application Treatment Testing			5-3
Technical Illustration			4-2
	24-18	25-18	25-15

COURSES

- 4.115 Advanced Drafting Problems** (2 class, 3 lab hrs/wk) 3 credits
Application of principles to problems commonly encountered by draftsmen. Prerequisite: Drafting II, and Mathematics 4.204, or approval of instructor.
- 4.117 Advanced Machine Drafting I** (5 lab hrs/wk) 2 credits
Technical sketching and shape description, multi-view projections, sectional views, and revolutions. Prerequisite: Second-year standing or approval of instructor.

66 Industrial Technology

- 4.123 Advanced Machine Drafting II** (5 lab hrs/wk) 2 credits
Advanced studies in the major areas of machine drafting. The area covered will include threads and fasteners, assembly drawings, pictorial drawings, and engineering graphics. Prerequisite: Advanced Machine Drafting I.
- 4.125 Advanced Machine Drafting III** (5 lab hrs/wk) 2 credits
Practical drafting problems requiring the application of previously learned principles of machine drafting. Advanced work on cams, gears, and the relationship of drafting to shop processes. Prerequisite: Advanced Machine Drafting II.
- 4.107 Architectural Drafting** (5 lab hrs/wk) 2 credits
Architectural drawing techniques, methods and procedures; lettering, layout and design of the standard drawings (construction and display, and rendering the display drawing. Design principles, carpentry, masonry principles, construction drawing. Prerequisite: Second-year standing or approval of department head.
- 4.101 Drafting I** (4 lab hrs/wk) 2 credits
Basic drawing techniques with emphasis on the application of drafting instruments, standard orthographic projection, layout procedures, and ASA approved lettering techniques. Prerequisite: High school algebra or approval of department head. Mathematics II, 4.202, may be taken concurrently.
- 4.105. Drafting II** (4 lab hrs/wk) 2 credits
Intermediate preparation for mechanical, structural, civil, and architectural drafting. Projection and perspective drawing. Concept technique of inking, and the development of working drawings as used in industry. Prerequisite: Drafting I, 4.101, or equivalent.
- 4.103 Electrical Drafting** (4 lab hrs/wk) 2 credits
Techniques required for the electrical and electronic fields. Charts, graphs; schematic, wiring and routing diagrams; location drawings. Standard schematics such as motor starters, annunciators, AM and EEIA approved symbols will be used. Prerequisite: Drafting I or equivalent.
- 4.108 Industrial Safety** (3 class hrs/wk) 3 credits
Principles of safety in industry, including safety codes, personnel considerations and safety practices relating to design work, materials handling, and equipment. Prerequisite: Second-year standing or approval of department head.
- 4.128 Introduction to Fabrication Practices I** (2 class, 3 lab hrs/wk) 3 credits
Practices in the fabrication of metals and metal cutting, finishing, change of shape, change of physical characteristics, and joining of metals.
- 4.129 Introduction to Fabrication Practices II** (2 class, 3 lab hrs/wk) 3 credits
Practices in the fabrication of woods implemented by visits to various manufacturing companies and construction jobs using common practices. Woodcutting, finishing, shaping, joining and fastening. A study of building codes will be included. Prerequisite: Fabrication Practices I or consent of department head.
- 4.130 Introduction to Fabrication Practices III** (2 class, 3 lab hrs/wk) 3 credits
Fabrication practices in the general area of construction and related areas: Concrete structure, highway construction, bridge construction, electrical and electronic applications, and plastics. Prerequisite: Fabrication Practices I and II.
- 4.102 Introduction to Specifications** (3 class hrs/wk) 3 credits
Common usage and practice in the preparation and interpretation of specifications. Examination of existing specifications covering current subjects with practical problems. Prerequisite: Second-year standing or approval of department head.

- 6.127 Practical Descriptive Geometry** (4 lab hrs/wk) 2 credits
This course gives a brief review of advanced drafting problems and takes the student further into the field of descriptive geometric principles. Prerequisite: Third-term standing or approval of department head.
- 4.119 Project Drafting** (1 class, 9 lab hrs/wk) 4 credits
Working conditions similar to industrial drafting room. Project drawings requiring skills previously acquired. Methods for detail layout, reading specifications, common material of fabrication, checking and back-checking drawings, and material take-offs. Prerequisite: Drafting II which may be taken concurrently.
- 4.104 Production Planning and Practices** (3 class, 2 lab hrs/wk) 4 credits
Elements of production control and planning such as: Machine routing, steps of fabrication, efficient shop layout, materials handling, storage problems, and production records. Prerequisite: Second-year standing or approval of department head.
- 4.111 Structural Drafting** (5 lab hrs/wk) 2 credits
Civil and structural drafting procedures. Function and design of plans, diagrams and drawings; structural shapes such as bridges, dams and earthwork constructions. Prerequisite: Sixth-term standing or approval of department head.
- 4.127 Technical Illustration** (4 lab hrs/wk) 2 credits
Techniques required for modern technical illustrations and drawings in catalogs, published presentation, or exploded drawings: freehand drawing and template implements, pencils, brush and technique of light and shadow. Prerequisite: Second-year standing or approval of department head.

For course descriptions of the following, refer to indicated department:

Mathematics II, III	Mathematics
Practical Physics I, II, III	Science
Communications Skills I, II, III	Language Arts
Applied Economics	Social Science
Employer-Employee Relations	Social Science
Technical Math I, II, III	Mathematics
Health Education	Health & P. E.
Engineering Problems	Mathematics

Welding Technology

TWO YEAR ASSOCIATE DEGREE PROGRAM

The student prepares for employment as a welder or in a supervisory capacity. Course material covers techniques needed for entry positions in the welding industry, along with background information helpful for those who seek advancement into management, sales and service, ownership, and technician positions in production industries.

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Welding Processes IA, IB, IIB	5-2	5-2	5-2
Communications Skills I, II or Wr 111 and Sp 111	3-3	3-3	
Communications Skills III			3-3
Mathematics II, III	3-3	3-3	
Practical Physics II			5-4
Introduction to Fabrication Practices I, IA	5-3	5-3	
Metal Application Treatment & Testing			5-3
Machine Tool Operation		5-3	
Drafting Fundamentals	5-2		

68 Industrial Technology

Mechanical Drafting		5-2	
Blueprint Reading for Construction I			5-3
Health Education			2-2
	21-13	26-16	25-17
*H-hours, C-credits			
	F	W	S
	H-C	H-C	H-C
Second Year			
Welding I, II, III	15-9	15-9	15-9
Employee-Employer Relations			2-2
Human Relations I		3-3	
Blueprint Reading for Construction II	5-3		
Welding, Senior Projects I, II		8-4	8-4
Electives*	4-4		1-1
	24-16	26-16	26-16

*Enough of the electives must be from general education to qualify the student for the Associate of Science Degree.

COURSES

- 3.910 Blueprint Reading for Construction I** (5 class hrs/wk) 3 credits
Relationship of the various drawings in a set of plans to basic drawing principles; recognition of detail in job prints related to the construction industries; prints of construction jobs; free hand, large scale detailing of portions of construction; material take off.
- 3.911 Blueprint Reading for Construction II** (5 class hrs/wk) 3 credits
Advanced study related to the needs of the individual in the interpretation of shop prints for special features of design, fabrication, construction, and assembly. Residences, commercial buildings, and bridge or dam construction prints typify the type of plans used for study. Prerequisite: Blueprint Reading for Construction I.
- 4.128A Introduction to Fabrication Practices IA** (1 class, 4 lab hrs/wk) 3 credits
Study and application of fabricated metal technology. Recognition of pattern and jig material. Positioning of fabricated sections for rapid completion. Areas where automated equipment can be utilized. Elimination of distortion problems. Prerequisite: Introduction to Fabrication Practices I.
- 4.109 Mechanical Drafting** (5 lab hrs/wk) 2 credits
An advanced course emphasizing mechanical design. Includes sketching, cam and gear layout, isometric drawings, welding drawings, tolerances and allowances, tool jib drawings. Simplified drawing techniques will be placed on the industrial requirements of drawing. Prerequisite: Third-term standing or approval of department head.
- 4.106 Metals Application Treatment and Testing** (2 class, 3 lab hrs/wk) 3 credits
Survey in metallurgy covering the common materials of fabrication, metals coding systems, characteristics, methods of refining and alloying and methods of treating. Various types of and the working of metals used by industry. Prerequisite: Second-year standing or approval by department head.
- 3.905 Welding I** (15 class hrs/wk) 9 credits
Use of inert gas welding of ferrous and non-ferrous metals. T.I.G. and M.I.G. process, and use of semi- and full automatic welding equipment. All position welding, layout, and joint preparation of materials toward State Welding Certification is included.
- 3.906 Welding II** (15 class hrs/wk) 9 credits
Simulation, diagrams, and symbols of tests for graduation and State Certification. Advanced welding procedures with emphasis on welds of low hydrogen quality. Prerequisite: Welding I.

- 3.907 Welding III** (15 class hrs/wk) 9 credits
Industrial level experiences in material scheduling and listing, reading of blueprints, engineering specification, data review, and supervisory training. Preparation for test specimens to be sent to the testing lab, certification papers will be required. Prerequisite: Welding II.
- 4.150 Welding IA** (1 class, 4 lab hrs/wk) 2 credits
Set up and operation of oxyacetylene welding equipment. Practice in welding, brazing, and soldering ferrous and non-ferrous metals and their alloys.
- 4.151 Welding IB** (1 class, 4 lab hrs/wk) 2 credits
Introductory instruction in arc welding. Demonstration and practice in welding by electric arc. Application to industrial use in construction, maintenance, and repair.
- 4.156 Welding IIA** (1 class, 4 lab hrs/wk) 2 credits
Advanced application of oxyacetylene. Information and instruction on the manufacture of metals, advanced heat treating of metals, advanced cutting applications, technical information. Shop practice with reference to various trades and industrial applications.
- 4.158 Welding IIB** (1 class, 4 lab hrs/wk) 2 credits
Advanced instruction and practice in electric arc welding. Information and instruction in manufacturing of metals, advanced heat treating, cutting applications, and technical information correlated with shop practice and application to various trades and industry.
- 3.908 Welding, Senior Projects I** (8 lab hrs/wk) 4 credits
A lab course in project development. Layout, cutting, and metal preparation from shop drawings, welding in journeyman-type procedures of industry; transfer of plans on paper to "all-dimensional" metal parts for fabrication and welding.
- 3.909 Welding, Senior Projects II** (8 lab hrs/wk) 4 credits
A lab course in continued, advanced, layout procedures, prefabrication, assembly processes, correct uses and routing of manpower and equipment. Prerequisite: Senior Projects I.

For course descriptions of the following, refer to indicated department:

Communications Skills I, II, III	Language Arts
English Composition, Wr 111	Language Arts
Fundamentals of Speech, Sp 111	Mass Communications
Math II, III	Mathematics
Practical Physics II	Science
Health Education	Health & P. E.
Employer-Employee Relations	Social Science
Human Relations I	Social Science

Language Arts

Chairman: John Howard

Faculty: Evan Alford, Catherine Anderson, Paul Armstrong, Samuel E. Blackwell, Ruth Bowman, Pauline Dixon, Britta Hansen, Sheila B. Juba, Thomas Kepner, Karen Lansdowne, Frank Miller, Virginia Nelson, Ada Orcutt, Jack Powell, Claus Reschke, Antoinette Robinson, Theodore Romoser, Michael Rose, Delta Sanderson, Celeste Schneider, W. Donald Smith, William Sweet, Cherry Taylor, Arthur Tegger, Ruby Vonderheit, Arden Woods

COURSES

- 0.510 English as a Second Language** (3 hrs/wk) 3 credits
A course designed specifically for students whose native language is not English. The course will consist of work in the listening and reading comprehension, speaking, and writing skills needed by students to succeed in college courses. Attention will be given to individual problems.

70 Language Arts

- 1.100 Communications Skills I** (3 class hrs/wk) 3 credits
Speaking, listening, spelling and vocabulary. Prerequisite: High school English or equivalent.
- 1.102 Communications Skills II** (3 class hrs/wk) 3 credits
Reading, writing, practical usage in mechanics and grammar, note-taking, outlining, summarizing, and report making. Prerequisite: Communications Skills I or equivalent.
- 6.126 Communications Skills III** (3 class hrs/wk) 3 credits
Report and letter writing basic to occupational and business education. Prerequisite: Communications Skills I & II or equivalent.
- 1.108 Accelerated Reading** (3 hrs/wk) (8 weeks) 2 credits
To develop a rapid, efficient, and flexible reader, reading technique to meet the demands of the reading situation. The course content encompasses vision training, word and phrase recognition, and vocabulary development. The reading techniques developed will be those used for main idea, study, exploratory, recreational, and speed reading.
- 1.109 Effective Study Skills** (1 hr/wk) 1 credit
Skills which facilitate the location, selection, organization, and retention of information, the comprehension and interpretation of graphic representations, the adjustment of reading models to purposes and materials, and the following of directions. Note-taking and exam-taking skills are included. The emphasis is on application of technique, using the student's own textbook.
- Wr 10 Corrective English** (3 class hrs/wk) non-credit
Review of fundamentals of English Composition.
- Wr 111, 112 English Composition** (3 class hrs/wk) 3 credits each
Fundamentals of composition; frequent written themes. Must be taken in sequence.
- Wr 226 Expository Writing** (3 class hrs/wk) 3 credits
Practice in various forms of expository writing. Prerequisite: Wr 111, 112.
- RL 50, 51, 52 French, First Year** (4 class hrs/wk) 4 credits each
Must be taken in sequence.
- RL 101, 102, 103 French, Second Year** (4 class hrs/wk) 4 credits each
Must be taken in sequence.
- GL 50, 51, 52 German, First Year** (5 class hrs/wk) 4 credits each
Must be taken in sequence.
- GL 101, 102, 103 German, Second Year** (5 class hrs/wk) 4 credits each
Must be taken in sequence.
- Eng 201, 202, 203 Shakespeare** (3 class hrs/wk) 3 credits
Important plays: Comedies, histories, and tragedies.
- RL 60, 61, 62 Spanish, First Year** (4 class hrs/wk) 4 credits each
Must be taken in sequence.
- RL 107, 108, 109 Spanish, Second Year** (4 class hrs/wk) 4 credits each
Must be taken in sequence.
- Eng 101, 102, 103 Survey of English Literature** (3 class hrs/wk) 3 credits each
Readings selected to represent great writers, literary forms, and significant currents of thought. Should be taken in sequence.
- Eng 107, 108, 109 Survey of World Literature** (3 class hrs/wk) 3 credits each
Outstanding works of ancient, medieval, and modern writers that have had a wide appeal outside the countries in which they originated. Should be taken in sequence.
- Eng 210 The Negro in American Literature** (3 class hrs/wk) 3 credits
This course is designed to provide a wide sampling of the Negro writings in America, but also to allow the student considerable freedom of direction in pursuing an independent program of reading.

Eng 253, 254, 255 Survey of American Literature (3 class hrs/wk) 3 credits each
American literature from its beginning to present day.

English

This program is recommended for those who plan to transfer in English to the University of Oregon, Oregon State University, Portland State University, Eastern Oregon College, or Southern Oregon College. The baccalaureate degree may be completed with two additional years of work.

CURRICULUM

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence numbered at 100 level ²	3	3	3
Science sequence (with laboratory or 12 hours of mathematics numbered 101 or above)	4	4	4
Foreign language ³	4	4	4
Physical Education	1	1	1
	<hr/> 15	<hr/> 15	<hr/> 12

Sophomore Year

	F	W	S
Eng 210, 202, 203 Shakespeare ⁴	3	3	3
Hst 101, 102, 103 History of Western Civilization	3	3	3
Second social science sequence ⁵	3	3	3
Foreign language ³	4	4	4
Physical Education	1		1
Personal Health		2	
Electives ⁶	3		2
	<hr/> 17	<hr/> 15	<hr/> 16

Total: 93 hours

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO, EOC, or SOC should complete Wr 111, 112. (SOC students may substitute a writing elective for Wr 113).

²OSU: Eng 101, 102, 103 or Eng 107, 108, 109. SOC: 104, 105, 106 or Eng 107, 108, 109.

³The language requirement for the B.A. degree may be met in any one of the following ways: (1) two years (normally 24 term hours) of college work in a foreign (2) one year of college work at the second-year or higher level; or (3) examination showing language competence equivalent to that attained at the end of two years of college study. SOC also offers a B.S. program in English which does not require a foreign language. Students selecting this option should complete Sp 111 and two of following: AA 201, Mus 201, Phl 201.

⁴PSU students may substitute Eng 253, 254, 255 Survey of American Literature. EOC students may complete Eng 201, 202, and Wr 226 Expository Writing.

⁵Students planning to teach should complete Psy 201, 202 Introduction to Psychology, and Sp 111 Introduction to Speech.

⁶OSU students should begin a second sequence in science or complete courses in mathematics to meet OSU distribution requirements.

Foreign Languages

This program is recommended for those who plan to transfer in foreign languages to the University of Oregon, Portland State University, or Oregon State University (French and German). Requirements for the baccalaureate degree may be completed with two additional years of work. Foreign language students may begin their study of language in college.

72 Language Arts

However, it is more common and desirable for prospective language majors to begin their studies with two to four years of work in high school. Students ready to begin second-year course work in language their freshman year will need to transfer to a four-year institution for advanced course work during the sophomore year.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Science sequence (with laboratory, or 12 hours of mathematics numbered 101 and above)	3-4	3-4	3-4
Foreign Language	4	4	4
Physical Education	1		1
Personal Health		2	
	14-15	15-16	11-12

Sophomore Year

	F	W	S
Foreign Language	4	4	4
Second science sequence ²	3-4	3-4	3-4
Social science sequence (Hst 101, 102, 103 History of Western Civilization recommended)	3	3	3
Second social science or humanities sequence ³	3	3	3
Physical Education	1	1	1
Electives to bring total to 93 hours	2	2-3	
	15-16	15-17	14-15

Total: 93 hours

¹Students transferring to UO should complete Wr 111, 112. Students transferring to PSU or OSU should complete Wr 111, 112 and 3 hours of electives.

²Students transferring to UO may complete Psy 201, 202, 203 General Psychology. If this is done, laboratory course work will need to be completed after transfer.

³Students transferring to PSU or OSU who plan to be teachers should complete Psy 201, 202 and Sp 111 Introduction to Speech. AA 201, 202, 203 Survey of Visual Arts is recommended for students transferring to PSU who do not plan to teach.

General Arts and Letters

General Studies in Arts and Letters

General Studies in Humanities

This program is recommended for students who plan to transfer in general arts and letters at the University of Oregon, in general studies in arts and letters at Portland State University, or in general studies in humanities at Eastern Oregon College, Oregon College of Education, Oregon State University, or Southern Oregon College. Requirements for the baccalaureate degree may be completed with two additional years of work. Students planning to teach in the secondary schools, who will complete their preparation at Portland State University, should complete the transfer program recommended for the subject they plan to teach.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature Sequence ²	3	3	3
First year foreign language ³ or social science sequence	3-4	3-4	3-4
Science sequence (with laboratory or 12 hours of mathematics numbered 101 or above) ⁴	4	4	4
Physical Education	1		1
Personal Health		2	
	14-15	15-16	11-12

Sophomore Year

	F	W	S
Psy 201, 202, 203 General Psychology ⁵ or social science	3	3	3
Hst 101, 102, 103 History of Western Civilization (UO, OSU, EOC, SOC see ⁶)	3	3	3
Social science or science sequence (PSU)	3-4	3-4	3-4
Two terms of Eng 253, 254, 255 American Literature and one term of Eng 201, 202, 203 Shakespeare (OCE)	3	3	3
Second year foreign language or science sequence	3-4	3-4	3-4
Select one: ⁷			
Eng 201, 202, 203 Shakespeare			
AA 201, 202, 203 Survey of the Visual Arts			
Mus 201, 202, 203 Introduction to Music and Its Literature	3	3	3
Physical Education	1	1	1
Electives ⁸	2	2	2
	15-16	15-16	15-16

¹Students planning to transfer to OSU, PSU, or OCE should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO or EOC should complete Wr 111, 112. SOC students complete Wr 111, 112 or writing elective.

²UO: course numbered at 100 level. SOC: Eng 104, 105, 106 or 107, 108, 109. OCE: Eng 101, 102, 103 or Eng 107, 108, 109. PSU: any arts and letters courses acceptable.

³The language requirement for the B.A. degree may be met in one of the following ways: (1) two years (normally 24 term hours) of college work in a foreign language; (2) one year of college work at the second-year level; or (3) examination showing competence equivalent to that attained at the end of two years of college work. OSU, PSU, EOC, OCE, and SOC offer Bachelor of Science degree, which does not require completion of the foreign language requirement.

⁴SOC requires two science sequences, one a biological science and one physical science or mathematics. Non-laboratory science and Mth 95 are acceptable at PSU.

⁵Students transferring to EOC, OCE, OSU and SOC who plan to become teachers must complete Psy 201, 202, and Sp 111. Others may substitute a social science sequence. UO students should complete the program outlined.

⁶SOC students should take either Hst 201, 202, 203 History of the United States or Ps 201, 202, 203 American Governments.

⁷OSU students should take AA 201, 202, 203 or Mus 201, 202, 203. OCE students may complete Eng 101, 102, 103 or Eng 107, 108, 109, if not taken during Freshman year, or any combination of Eng 201, 202, 203, AA 201, 202, 203, and Mus 201, 202, 203 (not necessarily a sequence). PSU also recommends Eng 253, 254, 255.

⁸OSU students should select courses in philosophy or social science. OCE students planning to teach should complete Phl 201, 202, 203.

Mass Communications

Chairman: Virginia DeChaine

Faculty: Sam E. Blackwell, Carl Carmichael, Norman Delue, Barrie Hartman, Roger J. Houghlum, Mary Forestieri, Michael Hopkinson, Tom Lichty, Joyce Harms

Speech

Students who plan to transfer to the major programs in speech at the University of Oregon, Oregon State University, Portland State University should take the courses listed below. Requirements for the baccalaureate degree may be completed with two additional years of work at the University of Oregon, three years at Portland State University.

74 Mass Communications

TWO-YEAR PROGRAM (UO, OSU)

Freshman Year

	F	W	S
Wr 111, 112, English Composition ¹	3	3	
Literature sequence	3	3	3
First year foreign language ² or Science sequence ³ (with laboratory or 12 hours of mathematics 101 or above)	3-4	3-4	3-4
Sp 111, 112, 113 Fundamentals of Speech	3	3	3
Physical Education	1		1
Personal Health		2	
Electives	2		2
	15-16	14-15	15-13

Sophomore Year

	F	W	S
Social Science sequence ⁴	3	3	3
Sp 229 Interpretation	2		
Second year foreign language (B.A. degree) Science sequence (B.A. degree) ⁵	4 3-4	4 3-4	4 3-4
Second humanitarian sequence (B.S. degree) ⁵ Second social science sequence (B.S. degree) ⁶	3 3	3 3	3 3
Physical Education	1	1	1
Electives ⁷	0-4	3-6	3-6
	14-16	15-16	15-16

Total: 93 hours

ONE-YEAR PROGRAM (PSU)

	F	W	S
Wr 111 English Composition	3		
Social science sequence	3	3	3
Science sequence ⁸	3-4	3-4	3-4
Sp 111, 112, 113 Fundamentals of Speech	3	3	3
Physical Education	1	1	
Personal Health			2
Electives ⁷	2-3	2-3	2-3
	16	16	15-16

Total: 47-48 hours

¹Students planning to transfer to OSU should complete Wr 111, 112, and 3 hours of elective. Students transferring to UO should complete Wr 111, 112.

²The B.A. degree program is recommended particularly for students interested in theater or contemplating graduate study. The language requirement for the B.A. degree may be met in any one of the following ways (1) two years (normally 24 term hours) of college work in a foreign language; (2) one year of college work at the second-year level; or (3) examination showing competence equivalent to that attained at the end of two years of college work.

³Students interested in speech therapy should take GS 101, 102, 103 General Biology. Students transferring to UO may take Psy 201, 202, 203 to meet science requirements if laboratory work is completed at UO after transfer.

⁴History of Western Civilization recommended. Students planning to teach should complete Psy 201, 202 during sophomore year.

⁵Recommended: Mus 201, 202, 203 Introduction to Music and Its Literature; AA 201, 202, 203 Survey of the Visual Arts; or Eng 201, 202, 203 Shakespeare.

⁶Recommended: Soc 204, 205, 206 General Sociology or Hst 201, 202, 203 History of the United States.

⁷Students may complete 1-6 credits in Sp 250 Speech and Theater Workshop, if offered.

⁸Students interested in speech science and correction should take GS 101, 102, 103 General Biology or GS 104, 105, 106 Physical Science.

COURSES

Sp 214, 215, 216 & 1.104, 1.105, 1.106 Communication Process & Theory

(3 hrs/wk) 3 credits each

Nature, functions, impact, and problems of mass communications; its developmental, psychological, sociological, aesthetic, and physical bases; in-

roduction to general speech, journalism, photography, radio and television.

Sp 111, 112, 113 Fundamentals of Speech (3 hrs/wk) 3 credits each
Projects in extempore speaking. Primary emphasis on content and organization, with attention to the student's adjustment to the speaking situation, effective delivery, audience motivation, and language of speech.

Sp 130 Voice and Articulation (3 hrs/wk) 3 credits
Principles of voice production and articulation of speech sounds, with attention to elementary speech physiology and phonetics. Intended for those who desire to develop more effective speech and for meeting the special needs of teachers, radio and television speakers, public speakers, foreign born, and others who require special competence in speaking.

Sp 241 Fundamentals of Broadcasting (3 hrs/wk) 3 credits
General survey of broadcasting, including history, growth, social aspects, laws and policies, station and network organization, programming, the advertiser, the listener, public interest, standards of criticism, comparison of broadcast systems, international broadcasting and propaganda.

1.610 Public Speaking (3 hrs/wk) 3 credits
This course is intended to develop speaking skills with emphasis on the dual role of speech as both a speaking and listening skill, and on adjusting the approach to the specific audience. Practice is provided through individual speeches and group discussion with careful attention being given to effective organization and deliver. In addition to the general principles of speech, stress is placed on poise and confidence and on understanding their psychological basis.

Radio Broadcasting

TWO YEAR ASSOCIATE DEGREE PROGRAM

The radio communications training program in broadcasting gives the student the basic instruction and training required for employment in a commercial radio broadcast station.

Instruction covers the fundamentals of radio station operation, program planning and production, studio and control room operation, announcing techniques and radio advertising. On-the-air experience is provided at the College's FCC-licensed FM broadcast station, KLCC, which operates with 450 watts of power on 90.3 mc.

Instruction and training in this program are aimed at preparing a person for employment as a combination man, announcer-technician, or announcer. Usual first employment is at radio stations in smaller communities, with promotion to larger stations and more specialized jobs possible after a year or two of experience. Beginning pay is about \$400 a month.

Radio Broadcasting may be combined with a year of Telecasting for those who wish to earn an Associate Degree in Telecommunications.

CURRICULUM

First Year	F	W	S
	H-C	H-C	H-C
Wr 111, 112, English Composition	3-3	3-3	
Sp 214, 215, 216 Communication Process & Theory	3-3	3-3	3-3
Radio Broadcasting I, II, III & Lab	15-7	15-7	15-7
Personal Typing	5-3		
Elective chosen from:			
Newswriting I & Lab	3-3		
Electronics I	(5-4)		

76 Mass Communications

Two electives chosen from:			
Newswriting II & Lab		3-3	
Introduction to Business		(4-4)	
Electronics II		(5-4)	
Voice & Articulation		(3-3)	
Survey of American Literature		(3-3)	
Math II		3-3	
Two electives chosen from:			
Advertising (Broadcast)			3-3
Electronics III			(5-4)
Survey of American Literature			(3-3)
Fundamentals of Broadcasting			(3-3)
Math III			3-3
	29-19	27-19	24-16
 Second Year	 F	 W	 S
	H-C	H-C	H-C
Radio Broadcasting IV, V, VI & Lab	15-7	15-7	15-7
Sp 111, 112, 113 Fundamentals of Speech	3-3	3-3	3-3
Elective chosen from:			
General Sociology	3-3	3-3	3-3
General Psychology	(3-3)	(3-3)	(3-3)
Elective chosen from:			
Introduction to Music and Its Literature	3-3	3-3	3-3
Physical Science	(5-4)	(5-4)	(5-4)
Elective chosen from:			
Practical Physics I	5-4		
Radiotelephone Operator Preparation I	(5-4)		
Elective chosen from:			
Expository Writing		3-3	
Radiotelephone Operator Preparation II		(5-4)	
Elective chosen from:			
American Government			3-3
Radiotelephone Operator Preparation III			(5-4)
	29-20	17-19	17-19
Health or Physical Education 1 hour any term.			

COURSES

- 3.400 Radio Broadcasting I** (3 class hrs/wk) 3 credits
Provides a broad, general background on the development of broadcasting. Develops basic understanding of broadcast organization, management, and programming. Broadcasting history, comparative systems, vocabulary practice.
- 3.401 Radio Broadcasting I Lab** (12 lab hrs/wk) 4 credits
Introduces the student to the equipment of the modern control room. Develops the basic skills of the radio announcer.
- 3.402 Radio Broadcasting II** (3 class hrs/wk) 3 credits
Provides experience with actual radio continuities, including actual scripts and spot announcements. Develops further insight into the announcer's basic skills, with particular emphasis on interpretive reading, foreign words, place names, and proper names.
- 3.403 Radio Broadcasting II Lab** (12 lab hrs/wk) 4 credits
Acquaints the student with the characteristics of various microphone types, tape recorders, turntables, and audio consoles. Cultivates the voice qualities necessary for good microphone work. Prerequisite: Fundamentals of Radio Broadcasting I or consent of instructor.
- 3.404 Radio Broadcasting III** (3 class hrs/wk) 3 credits
Provides an understanding of the basic functions of the modern control room and studio equipment, typical inter-connection of equipment items, and certain limitations and cautions in its use.

- 3.405 Radio Broadcasting III Lab** (12 lab hrs/wk) 4 credits
Develops further understanding and skill in the operation of the control room through actual on-the-air experience. Prerequisite: Fundamentals of Radio Broadcasting II or consent of Instructor. (Seminar in advanced radio station operation is available on sufficient demand.)
- 3.370 Radio Broadcasting IV** (3 class hrs/wk) 3 credits
Provides the prospective announcer with an understanding of the role that programming plays in the commercial success of today's stations and the development of network programming.
- 3.371 Radio Broadcasting IV Lab** (12 lab hrs/wk) 4 credits
Provides laboratory and on-the-air experience in newscasting, copy writing, equipment maintenance, library maintenance, and program production. Prerequisite: Radio Broadcasting III or consent of instructor.
- 3.372 Radio Broadcasting V** (3 class hrs/wk) 3 credits
Provides the student with an insight into the development of our present system of time sales and program sponsorship. Describes the inter-related roles of radio and television networks, affiliated stations, advertising agencies, sponsors and advertisers.
- 3.373 Radio Broadcasting V Lab** (12 lab hrs/wk) 4 credits
Emphasizes continuity and production of typical spot announcements in typical merchandising fields. Prerequisite: Radio Broadcasting IV.
- 3.374 Radio Broadcasting VI** (3 class hrs/wk) 3 credits
Provides the student with an insight into the problems of organizing a station staff, of developing a program format suitable to the community's needs, and improving station-community relations. Includes an understanding of the public-service responsibilities of radio licensees and ways of meeting these obligations.
- 3.375 Radio Broadcasting VI Lab** (12 lab hrs/wk) 4 credits
Focuses on the student's air personality. Defines his goals, his abilities and his possibilities. Audition tape preparation and job application procedures. Prerequisite: To be taken in the sixth term.

For course descriptions of the following, refer to indicated department:

English Composition	Language Arts
Personal Typing	Business
Electronics I	Electronics
Introduction to Business	Business
Electronics II	Electronics
Mathematics II	Mathematics
Advertising	Business
Electronics III	Electronics
Mathematics III	Mathematics

Television Broadcasting

TWO YEAR ASSOCIATE DEGREE PROGRAM

Those who have previous background in communications receive basic instruction and job experience for employment in the broadcasting field. Instruction covers the fundamentals of television control room and studio techniques. LCC's new closed-circuit TV installation is used as a training laboratory. Students may specialize in camera work, switching, set construction and lighting, or announcing.

A usual prerequisite is the completion of Radio Broadcasting I, II, III or previous radio or station experience. Telecasting may be combined with a year of Radio Broadcasting for those who wish to earn an Associate Degree in Telecommunications.

78 Mass Communications

CURRICULUM

First Year	F H-C	W H-C	S H-C
Wr 111, 112 English Composition	3-3	3-3	
Sp 214, 215, 216 Communication Process & Theory	3-3	3-3	3-3
Television Broadcasting I, II, III, & Lab	15-7	15-7	15-7
Personal Typing	5-3		
Elective chosen from:			
Newswriting I & Lab	3-3		
Electronics I	(5-4)		
Two electives chosen from:			
Newswriting II & Lab		3-3	
Introduction to Business		(4-4)	
Electronics II		(5-4)	
Voice & Articulation		(3-3)	
Survey of American Literature		(3-3)	
Math II		3-3	
Two electives chosen from:			
Advertising (Broadcast)			3-3
Electronics III			(5-4)
Survey of American Literature			(3-3)
Fundamentals of Broadcasting			(3-3)
Math III			3-3
	29-19	27-19	24-16
Second Year	F H-C	W H-C	S H-C
Television Broadcasting IV, V, VI & Lab	15-7	15-7	15-7
Sp 111, 112, 113 Fundamentals of Speech	3-3	3-3	3-3
Elective chosen from:			
General Sociology	3-3	3-3	3-3
General Psychology	(3-3)	(3-3)	(3-3)
Elective chosen from:			
Survey of Visual Arts	3-3	3-3	3-3
Physical Science	(5-4)	(5-4)	(5-4)
Elective chosen from:			
Practical Physics I	5-4		
Radiotelephone Operator Preparation I	(5-4)		
Elective chosen from:			
Expository Writing		3-3	
Radiotelephone Operator Preparation II		(5-4)	
Elective chosen from:			
American Government			3-3
Radiotelephone Operator Preparation III			(5-4)
	29-20	27-19	27-19

For course descriptions of the following, refer to indicated department:

English Composition	Language Arts
Personal Typing	Business
Electronics I	Electronics
Introduction to Business	Business
Electronics II	Electronics
Survey of American Literature	Language Arts
Electronics III	Electronics
Mathematics I	Mathematics
General Sociology	Social Science
Mathematics II	Mathematics
General Psychology	Social Science
Survey of Visual Arts	Fine & Applied Arts
Physical Science	Science
Practical Physics I	Science
Radiotelephone Operator Preparation I, II, III	Electronics
Expository Writing	Language Arts
American Government	Social Science

COURSES

- 3.410 Television Broadcasting I** (3 class hrs/wk) 3 credits
 An introduction to the broadcasting industry—its organization and practices. Includes the operation of stations, networks, advertisers and ad-

vertising agencies, station representatives, the FCC, and professional organizations. Also, regulation of the industry (both governmental and self-regulation).

- 3.411 Television Broadcasting I Lab** (12 lab hrs/wk) 4 credits
An introduction to basic equipment used in TV studios and control rooms. The use of lighting instruments, audio, film chains, and video switchers in basic production situations. Operating procedures and responsibilities of each member of a TV production crew.
- 3.412 Television Broadcasting II** (3 class hrs/wk) 3 credits
An examination of the different types of programs presented on television. How programs are conceived, produced, and sold. The TV audience: How it is measured and how ratings are used by broadcasters. The social effects of broadcasting.
- 3.413 Television Broadcasting II Lab** (12 lab hrs/wk) 4 credits
A further study of types of equipment used in a TV station. Graphic materials and their use in production. Basic principles of TV directing. Intensive experience in each of the studio crew positions.
- 3.414 Television Broadcasting III** (3 class hrs/wk) 3 credits
The history of broadcasting, including background of current problems in the industry and economic development of television. Study of the broadcasting systems of other countries.
- 3.415 Television Broadcasting III Lab** (12 lab hrs/wk) 4 credits
The use of film (35 mm. and 16 mm.) in television production. Film camera operation and film editing techniques. Practice directing various types of studio productions. Basic techniques of remote broadcasting.
- 3.416 Television Broadcasting IV** (3 class hrs/wk) 3 credits
Television station management and problems involved in day-to-day station operation. Employer-employee relations. Financial operations of individual stations.
- 3.417 Television Broadcasting IV Lab** (12 lab hrs/wk) 4 credits
Make-up and clothing for television. Scenery and set construction. Continued directing practice. The visual aesthetic of television. Acting for television.
- 3.418 Television Broadcasting V** (3 class hrs/wk) 3 credits
Basic broadcast law. An examination of the role of educational broadcasting. Salesmanship and public relations.
- 3.419 Television Broadcasting V Lab** (12 lab hrs/wk) 4 credits
Continued practice in all crew positions, including directing. Special effects in television production.
- 3.420 Television Broadcasting VI** (3 class hrs/wk) 3 credits
The role of broadcasting in contemporary society. Current problems facing the broadcasting industry. Broadcasting in the future. Seeking employment in broadcasting.
- 3.421 Television Broadcasting VI Lab** (12 lab hrs/wk) 4 credits
Advanced production techniques employing all previous material. The role and functions of a TV producer.

Journalism

TWO YEAR PROGRAM

Those who plan to transfer to the major program in journalism at the University of Oregon are advised to follow the program below. Requirements for the baccalaureate degree may be completed with two additional years of work. Lower-division course work in journalism, up to 13

80 Mass Communications

hours, is accepted as elective credit at UO. It does not apply toward the upper-division major.

CURRICULUM

Freshman Year

	F	W	S
Wr 111, 112 English Composition	3	3	
Eng 101, 102, 103 Survey of English Literature, or Eng 104, 105, 106 Introduction to Literature	3	3	3
Science Sequence (with laboratory or 12 hours Mth 101 and above)	4	4	4
Foreign language or electives ¹	4	4	4
Physical Education	1		1
Personal Health		2	
	15	16	15

Sophomore Year

	F	W	S
Hst 101, 102, 103 History of Western Civilization or Hst 201, 202, 203 History of the United States	3	3	3
Eng 253, 254, 255 Survey of American Literature or Eng 201, 202, 203 Shakespeare	3	3	3
Ec 201, 202, 203 Principles of Economics or PS 201, 202, 203 American Governments	3	3	3
Foreign Language or second social science sequence	3-4	3-4	3-4
Electives ²	2-3	2-3	2-3
Physical Education	1	1	1
	16	16	15

Total: 93 hours

¹Students are encouraged to study one foreign language through the second-year college level. Introduction to Mass Communications is a satisfactory elective.

²J215 Newswriting Lab, J216, J217 Newswriting I and II, J218 News Editing, are satisfactory electives.

COURSES

J215 Newswriting Lab (1 lab hr/wk) 1 credit
Gathering, writing, editing news for the College newspaper. Prerequisite: Concurrent enrollment in either J216, 217, 218.

J216 Newswriting I (2 class hrs/wk) 2 credits
What news is, how its simpler forms are written. Prerequisite: Concurrent enrollment in J215.

J217 Newswriting II (2 class hrs/wk) 2 credits
Writing news which lends itself to "feature" treatment. Prerequisite: J216, concurrent enrollment in J215.

J218 News Editing (2 class hrs/wk) 2 credits
Basics of copy reading, headline writing, makeup. Prerequisite: J216.

Photography

Fundamentals of visual communications, using photography, are stressed. Emphasis is on camera, optics, lighting, composition, exposure, and dark-room developing and printing.

COURSES

- 2.207 Photography I** (3 class hrs/wk) 3 credits
Introduction, history, purposes, uses, fundamentals of camera and dark-room procedures.
- 2.209 Photography II** (3 class hrs/wk) 3 credits
Camera techniques, composition, lighting, optics, mechanics of the finished photograph. Prerequisite: Photography I or consent of instructor.

Mathematics

Chairman: Howard E. Zink

Faculty: Richard Coalwell, Ron Edelman, Casey Fast, Leland Halberg, Roger Jay, John Loughlin, Thomas Reimer, Vernon D. Schwin, Edward Seabloom, Hazel Smith, James W. Snow.

OCCUPATIONAL COURSES

- 4.200 Mathematics I** (3 class hrs/wk) 3 credits
Practical mathematics that includes problems composed of whole numbers, fractions, measurements, formulas, graphs, and roots. Review of general mathematics. May be taken in a regular class section or in independent study through the Math Lab. Prerequisite: Ability to profit from instruction.
- 4.202 Mathematics II** (3 class hrs/wk) 3 credits
Essentials of elementary algebra, trigonometry of the right triangle, with applications related to the occupational fields. Prerequisite: Successful completion of high school level general mathematics; no knowledge of algebra or geometry is presumed.
- 4.204 Mathematics III** (3 class hrs/wk) 3 credits
A continuation of algebra studied in Mathematics II with emphasis upon practical application. Prerequisite: Mathematics II, or the equivalent.
- 4.208 Slide Rule** (2 lab hrs/wk) 1 credit
Basic course in the theory, operation, and applications of the slide rule, including multiplication, division, power and roots, trigonometric functions, and logarithms. Prerequisite: Mathematics III (4.204 or equivalent).
- 1.281 Mathematics for Data Processing** (5 class hrs/wk) 5 credits
Basic logic, numeral system, algebra with emphasis on problem solving, numbers in bases other than ten, and Boolean Algebra. Prerequisite: Mathematics III (4.204 or equivalent).
- 6.135 Engineering Problems I** (2 class hrs/wk) 2 credits
Designed to meet the calculating needs of the technician in electronics, civil and structural engineering and technical drafting. Engineering methods and related problem solving will be considered. Prime emphasis on slide rule computation. Prerequisite: One year of high school algebra or equivalent.
- 6.136 Engineering Problems II** (2 class hrs/wk) 2 credits
Continuation of the slide rule and related problem solution. Other means of calculation will be related to problem solution in the technician's various fields. Problem solution will be structured in terms of analysis, formulation, calculation, and clear presentation. Prerequisite: Engineering problems I (6.135).
- 6.261 Technical Mathematics I** (4 class hrs/wk) 4 credits
Review of basic algebra and advanced work with functions, variation, systems of linear equations, exponents and radicals, and quadratic equations

82 Mathematics

in one unknown. Emphasis on problem solving. Prerequisite: Math III, or at least one year of high school algebra.

- 6.262 Technical Mathematics II** (4 class hrs/wk) 4 credits
Trigonometric ratios with applications, vectors, trigonometric functions, trigonometric identities and conditional equations, complex numbers with applications. Prerequisite: Technical Mathematics I, 6.261 or College Algebra, Mth 101.
- 6.266 Technical Mathematics III** (4 class hrs/wk) 4 credits
Basic analytic geometry, intuitive introduction to differential and integral calculus. Emphasis will be placed on the continued development of the student's understanding of functions and on applications to technical areas. Prerequisite: Technical Mathematics II, 6.262 or Trigonometry, Mth 102.
- 6.115 Electrical Mathematics** (4 class hrs/wk) 4 credits
Introductory calculus for electronics engineering technicians. Differentiation and integration of rational, trigonometric, and exponential functions. Prerequisite: Technical Mathematics III, 6.266 or equivalent.

COLLEGE TRANSFER COURSES

- Mth 10 Elementary Algebra** (4 class hrs/wk) Non-credit
Fundamental concepts of algebra including signed numbers, monomials, polynomials, linear equations and stated problems. Designed to qualify the student with little or no background in algebra for Mth 95. Placement may result from the cooperative tests given in Mth 95.
- Mth 95 Intermediate Algebra** (4 class hrs/wk) 4 credits
Basic algebraic concepts related to linear and quadratic equations, complex numbers, radicals, exponents and logarithms. No credit if taken after Mth 101 or any more advanced mathematics course. Not acceptable toward meeting science group requirements at the University of Oregon. Placement may result from cooperative tests given in Mth 101. Prerequisite: Mth 10, Mth III, or one year of high school algebra, preferable within the past 5 years.
- Mth 101 College Algebra** (4 class hrs/wk) 4 credits
Fundamental concepts of number systems, functions, linear equations, systems of linear equations, matrices, determinants, mathematical induction and logarithms. Prerequisite: Mth 95 or one and one-half years of high school algebra.
- Mth 102 Trigonometry** (4 class hrs/wk) 4 credits
Study and analysis of trigonometric functions and complex numbers, with topics in probability and theory of equations. Prerequisite: Mth 101.
- Mth 103 Introduction to Probability and Statistics** (4 class hrs/wk) 4 credits
Basic theory and applications of statistics. Measures of central tendency, variance, sampling methods, probability distributions, regression analysis, correlation, and analysis of variance. Prerequisite: Mth 101.
- Mth 106 Elementary Calculus** (4 class hrs/wk) 4 credits
A one term course in the elements of differential and integral calculus approached largely from an intuitive viewpoint. Electronic calculators and computers will be utilized to facilitate computations. Prerequisite: Mth 102 or Mth 103.
- Mth 107 Introduction to Linear Algebra** (4 class hrs/wk) 4 credits
Systems of linear equations, vectors in a geometric setting, real vector spaces, matrices and operations on matrices, equivalence of matrices, linear transformation and matrices, determinants, inverse of a matrix. Prerequisite: Mth 106, Mth 200, or consent of the instructor.

- Mth 191, 192, 193 Mathematics for Elementary Teachers** 3 credits each
Sequence of study in the basic concepts of mathematics for elementary teachers, or for anyone wishing a course in contemporary mathematics. Note: Although it is not required by the State of Oregon, it is highly recommended by most professional teacher education programs that the entire sequence of Mathematics for Elementary Teachers be taken.
- Mth 191** (3 class hrs/wk) 3 credits
Concepts of sets, functions, cardinal number system, exponential notation, division and systems of numeration.
- Mth 192** (3 class hrs/wk) 3 credits
Divisibility tests, prime numbers, fundamental theorem of arithmetic, rational and real numbers.
- Mth 193** (3 class hrs/wk) 3 credits
Geometry, ratio, proportion, per cent, graphs, simple algebra, logic and computational devices.
- Mth 200, 201, 202, 203 Calculus with Analytic Geometry** 4 credits each
Standard sequence for students in mathematics, science and engineering.
- Mth 200** (4 class hrs/wk) 4 credits
A careful development of the concepts of plane analytic geometry, limits and derivative. Theorems on differentiation and their applications. Prerequisite: Mth 102.
- Mth 201** (4 class hrs/wk) 4 credits
Development and analysis of definitions and theorems related to the definite integral with applications. Trigonometric review of lines, conics, and trigonometric and exponential functions. Prerequisite: Mth 200.
- Mth 202** (4 class hrs/wk) 4 credits
Parametric equations, polar coordinates, vectors, and methods of integration with applications. Prerequisite: Mth 201.
- Mth 203** (4 class hrs/wk) 4 credits
Solid analytic geometry, vectors in three dimensions, infinite series, partial differentiation, multiple integration and linear algebra. Prerequisite: Mth 202.
- Mth 233 & 6.268 Introduction to Numerical Computation**
(3 class hrs/wk) 3 credits
Computer use with emphasis on problem definition and problem analysis; use of flow charting techniques and the Fortran programming language. Prerequisite: Mth 101 or equivalent.

Mathematics

The program outlined below has been approved by the University of Oregon, Oregon State University, Portland State University, and Southern Oregon College for students who plan to transfer to a major program in mathematics. Students who complete Mth 203 by the end of the sophomore year may complete requirements for the baccalaureate degree with two additional years of work.

CURRICULUM

Freshman Year

	F	W	S
Wr 121 or 111, 112 English Composition and electives ¹	3	3	3
Literature sequence	3	3	3
Foreign Language (French, German, or Russian) (OSU)			
Biological science sequence (SOC)	3-4	3-4	3-4
Non-math science sequence (PSU)			
Non-math science or social science sequence (UO) ²			

84 Mechanics

Mathematics ²	4	4	4
Physical Education	1		1
Personal Health		2	
	<hr/> 14-15	<hr/> 15-16	<hr/> 14-15

Sophomore Year

	F ¹	W	S
Mathematics ²	4	4	4
Second-year foreign language (OSU)	4	4	4
Second science sequence (SOC)	4	4	4
Non-math science sequence (PSU)	3-4	3-4	3-4
Social Science sequence ^{3, 4}	3	3	3
Physical Education	1	1	1
Wr 222 English Composition and/or electives to bring total hours to 93 ⁵	3-4	3-4	3-4
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

Total: 93 hours

¹Students transferring to SOC should complete their electives with Sp 111, Mus 201, Phl 201, or Art 201.

²University of Oregon planning to continue with graduate study should complete 2 years of a foreign language (French, German, or Russian) instead of the non-math science and social science sequences indicated for the freshman and sophomore years.

³Students should enroll in mathematics at the level indicated in placement examinations. Students ready to begin calculus fall term of the freshman year should transfer to a major institution for their sophomore year of work. Since Oregon State University courses equivalent to Mth 95 Intermediate Algebra, Mth 101 College Algebra, and Mth 102 Trigonometry offer only 2 hours credit each, students who transfer these courses to Oregon State University may find only 2 hours credit for each course will be applied toward meeting departmental requirements in mathematics.

⁴Students transferring to Southern Oregon College should take Hst 201, 202, 203 History of the United States or PS 201, 202, 203 American Governments. Students transferring to University of Oregon should take a non-math science sequence if social science sequence is completed during the freshman year.

⁵Students preparing to become secondary teachers should complete Psy 201, 202 General Psychology.

Mechanics

Chairman: Melvin C. Gaskill

Faculty: Lawrence L. Davis, Donald Dickinson, Howard Dull, German C. M. Ellsworth, Don Greenlund, John Haurigan, Daryl A. Jossart, Carl Lemke, George Luck, Robert D. Maxwell, Roland Meyer, Henry Naessens, John Neely, Paul Patrick, Herb Pruett, Marvin Winger.

Agricultural and Industrial Equipment Technology

TWO YEAR ASSOCIATE DEGREE

Students are trained to repair agricultural and light industrial equipment. Since equipment is increasing in size, cost and complexity, few are skilled in this specialty and jobs are abundant. Wages begin at about \$2.50 per hour; journeyman get \$3.50 to \$4.

The program has 20 vacancies yearly. An agricultural background and interest in mechanics are helpful. Special costs include: Books \$25, tools \$100, welding fee \$10.

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Farm Implement I, II, III	5-5	5-5	2-2
Farm Implement I, II, III Lab	10-3	10-3	6-2
Mathematics II	3-3		
Machine Shop Orientation	5-3		
Welding IA	5-2		
Practical Physics II, III		5-4	5-4
Machine Tool Operation		5-3	
Internal Combustion Engines I		2-2	
Internal Combustion Engines I Lab		3-1	
Applied Fluid Mechanics			2-2
Power Trains			2-2
Power Trains Lab			6-2
Fuel Systems, Farm Equipment			6-4
	28-16	30-18	29-18

*H-hours, C-credits

Agriculture and industrial equipment technology work experience fills the summer between the first and second years. It carries 30 class/lab hours and 10 credits. Regular tuition must be paid if credits are to be earned.

Second Year	F H-C	W H-C	S H-C
Farm Equipment Electrical System	6-4		
Farm Equipment Engines	5-5		
Farm Equipment Engines Labs	10-3		
Communications Skills I, II	3-3	3-3	
Hydraulics, Heavy Equipment	5-3		
Farm Equipment Hydraulics I, II		5-3	5-3
Farm Equipment Power Trains		5-3	
Crawler Tractors		5-5	
Crawler Tractors Lab		10-3	
Farm Equipment Service Management			3-3
Farm Equipment Painting			5-2
Tractor, Major Overhaul			15-7
Elective (General Ed.)			3-3
	29-18	28-17	31-18

COURSES

- 8.101 Farm Implement** (5 class hrs/wk) 5 credits
The farm equipment industry; history, developments of the industry, and job requirements; Tillage equipment: plows, harrows, cultivators, rollers, and carriers.
- 8.102 Farm Implement I Lab** (10 lab hrs/wk) 3 credits
Development of skill in adjusting, maintaining, repairing, and in-the-field operation of tillage equipment.
- 8.103 Farm Implement II** (5 class hrs/wk) 5 credits
Instruction in the use of Operator's Manual when assembling, adjusting, maintaining, repairing of seeding, fertilizing, and spraying equipment. Prerequisite: Farm Implement I, 8.101.
- 8.104 Farm Implement II Lab** (10 lab hrs/wk) 3 credits
Practice in assembling, adjusting, lubricating, and repairing of seeding, fertilizing, and spray equipment. To be taken concurrently with Farm Implement II.
- 8.105 Farm Implement III** (2 class hrs/wk) 2 credits
Use of the Operator's Manual when adjusting, maintaining, assembling, and repairing harvest equipment. Prerequisite: Farm Implement II, 8.103.
- 8.106 Farm Implement III Lab** (6 lab hrs/wk) 2 credits
Practice in adjusting, maintaining, assembling, and repairing harvesting equipment. To be taken concurrently with Farm Implement III, 8.105.

86 Mechanics

- 8.107 Fuel Systems, Farm Equipment** (3 class, 3 lab hrs/wk) 4 credits
Kinds, repairing, assembling of fuel systems in agricultural machinery. Prerequisite: Internal Combustion Engines I, 3.304.
- 8.109 Farm Equipment Electrical Systems** (3 class, 3 lab hrs/wk) 4 credits
Principles of the tractor electrical system, locating and correcting troubles in the electrical system. Prerequisite: Practical Physics III, 4.304.
- 8.111 Farm Equipment Engines** (5 class hrs/wk) 5 credits
Farm motors other than tractors. Prerequisite: Internal Combustion Engines I, 3.304.
- 8.112 Farm Equipment Engines Lab** (10 lab hrs/wk) 3 credits
Adjustment, maintenance, and repair of small engines. To be taken concurrently with Farm Equipment Engines, 8.111.
- 8.113 Farm Equipment Hydraulics I** (2 class, 3 lab hrs/wk) 3 credits
Basic hydraulics and its application to agricultural machinery. Prerequisite: Hydraulic Heavy Equipment, 3.353.
- 8.115 Farm Equipment Hydraulics II** (2 class, 3 lab hrs/wk) 3 credits
Assembling, servicing, and repairing hydraulic units. Prerequisite: Farm Equipment Hydraulics I, 8.113.
- 8.117 Farm Equipment Power Trains** (2 class, 3 lab hrs/wk) 3 credits
Instruction in assembling, and repairing of different types of power trains in tractors.
- 8.121 Crawler Tractors** (5 class hrs/wk) 5 credits
Understanding and use of the Operator's Manual for Crawler Tractors; various kinds and types of Crawler tractors. Prerequisite: Completion, first year of Farm Equipment Service Curriculum.
- 8.122 Crawler Tractors Lab** (10 lab hrs/wk) 3 credits
Instruction in assembling, adjusting, and repairing tracks and steering clutches of the Crawler tractor. To be taken concurrently with Crawler Tractors, 8.121.
- 8.123 Tractor, Major Overhaul** (3 class hrs, 12 lab hrs/wk) 7 credits
Procedures in overhauling a tractor and the ability to disassemble, repair, reassemble, and tune the tractor for field conditions. Prerequisite: Final term standing in Agricultural & Industrial Equipment Technology.
- 8.131 Farm Equipment Painting** (1 class, 4 lab hrs/wk) 2 credits
Equipment cleaning and painting.
- 8.143 Farm Equipment Service Management** (3 class hrs/wk) 3 credits
Operating procedures of an agricultural machinery service department; function of a service employee. Prerequisite: Final term standing in Agricultural and Industrial Equipment.
- 8.145 Farm Equipment Service Work Experience** (30 class/lab hrs/wk) 10 credits
Students are placed at Farm Implement dealers for one summer to work as regular employees.
1. Student keeps records of jobs performed and experiences received.
2. Employer evaluates progress of student.
3. Instructor visits and evaluates student progress at regular intervals during the summer.
- 8.146 Internal Combustion Engines I** (2 class hrs/wk) 2 credits
- 8.147 Internal Combustion Engines Lab I** (3 lab hrs/wk) 1 credit
Principles of operation of various types of internal combustion engines and all components and accessories. Service and overhaul techniques. Engine and accessory component functions. Prerequisite: Practical Physics I taken concurrently.
- 8.148 Applied Fluid Mechanics** (2 class hrs/wk) 2 credits
Practical uses of hydraulic power transmission and application. Fundamental principles are reviewed and the uses of Hydraulic pressure and

fluid flow in brakes, pumps, power steering units, fluid couplings, torque converters, and power accessories are covered thoroughly. Prerequisite: Practical Physics I, II.

8.149 Power Trains (2 class hrs/wk) 2 credits

8.150 Power Trains Lab (6 lab hrs/wk) 2 credits

All components of the power train, including clutch, standard and over-drive type transmissions, drive line, and final drive. Prerequisite: Automotive Chassis I or equivalent.

8.151 Hydraulics, Heavy Equipment (2 class, 3 lab hrs/wk) 3 credits

Principles of hydraulics in power transmission as used on heavy duty equipment. Basic principles of hydraulics and the trouble shooting, servicing, and overhauling of hydraulic system components. Prerequisite: Sixth-term standing.

Airframe and Powerplant Mechanics

The Airframe and Powerplant curriculum is being revised. Please discuss enrollment into the program with a counselor.

Auto Body and Fender/Auto Painting

TWO YEAR ASSOCIATE DEGREE PROGRAM

Training is given in all phases of auto body and fender repair and painting. A broad understanding and background is provided in the various phases of auto body and fender and painting through class instruction and shop practice. Special costs include: Tools \$95, welding fee \$10.

Entry jobs for employment in this field are available in bodyshops, at auto sales and service departments, and specialty auto body and fender repair and paint shops. Increasing numbers of auto makes and models and traffic congestion have caused an ever-increasing demand for qualified auto body and fender repairmen. Beginners earn \$1.50 to \$2 per hour; journeymen get \$8,000 to \$9,000 per year.

This two-year program consists of one year of auto body metal work and one year of auto painting. Each course prepares the student for that specialty. To qualify for the associate degree, both one year courses must be completed.

CURRICULUM—Automotive Body and Fender

	F	W	S
	H-C*	H-C	H-C
Automotive Metal Work I, II, III	3-3	3-3	2-2
Automotive Metal Work I, II, III Lab	20-7	20-7	20-7
Welding IA, IIA, IB	5-2	5-2	5-2
Practical Physics II or	5-4		
General Physics 202	(6-4)		
Communications Skills I or II or WR 111 or 112		3-3	
Math II			3-3
or Math 95			5-4
Physical Education			3-1
	<hr/>	<hr/>	<hr/>
	33-16	31-15	33-15

*H-hours, C-credits

Recommended supporting courses: Collision Estimating, Automotive Materials, Blueprint Reading and Sketching, Applied Economics, Machine Shop Orientation, Health Education, Automotive Service Management, and Welding IIB.

For those intending to take two years to earn an associate degree, Communications Skills I and II or English Composition WR 111 and 112, and Math II or Math 95 are required. Second year students should take a recommended supporting course if they have completed the math requirement the first year.

88 Mechanics

CURRICULUM—Automotive Painting

	F	W	S
	H-C*	H-C	H-C
Automotive Painting I, II, III	3-3	3-3	3-3
Automotive Painting I, II, III Lab	20-7	20-7	20-7
Practical Physics II	5-4		
or General Physics 201	(6-4)		
Mathematics II	3-3		
or Mathematics 95	(5-4)		
Communications Skills I or II or WR 111 or 112		3-3	
Employer-Employee Relations			2-2
Health Education		2-2	
Applied Economics			3-3
	<hr/> 31-17	<hr/> 28-15	<hr/> 28-15

*H-hours, C-credits

Recommended Supporting Courses: Automotive Materials, Blueprint Reading and Sketching, Machine Shop Orientation, Automotive Service Management, Welding IA, Welding IB, Welding IIA, and Welding IIB.

COURSES

- 3.238 Automotive Painting I** (3 class hrs/wk) 3 credits
Instruction on materials and equipment used in preparation of auto body for refinishing.
- 3.239 Automotive Painting I Lab** (20 lab hrs/wk) 7 credits
Provides shop practice in mixing primers and color; spray gun adjusting and cleaning; preparing metal for painting; painting with lacquer type products; and rubbing and cleaning. Prerequisite: To be taken concurrently with Automotive Painting I.
- 3.240 Automotive Painting II** (3 class hrs/wk) 3 credits
Matching colors and the use of color charts. Complete refinishing instructions. Prerequisite: Automotive Painting I.
- 3.241 Automotive Painting II Lab** (20 lab hrs/wk) 7 credits
Shop practice in all phases of lacquer type painting and preparation, and general production work. Prerequisite: To be taken concurrently with Automotive Painting II.
- 3.243 Automotive Painting III** (3 class hrs/wk) 3 credits
Preparing a car for complete painting; spraying with enamel; special enamel finishes; interior refinishing; auto clean-up after painting; preparing car for delivery to customer. Prerequisite: Automotive Painting II.
- 3.244 Automotive Painting III Lab** (20 lab hrs/wk) 7 credits
Shop practice in preparing car for painting with enamel; interior painting detailing; and preparing car for delivery to customer. Prerequisite: To be taken concurrently with Automotive Painting III.
- 3.248 Automotive Metal Work I** (3 class hrs/wk) 3 credits
History and development in auto body and frame construction and types of auto bodies and frames. Fundamentals of metal work. Removal, repair and replacement of hardware, glass and trim; sealing for water and dust leaks.
- 3.249 Automotive Metal Work I Lab** (20 lab hrs/wk) 7 credits
Shop practice in straightening metal damage; door assembly and alignment; fender, hood, and deck lid replacement; removal and replacement of glass; and seal for dust and water leaks. Prerequisite: To be taken concurrently with Automotive Metal Work I and Welding IA.
- 3.250 Automotive Metal Work II** (3 class hrs/wk) 3 credits
Body, fender and panel major repair. Prerequisite: Automotive Metal Work I.

- 3.251 Automotive Metal Work II Lab** (20 lab hrs/wk) 7 credits
Provides shop practice on major front end repair; major rear end damage, and damages resulting from side swipe. Prerequisite: To be taken concurrently with Automotive Metal Work II.
- 3.252 Automotive Metal Work III** (2 class hrs/wk) 2 credits
Methods and procedures for repair of extensive damage to cars involving body structural members; frame measuring and alignment; fitting and placing of panels. Prerequisite: Automotive Metal Work II.
- 3.253 Automotive Metal Work III Lab** (20 lab hrs/wk) 7 credits
Provides shop practice in repairing extensive damage; frame repair, superstructure alignment, major body replacements, and general production. Prerequisite: To be taken concurrently with Automotive Metal Work III.
- 3.245 Automotive Service Management** (2 class hrs/wk) 2 credits
Duties and responsibilities of the service manager. Methods of organizing service personnel, shop facilities, and an instruction to shop layout and buildings. Appreciation of good relationship with customers, labor and management groups and individuals.
- 3.246 Collision Estimating** (2 class, 3 lab hrs/wk) 3 credits
Estimating over-all cost for parts, labor, fixing shop costs and profit on repair jobs. Preparation of insurance claim estimates and making out insurance claim forms. Prerequisite: Third-term standing.
- 3.247 Automotive Materials** (2 class hrs/wk) 2 credits
Use of iron, steel, aluminum and light alloys, copper and its alloys, plastics, fibers, rubber, and synthetics. Various body finishes.

Automotive and Diesel Technology

TWO YEAR CERTIFICATE PROGRAMS

TWO YEAR ASSOCIATE DEGREE AUTOMOTIVE TECHNOLOGY

TWO YEAR ASSOCIATE DEGREE DIESEL TECHNOLOGY

AUTOMOTIVE TECHNOLOGY

This training can lead to employment in entry occupations of the automotive service and repair field. Beginners usually earn from \$1.50 to \$2.00 an hour; journeymen get up to \$10,000 annually.

With an ever-expanding number of makes and models of autos, the demand for auto mechanics who have a broad background of course instruction and training is constantly increasing. Class vacancies total 100. Special costs include: Tools \$150, coveralls, books, and fees.

CURRICULUM—Automotive-Diesel Technology

First Year	F H-C*	W H-C	S H-C
Auto-Diesel I	8-8		
Auto-Diesel I Lab	15-5		
Welding IA	5-2		
Machine Shop Orientation	5-3		
Auto-Diesel II		8-8	
Auto-Diesel II Lab		15-5	
Welding IB		5-2	
Machine Tool Operation		5-3	
Auto-Diesel III			8-8
Auto-Diesel III Lab			15-5
Employer-Employee Relations			2-2
	33-18	33-18	25-15

90 Mechanics

*H-hours, C-credits

Auto Diesel I, II, III, and Labs are offered each term and need not be taken in sequence.

The following courses are required for students enrolled in Associate Degree in Auto Technology or Diesel Technology: Mathematics I; Physics I, II, III; Communications Skills I, II; and Health.

COURSES

3.300 Auto-Diesel I (8 class hrs/wk) 8 credits

3.301 Auto-Diesel I Lab (15 class hrs/wk) 5 credits

Internal Combustion Engines

This course covers the design, function, and operation of internal combustion engines. Lab work will include complete disassembly, inspection, repair, reassembly, and test of automotive engines.

Chassis

This course covers theory and laboratory experiences in suspension systems, steering geometry and alignment, brakes, wheel balancing, and miscellaneous components.

3.302 Auto-Diesel II (8 class hrs/wk) 8 credits

3.303 Auto-Diesel II Lab (15 class hrs/wk) 5 credits

Applied Fluids

The course covers the methods and uses of hydraulics as applied to all types of equipment including power steering, automatic transmissions, and braking systems. Basic principles of construction and design, testing and repairing hydraulic components will be covered by classroom and lab studies and work.

Power Trains

This is the study of operating principles, design, and construction of all automotive and light truck components. Included are clutches, transmissions, rear axle assemblies, gear reductions, and all types of power train applications. The lab work will consist of actual tear down and assembly of power train components.

3.304 Auto-Diesel III (8 class hrs/wk) 8 credits

3.305 Auto-Diesel III Lab (15 class hrs/wk) 5 credits

Electricity

Fundamental principles of electricity as used by the auto and heavy duty mechanic. The construction and function of all types of electrical components used in automotive equipment are studied in detail with the aid of demonstrations, cutaways and mockups. Students will diagnose minor problems in lighting, charging, starting, indicating and ignition systems. Students will diagnose problems using wiring diagrams and test instruments.

Fuel Systems and Carburetion

Principles of carburetion, fuel systems and fuels, and function of all types of fuel systems on automotive and heavy duty gasoline engines. Techniques and procedures for overhaul and service of carburetors and fuel system components including all types of single and multiple throat carburetors will be practiced. Diagnosis and testing procedures involving fuel systems are covered using standard automotive test instruments.

CURRICULUM—Automotive Technology Certificate Program

Second Year	F	W	S
	H-C	H-C	H-C
Auto Technology IV	8-8		
Auto Technology IV Lab	15-5		
Auto Technology V		8-8	
Auto Technology V Lab		15-5	
Auto Technology VI			8-8
Auto Technology VI Lab			15-5
	23-13	23-13	23-13

COURSES

3.306 Auto Technology IV (8 class hrs/wk) 8 credits

3.307 Auto Technology IV Lab (15 class hrs/wk) 5 credits

Tune-up and Diagnosis

Diagnosing malfunctions in the automotive engine and its accessory systems. Advanced testing of electrical and carburetion systems. Developing the ability to analyze the operation of engine accessories directly related to engine performance.

Auto Repair Estimating

Diagnosing and estimating of labor and material costs involved in the repair and service of automotive equipment. Emphasis on the use of typical manuals and price lists used in industry.

Automotive Overhaul

Complete inspection and analysis to determine repairs needed to recondition an automobile.

3.308 Auto Technology V (8 class hrs/wk) 8 Credits

3.309 Auto Technology V Lab (15 class hrs/wk) 5 credits

Automotive Fuels and Lubricants

Nature and origin of petroleum products, their manufacturing processes, uses and functions.

Automotive Repair

Development of additional abilities and understanding through diagnosis and repair of automotive equipment with emphasis on automotive electricity and power steering units.

3.310 Auto Technology VI (8 class hrs/wk) 8 Credits

3.311 Auto Technology VI Lab (15 class hrs/wk) 5 credits

Automatic Transmissions

Instruction in automatic transmissions, including principles of operation, trouble shooting and overhaul procedures on hydraulically operated transmissions, torque converters, and fluid couplings used with automatic transmissions common to the automotive field.

Auto Service Management

Duties and responsibilities of the service manager, methods of organizing service personnel, shop facilities, and instruction in shop layout and buildings. Appreciation of good relationship with customers, labor and management groups and individuals.

Auto Repair

Continuation of Auto Repair to develop further the student's abilities in diagnosis and repair of automotive units, with emphasis on automatic transmissions and tune-up procedures. Power accessories are serviced.

92 Mechanics

DIESEL TECHNOLOGY

Students are prepared for employment in entry occupations leading to jobs such as heavy duty mechanic, truck mechanic, tractor mechanic, fuel injection technician, and diesel tune-up technician. Beginning pay is \$3 an hour; journeymen get \$4.50 an hour.

Possible job opportunities are available with truck fleets, logging operations, heavy construction, factory diesel sales outlets, road construction contractors, parts sales and service outlets, general heavy equipment repair jobs, and automotive diesel service and repair. Special costs include tools and coveralls. Class vacancies total 40.

CURRICULUM—Diesel Technology Certificate Program

Second Year	F H-C	W H-C	S H-C
Diesel Technology IV	8-8		
Diesel Technology IV Lab	15-5		
Welding IIB	5-2		
Diesel Technology V		8-8	
Diesel Technology V Lab		15-5	
Diesel Technology VI			8-8
Diesel Technology VI Lab			15-5
	28-15	23-13	23-13

The following courses are required for students enrolled in Associate Degree in Auto Technology or Diesel Technology: Mathematics I; Physics I, II, and III; Communications Skills I and II; and Health.

COURSES

3.312 Diesel Technology IV (8 class hrs/wk) 8 Credits

3.313 Diesel Technology IV Lab (15 class hrs/wk) 5 Credits

Fuel Injection

Diesel fuel systems, fuel-oil transfer pumps, injection systems, fuel injection pumps, and nozzles.

Service and repair of injection equipment. Safety and proper handling of fuel injection equipment and testing equipment. The principles, specifications, installations, adjustments, and maintenance of various types of nozzles.

Diesel Tune Up and Diagnosis

Various troubles encountered in tune-up and diagnosis of diesel engines with emphasis on accurate and systematic procedures.

3.314 Diesel Technology V (8 class hrs/wk) 8 Credits

3.315 Diesel Technology V Lab (15 class hrs/wk) 5 Credits

Auxiliary Systems

Specialized study in the areas of the cooling, fuel supply, lubrication, air intake, exhaust, and starting systems of typical diesel engines in use today. Starting aids, blowers, superchargers, governors, and compressors.

Hydraulics, Heavy Equipment

Principles of hydraulics in power transmission as used on heavy duty equipment. Basic principles of hydraulics and the trouble shooting, servicing, and overhauling of hydraulic system components.

Power Trains, Heavy Equipment

Developing skills in servicing, overhauling, and adjusting units in automotive, and heavy equipment power trains.

Automotive Service Management

Duties and responsibilities of the service manager. Methods of organizing service personnel, shop facilities, and instruction in shop layout and buildings. Appreciation of good relationship with customers, labor and management groups, and individuals.

3.316 Diesel Technology VI (8 class hrs/wk) 8 Credits

3.317 Diesel Technology VI Lab (15 class hrs/wk) 5 Credits

Diesel Engines

Types and construction of engines with emphasis on the fundamentals, also cooling and lubricating systems.

Valve operating mechanism, air intake systems, piston and connecting rod servicing, crankshaft servicing, cylinder and block servicing, engine performance superchargers and blowers, and hydraulic and mechanical governors.

Diesel Engine Repair (1)

Shop and/or laboratory course for development of additional abilities and understandings through the diagnosis and repair of operating diesel equipment and components. Overhaul and maintenance procedure and practices as they relate to the removal, disassembly, overhaul, reassembly, installation, and testing of component parts. Inspection, servicing, and repair of systems.

Insurance Adjusters**TWO YEAR ASSOCIATE DEGREE PROGRAM**

This course is designed to give training in all phases of Insurance Adjusting which includes industrial experience, statements, estimate writing, investigations, and settlements of claims.

Entry employment as adjuster would be with an independent adjusting firm or with an insurance company claims department. Starting pay ranges from \$6,500 to \$7,500 per year.

This two-year program consists of laboratory and related class work to prepare a student for employment as an insurance adjuster, automobile body man, or automotive painters helper.

A person considering this training must be a high school graduate, must be bondable, and have a good driving record.

CURRICULUM

First Year	F	W	S
	H-C*	H-C	H-C
Automotive Metals Work I, II, III	3-3	3-3	3-3
Automotive Metals Work I, II, III Lab	15-5	15-5	15-5
Communications Skills I	3-3		
Insurance Policies I, II, III	5-5	5-5	5-5
Welding IA	5-2		
Mathematics I		3-3	
Collision Estimating			3-2
Office Management Insurance Adjusters			3-3
	31-18	26-16	29-18

*H-Hours, C-credits

Second Year	F	W	S
	H-C	H-C	H-C
Automotive Painting for Insurance Adjusters	3-3		
Automotive Painting for Insurance Adjusters Lab	4-1		
Drafting for Insurance Adjusters	5-2		

94 Mechanics

Insurance Law	5-5		
Insurance Investigations I, II		5-5	5-5
Estimating Building Construction Cost		3-3	
Contracts & Specifications for Building Const.		2-2	
Fundamentals of Speech		3-3	
Insurance Settlements			3-3
Estimating Auto Body Damages			5-3
Automotive Mechanics for Estimators			5-3
	17-11	13-13	18-14

NOTE: Students enrolled in the Associate Degree Program will need the following courses: Communications Skills II or English Wr 111; Health; Applied Economics; and Fundamentals of Speech 112.

COURSES

- 3.325 Insurance Policies I** (5 class hrs/wk) 5 Credits
A detailed treatment of the reading and interpretation of insurance policies. This course will deal with the theory of policies in general and will offer specific treatment of auto policies.
- 3.326 Insurance Policies II** (5 class hrs/wk) 5 Credits
A detailed treatment of the reading and interpretation of insurance policies. This course will deal with the theory of policies and will offer specific treatment of standard fire policies.
- 3.327 Insurance Policies III** (5 class hrs/wk) 5 Credits
Specific interpretation of standard and deluxe home-owners policy. The course covers the dwelling, contents, and personal liability divisions of the policy. The commercial portion of the course will acquaint the student with the most common forms used by the industry. Prerequisite: Insurance Policies I and II.
- 3.328 Automotive Painting for Insurance Adjusters** (3 class hrs/wk) 3 Credits
This is planned as a one-term program to prepare the student to have a general background of spray equipment, paint products, paint applications, spray-painting terminology, and paint problems.
- 3.329 Automotive Painting for Insurance Adjusters Lab**
(4 lab hrs/wk) 1 credit
Provides shop experience, in the use of spray equipment, preparing a paint surface, and spraying; primer surfaces, color and the use of compounds. Diagnosis of paint damages and corrections.
- 3.330 Drafting for Insurance Adjusters** (5 lab hrs/wk) 2 Credits
This is a course in practical drafting, sketching and interpretation of architectural drawing as related to home building plans and other related building projects including structural details, materials and drawing practices in common usage.
- 3.331 Insurance Law** (5 class hrs/wk) 5 Credits
A review of the applications of tort law and its pertinence to insurance claims. Covers the elements of tort law, the modifications of the basic doctrines of tort and negligence and the principles affecting the application of tort law and the laws applicable to negligence.
- 3.332 Insurance Investigation I** (5 class hrs/wk) 5 Credits
An introduction to the fundamentals of investigation. The course teaches the proper approach prior to the interview. It includes written statements, telephone reports, and use of a recorder in statement taking.
- 3.333 Estimating Building Costs** (3 class hrs/wk) 3 Credits
This is a course in practical estimating of building construction costs, the use of ordinary mathematics, the development of skill in the analysis of computing quantities, labor and overhead costs. Equipment owning and operating cost in remodeling and repairing existing buildings including residence and commercial building.

3.334 Contracts and Specifications for Building Construction

(2 class hrs/wk) 2 Credits

To relate plans and costs with contracts and specifications. To provide the student with a writing skill as it relates to field work, out of town, on-the-spot negotiations necessary to get the damaged buildings repaired.

3.335 Insurance Settlements: How to Conclude a Loss

(3 class hrs/wk) 3 Credits

Instruction in dealing with insureds and claimants. The course will deal with the role of management, supervisors, and the adjuster in final settlements.

3.336 Estimating Auto Body Damages (2 class, 3 lab hrs/wk)

3 Credits

Instruction and practice in estimating minor and major body damage; estimate procedures; use of flat-rate manual in estimating labor and parts, and preparing damage estimates for insurance companies and auto agencies.

3.337 Automotive Mechanics for Estimators (2 class, 3 lab hrs/wk)

3 Credits

This course in Auto Mechanics gives instruction in fundamentals of automobile engines, power trains, and chassis. It is designed to give the student a knowledge of the structure of the vehicle and the terminology involved with the parts. The use of service manuals and flat-rate charts will be stressed throughout the course. This will be a combination lab and classroom experience to give the student practical application of theory developed in the classroom.

3.338 Insurance Investigation II (5 class hrs/wk)

5 Credits

This course covers the use and value of photography as evidence in the adjustment of losses, the making of diagrams to show how an event occurred, and techniques of reporting the results of investigation to the file in a logical manner. Prerequisite: Insurance Investigation I.

2.517 Office Management for Insurance Adjusters (3 class hrs/wk)

3 Credits

The objective of this course is to provide insurance adjusters with a basic understanding of office equipment capabilities and limitations. It will combine basic mathematics with application on calculating machines to accounting and appraisal problems. The general function of the business machine and an understanding of their application will be stressed. The student will become familiar with the use of transcribing equipment for dictation. Practice in planning layout and the duplication of materials on various machines, such as the offset printer, ditto and mimeograph machines, will be presented. The rules and principles of indexing, filing, establishing and maintaining a filing system will be presented.

Machine Shop

TWO YEAR ASSOCIATE DEGREE PROGRAM

Basic principles and fundamentals are taught in machine and related metal work. Class instruction in theory is combined with shop practice. Students prepare for entrance occupations in machine shop or related industries. Class vacancies total 30. Special costs include: Tools, \$85; books, \$35; welding fee, \$40. Opportunities for employment are found in the machine repair and maintenance shops, metal working plants, repair and maintenance shops for mill and construction contractors, and specialty machine shops. Local beginning pay is \$3 an hour; journeymen earn \$3.90 an hour.

96 Mechanics

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Machine Shop I, II, III	3-3	3-3	3-3
Machine Shop I, II, III Lab	12-4	12-4	12-4
Practical Physics I, II, III	5-4	5-4	5-4
Drafting I, II	4-2	4-2	
Mathematics II	3-3		
Welding IA and IB		5-2	5-2
Applied Economics			3-3
	<hr/> 27-16	<hr/> 29-15	<hr/> 28-16

*H-hours, C-credits

Second Year	F H-C	W H-C	S H-C
Machine Shop IV, V, VI	3-3	3-3	3-3
Machine Shop IV, V, VI Lab	12-4	12-4	12-4
Communications Skills I, II	3-3		3-3
Welding IIA, IIB	5-2		5-2
Introduction to Specifications	3-3		
Mathematics III		3-3	
Project Drafting		10-4	
Health Education			2-2
Employer-Employee Relations			2-2
	<hr/> 26-15	<hr/> 28-14	<hr/> 27-16

COURSES

- 3.380 Machine Shop I** (3 class hrs/wk) 3 credits
- 3.381 Machine Shop I Lab** (12 lab hrs/wk) 4 credits
Fundamentals and workable knowledge of industrial processes and machines required of the machinist. Basic fundamentals of layout and machining metal by drilling, turning, and boring, milling, grinding, shaping, planing, and slotting. Use and maintenance of machinist hand tools and safety practices.
- 3.382 Machine Shop II** (3 class hrs/wk) 3 credits
- 3.383 Machine Shop II Lab** (12 lab hrs/wk) 4 credits
Use, operation, and maintenance of the machine lathe. Tool grinding, drilling, straight turning, taper turning, boring, internal and external thread cutting, and facing cuts. Prerequisite: Machine Shop I.
- 3.384 Machine Shop III** (3 class hrs/wk) 3 credits
- 3.385 Machine Shop III Lab** (12 lab hrs/wk) 4 credits
Varied uses of lathe in precision work. Methods and procedures for machining on face plate. Prerequisite: Machine Shop II.
- 3.386 Machine Shop IV** (3 class hrs/wk) 3 credits
- 3.387 Machine Shop IV Lab** (12 lab hrs/wk) 4 credits
Use and setup of machine shop shapers and planers; calculation of cutting speeds and feed rate for different metals; use of hand devices, fixtures, and vises. Cuts and slotting, joining. Prerequisite: Machine Shop III.
- 3.388 Machine Shop V** (3 class hrs/wk) 3 credits
- 3.389 Machine Shop V Lab** (12 lab hrs/wk) 4 credits
Different types of milling machines, their uses, maintenance, and proper safety precautions. Cutters and cutter holding devices, and speeds for feeds of cutters. Prerequisite: Machine Shop IV.
- 3.390 Machine Shop VI** (3 class hrs/wk) 3 credits

- 3.391 Machine Shop VI Lab** (12 lab hrs/wk) 4 credits
Theory of spur gears, chain sprockets and driver, bearings, bronze anti-friction and babbit, hydraulic power transmission, cylinders and control valves. Layout, matching, and assembly of simple machines. Prerequisite: Machine Shop V.
- 3.392 Machine Shop Orientation** (2 class, 3 lab hrs/wk) 3 credits
Various machine shop tools and their use. Setup and operation of machine shop.
- 3.393 Machine Tool Operation** (2 class, 3 lab hrs/wk) 3 credits
Basic machine shop practice with drill press, lathe, and grinder that a person may need to know to set up and operate in certain fields other than the machinist's trade.

Nursing

Director: Mary C. Fiorentino

Faculty: Evelyn Alford, Sheila Gardipee, Patricia Green, Janice Kinman, Alice McCarthy, Margaret Milne, Ann Newton, Arlene Underhill.

Nursing, Associate Degree

TWO YEAR PROGRAM

The program prepares beginning practitioners for performing general nursing care under qualified supervision. Both general and specialized content in approximately equal amounts is taught throughout the program to assist the student to develop as a person, as a citizen and as a nurse. Graduates earn an Associate Degree in Nursing and are eligible to write the State Board Test Pool Examination for licensure as registered nurses.

The Associate Degree nurse performs under the supervision of a physician and/or qualified superordinant and assists in planning the nursing care of patients, applying appropriate nursing measures, and evaluating the results of the care given. She/he assists others with less preparation to perform the technical aspects of nursing care and functions with a high degree of skill based upon knowledge of principles derived from the life and behavioral sciences.

Admission to Program

Candidates must make application and be accepted as regular College students according to the admission procedures outlined in the Catalog.

The applicant must be a high school graduate or have successfully completed the General Development Test (G.E.D.), satisfactory completion of a pre-entrance examination (college-level Sequential Test of Educational Progress), a personal interview and three letters of reference are required. A report of satisfactory physical and mental health is required prior to acceptance. A background in high school chemistry or chemistry 101 and 102 within the past five years is a pre-entrance requirement.

98 Nursing

CURRICULUM

First Year	F H-C	W H-C	S H-C
Human Anatomy & Physiology I, II	6-4	6-4	
Applied Physics II, III		6-4	6-4
General Psychology 201, 202	3-3	3-3	
Human Development & Individual Differences			3-3
Elementary Microbiology			6-4
Nursing Fundamentals I, II	10-6	13-7	
Maternal & Infant Health Nursing			17-9
Nutrition 225	3-3		
	<hr/> 22-16	<hr/> 28-18	<hr/> 32-17
Second Year	F H-C	W H-C	S H-C
Physical & Mental Illness I, II, III, IV	16-10	16-8	16-8
Survey of Nursing I, II	1-1		2-2
Community Health 251		3-3	
English Lit 101 or World Lit 107	3-3		
Writing 111		3-3	
Speech 111			3-3
Electives		3-3	3-3
Physical Education (1 Cr. taken any quarter)		3-1	
	<hr/> 20-14	<hr/> 28-18	<hr/> 24-16
C-Credits			
H-Total Number Theory and Laboratory Hours			

COURSES

- 5.607 Nursing Fundamentals I** (4 class hrs/wk) 4 credits
- 5.608 Nursing Fundamentals I Lab** (6 lab hrs/wk) 2 credits
Utilized principles derived from the physical and social sciences as a basis for presenting foundations for nursing intervention. The major concepts of nutrition, asepsis, pharmacology, safety, communication, and maintaining the individuality of man serve as connecting threads upon which to build more complex knowledge. Mental health concepts are stressed and integrated throughout.
- 5.610 Nursing Fundamentals II** (4 class hrs/wk) 4 Credits
- 5.611 Nursing Fundamentals II Lab** (9 lab hrs/wk) 3 Credits
A continuation of Nursing Fundamentals I which builds the basic foundation for nursing.
- 5.612 Maternal & Infant Health Nursing** (5 class hrs/wk) 5 Credits
- 5.613 Maternal & Infant Health Nursing Lab** (12 lab hrs/wk) 4 Credits
Builds upon concepts of normal behavior and personality development to form the basis for a study of the family unit during the pregnancy cycle and the development of the fetus from conception through adolescence. Emphasis is placed on child, family and nurse relationships as they influence the hospitalized child. Maternal complications and common disorders of infancy are considered in relation to their implications for nursing.
- 5.614 Physical & Mental Illness I** (6 weeks) (6 class hrs/wk) 3 Credits
- 5.615 Physical & Mental Illness I Lab** (6 weeks) (15 lab hrs/wk) 3 Credits
Presents mental health principles and concepts and their application to the care of the mentally ill. Therapeutic, rehabilitative and preventive health measures are incorporated.
- 5.616 Physical & Mental Illness II** (6 weeks) (6 class hrs/wk) 3 Credits

- 5.617 Physical & Mental Illness II Lab** (6 weeks) (6 lab hrs/wk) 1 Credit
Presents major alterations in normal physiology as the basis for medical-surgical conditions. The student moves from integration and application of knowledge and skills utilized in nursing the patient a single medical or surgical condition to those necessary to nurse the patient with a life threatening condition and/or multiple injuries.
- 5.618 Physical & Mental Illness III** (4 class hrs/12 lab hrs/wk) 8 Credits
- 5.619 Physical & Mental Illness III Lab**
- 5.621 Physical & Mental Illness IV** (4 class hrs/ 12 lab hrs/wk) 8 Credits
- 5.622 Physical & Mental Illness IV Lab**
A continuation of Physical & Mental Illness II. Mental health concepts and principles will continue to be integrated throughout.
- 5.609 Survey of Nursing I** (1 class hr/wk) 1 Credit
Major historical events which influenced the progress of nursing and the contributions made by selected leaders in the nursing field during specific periods of history.
- 5.620 Survey of Nursing II** (2 class hrs/wk) 2 Credits
Seminar discussion will focus responsibilities of new graduates, opportunities for employment, nursing organizations, legislation and legal responsibilities of the nurse.

For Course Descriptions of the following refer to indicated department:

Applied Physics for Nurses I, II	Science
Anatomy and Physiology	Science
Microbiology	Science
General Psychology	Social Science
Community Health	Health and Physical Education
Literature, Writing, Speech	Language Arts
Human Development and Individual Differences	Social Science
Nutrition	Home Economics

Nursing, Practical

ONE YEAR PROGRAM

This program prepares men and women to participate in the care of the sick, in rehabilitation, and in the prevention of illness.

The practical nurse as a nursing assistant works under the guidance of a physician and/or registered nurse. According to assignment she will apply selected nursing measures to meet the patients' basic physical needs of hygiene, comfort, safety, nutrition and elimination in a relatively stable, clinical situation. The practical nurse will assist in the more complex nursing situations by preparing equipment, supplies and the physical environment and by helping the registered nurse perform nursing measures. She will utilize knowledge of fundamental social and psychological concepts to identify significant patient responses and communicate such responses to the appropriate personnel.

Admission to the Program

Candidates must make application and be accepted as regular College students according to the admission procedure outlined in the catalog.

Applicants to this program are required to submit a high school transcript or have satisfactorily completed the equivalency test (G.E.D.). They must be in good physical and mental health as determined by a doctor's examination. A pre-entrance test, a personal interview, and three letters of reference will be required. Applicants will be selected on the basis of the above.

100 Nursing

CURRICULUM

	F	W	S	S
	H-C	H-C	H-C	H-C
Fundamentals of Nursing	18-10			
Physical Science I, II	5-4	4-3		
Maternal-Child Nursing		20-10		
History & Trends of Practical Nursing			1-1	1-1
Conditions of Illness I, II			22-12	30-9
Communication Skills II	3-3			
Human Relations 1.608		3-3		
First Aid He 252			3-3	
	26-17	27-16	26-16	31-10
C-Credit Hours				
H-Total Hours Per Week in Theory and Clinical Lab				
Summer Quarter Credits computed on an 8 week period				

COURSES

- 5.500 Fundamentals of Nursing** (6 class hrs/wk) 6 Credits
- 5.501 Fundamentals of Nursing Lab** (12 lab hrs/wk) 4 Credits
Introduces basic human needs of hygiene, comfort and safety, nutrition and elimination. Fundamental physical, social and emotional concepts, as applied to self and others, are correlated with clinical practice. Focus is on identification of patients' needs arrived at through observation and application of a problem solving approach. Therapeutic measures based upon nursing principles appropriate to this level of practitioner are applied to uncomplicated conditions of illness.
- 5.503 Maternal-Child Health Nursing** (5 class hrs/wk) 5 Credits
- 5.504 Maternal-Child Health Nursing Lab** (15 lab hrs/wk) 5 Credits
Fundamental physical, emotional and community health concepts will be applied to the nursing care of the family throughout the normal process of pregnancy and childbirth and to the newborn infant and child. Selected concepts of nutrition and pharmacology will be integrated. Laboratory experiences will be selected to help the students make application of theoretical concept.
- 5.505 Conditions of Illness I** (7 hrs lec/15 hrs lab) 12 Credits
- 5.506 Conditions of Illness I Lab**
- 5.507 Conditions of Illness II** (6 hrs lec/ 24 hrs lab) 9 Credits
- 5.508 Conditions of Illness II Lab** (Summer Quarter— $\frac{2}{3}$ total credits)
Theory and application of selected supportive, therapeutic, and rehabilitative measures during disease and injury. Selected concepts of nutrition and pharmacology will be integrated throughout the two quarters.
- 5.510 Physical Science I** (4 hrs lec/ 1 hr lab per wk) 4 Credits
- 5.511 Physical Science I Lab**
- 5.512 Physical Science II** (3 hrs lec/1 hr lab per wk) 3 Credits
- 5.513 Physical Science II Lab**
A two-quarter course which identify selected fundamental concepts of microbiology, chemistry, physics, anatomy and physiology.
- 5.502 History and Trends of Practical Nursing I** (1 hr lec/wk) 1 Credit
- 5.509 History and Trends of Practical Nursing II** (1 hr lec/wk) 1 Credit
Major historical events which influenced the progress of Practical Nursing. Current nursing trends, community health agencies, membership in nursing organizations, licensure, and job opportunities and responsibilities are presented during the two quarters.

For course descriptions of the following refer to indicated department.

Communication Skills 1.102	Language Arts
Human Relations I 1.608	Language Arts
First Aid He 252	Health & Physical Education

Nursing, Assistant

A one-term program designed to prepare nurse aides to work in: 1) hospitals, 2) nursing homes, or 3) home health agencies.

This program will be offered as needed. For information inquire at the Nursing Department.

CURRICULUM

Philosophy of Health Agencies
 Social and Psychological Needs of the Ill
 Foods and Nutrition
 Accident Prevention and First Aid—Health Measures
 Basic Nursing Skills—Daily living Activities
 Rehabilitation
 Cleaning and Care Tasks of Home and Health Agencies
 Hospital and Nursing Home Physical Environment Tasks
 Job Application Procedures

Nursing, Preprofessional

(Preprofessional Transfer Curriculum)

A four-year curriculum leading to a Baccalaureate Degree in Nursing generally includes the following specific requirements.

Freshman Year

	F	W	S
Wr 121, 222 or 111, 112, 113 English Composition	3	3	0-3
Ch 101, 102, 103, Ch 104, 105, 106 or Ch 201, 202, 203 General Chemistry	3-5	3-4	3-4
Literature Sequence ¹	3	3	3
Social Science Sequence ²	3	3	3
HEc 225 Nutrition	2-3		
Sp 111 Fundamentals of Speech			3
Physical Education ³	1	1	1
Elective (Social Science recommended)		3	0-3
	<hr/> 16-18	<hr/> 16-17	<hr/> 13-17

Total: 45-51 Hours

The requirements for the Freshman Year may be completed at Lane Community College. The student is advised to contact early the four year program of their choice to discuss the program and fulfill requirements to admission.

For further details contact the Nursing Department, Lane Community College.

Paradental-Paramedical

Director: John P. Dickson

Faculty: Becky Armstrong, James Bennett, Steven Bennett, Marie Bell, Vicki Bradford, Jack Dunham, Werner Fraenkel, Helen Franz, Jeanne Fox, E. D. Furrer, Foster Keene, Howard Kubler, Jack Mitchum, Muriel Peterson, Ray Rickett, Terry Strong, Elaine Taylor, Dale Tobin, Ron Tyvan.

Dental Assistant

ONE YEAR PROGRAM

The dental assistant's responsibilities are three-fold: She serves as a receptionist-secretary-bookkeeper, a technical or chairside assistant, and in some offices may complete some laboratory procedures. This program prepares its graduates for employment in private or group practice, with emphasis on modern concepts of chairside assisting and "four-handed" dentistry. The course is fully accredited by the American Dental Association's Council on Dental Education. Satisfactory completion of the course fulfills the education requirement for dental assistant certification, and graduating students are eligible to take the Certification Examination administered by the Certifying Board of the American Dental Assistants Association. Those who complete this examination successfully may become certified upon fulfilling the employment and membership requirements of the Board.

Oregon Law requires dental assistants who expose dental x-rays to hold a Certificate of Radiological Proficiency. The Oral Roentgenology class prepares students for the Radiological Proficiency Examination. Adult Education classes are held each year in Oral Roentgenology for employed dental assistants.

The dental assisting program includes basic health sciences, oral anatomy and pathology, radiographic techniques, fundamentals of chairside assisting, basic office record keeping, and supervised clinical experience. Concepts of oral health service, psychological considerations in patient treatment, and an understanding of auxiliary personnel's professional responsibilities are an integral part of the program.

The program accepts one class per year, beginning fall term. Class size is limited. Applicants are asked to take an aptitude test and appear for a personal interview. Books, special clothing and miscellaneous costs total approximately \$215 for the year. Applications close on or about March 1.

CURRICULUM

	F H-C*	W H-C	S H-C
Clinical Laboratory I, II, III	6-4	12-8	4-4
Applied Psychology in Dentistry		2-2	
Pre-Clinical Orientation	4-2		
Dental Health Education	1-1	1-1	1-1
Health Sciences	4-4		
Dental Anatomy	3-1		
Oral Roentgenology I, II, III (3 wks)	3-1	4-2	15-2
Typing II		5-3	
Professional Office Communications	3-3		
Theater Workshop	3-3		
Oral Pathology		2-2	
Bookkeeping and Accounting for Dental Assistants			5-3
Occupational Internship (6 wks)			40-6
	27-19	25-18	34-16

*H-Hours, C-credits

COURSES

- 5.433 Applied Psychology in Dentistry** (2 class hrs/wk) 2 credits
Maturation of patients; public relations; contact with the public. Applied psychology with patients, particularly children.
- 5.439 Bookkeeping and Accounting for Dental Assistants**
(2 class, 3 lab hrs/wk) 3 credits
Basic principles of bookkeeping and accounting applied to the dental

office. Includes bank deposits, statement reconciliation, computing payroll deductions, figuring of simple interest, profit-loss statements, keeping of tax records, completion of dental insurance forms, and accounts receivable.

- 5.404 Clinical Laboratory I** (3 class, 3 lab hrs/wk) 4 credits
Basic chairside assisting, including positioning of patient, oral evacuation techniques, instrument transfer, rubber dam procedure. Survey of instruments; instrument sharpening, annotation of teeth and cavity classification; charting completion of patient health histories; sterilization procedures; operation and care of dental office and laboratory equipment; ordering, care, and storage of dental supplies; the structure, physical properties, and manipulation of dental materials.
- 5.405 Clinical Laboratory II** (6 class, 6 lab hrs/wk) 8 credits
Specialties of dentistry, basic principles of treatment, role of the assistant in each, instrument set-ups for various procedures, application of dental materials and dental procedures to simple laboratory procedures. Summary and review and supervised clinical experience.
- 5.406 Clinical Laboratory III** (4 class hrs/wk) 4 credits
Summary and review of course content and practice. Prerequisite: Completion of all courses in dental assistant program.
- 5.415 Dental Anatomy** (3 lab hrs/wk) 1 credit
Anatomy and physiology of the teeth and their supporting structures. A laboratory course combined with a self-teaching course of instruction provided in a seven volume series of textbooks developed at the University of Oregon Dental School. The laboratory work involves the drawing of individual teeth, and detailed study of the anatomy of the teeth through the use of clay restorations on plaster models. Prerequisites: Admission to the dental hygiene or dental assistant program.
- 5.407, 5.408, 5.409 Dental Health Education I, II, III**
(1 class hrs/wk) 1 credit each
Basic principles of patient education in the dental office including oral hygiene, preventive and restorative dentistry and the techniques involved in communicating with patients. Dental Health Education II will be a continuation of this course dealing mainly with nutrition and communication through visual aids.
- 5.410 Health Sciences** (4 class hrs/wk) 4 credits
Basic study of structure and function of cells, tissues, organs, and systems of the human body. Bacteriology, microbiology, physiology, and the importance of these as related to dentistry. First aid procedures for dental emergencies.
- 5.436 Occupational Internship** (40 class hrs/wk; 6 wks) 6 credits
Students are assigned to two private dental offices for 3 weeks each to gain practical clinical experience. Completion of course depends upon satisfactory compilation of a procedures manual for offices in which they serve. Prerequisite: Completion of first and second terms of dental assistant curriculum.
- 5.435 Oral Pathology** (1 class, 1 lab hr/wk) 2 credits
The study of oral pathology. Normal tissues, diseased or injured tissues, developmental anomalies, dental caries, abscesses and cysts.
- 5.416 Oral Roentgenology I** (2 class, 1 lab hrs/wk) 1 credit
The complete theory background of x-ray, terminology, safety factors, biological effects of radiation; darkroom procedures; operation of the dental x-ray machine, including the breakdown of the functions; and the legal aspects pertaining to x-ray films.
- 5.417 Oral Roentgenology II** (1 class, 3 lab hrs/wk) 2 credits
Continuation of Oral Roentgenology I. Prerequisite: Oral Roentgenology I.

104 Paradental-Paramedical

- 5.418 Oral Roentgenology III** (15 lab hrs/wk for 3 wks) 2 credits
Continuation of Oral Roentgenology II. Prerequisite: Oral Roentgenology II.
- 5.401 Pre-Clinical Orientation** (4 class hrs/wk) 2 credits
Survey of the history of dentistry and its professional development, professional ethics, the laws governing the profession, the roles of the several members of the dental health team with emphasis on dental assistant's role, areas of professional service. The dental profession's relation to community and role in the community. Introduction to dental office environment includes purposes of dentistry, professional terminology, and conduct, basic principles of dental health, and detailing of responsibilities delegated to the dental assistant.
- 5.419 Professional Office Communications** (3 class hrs/wk) 3 credits
Development of personal oral communication skills. Principles of composition, business letters, and telephone procedure with emphasis on informal communication with patients in various office situations.

Dental Hygiene

TWO YEAR ASSOCIATE DEGREE PROGRAM

The Dental Hygienist is a professional member of the dental health team. She is educated so that she can be employed in the private office, in public health facilities, in industry and in teaching dental health in school rooms. Her duties include the oral prophylaxis (cleaning and scaling of the teeth), fluoride applications, dental health education, radiographic techniques, polishing alloy restoration, and office management.

She must pass the Oregon State Board of Dental Examiners Examination to practice her profession in this state. She must pass, in addition, a National Board Examination. The program is designed so that upon completion, if the student so desires, can apply the credits toward a baccalaureate degree in the schools that one part of the State System of Higher Education in the State of Oregon given by the college. The American Dental Hygiene Association aptitude test is not required. If, however, the applicants take it and have their results sent to the college, the results will be used so that it is not necessary to take the Lane Community College test.

Class size is 16. Both male and female students are accepted. Applicant must be a high school graduate or have a GED certificate. In addition have had high school math, and chemistry within five years of application date. They are asked to take an aptitude test and the student is scheduled to appear for a personal interview. Special costs total about \$350 for books, uniforms and shoes. Applications close on or about March 1.

CURRICULUM

First Year

	F H-C*	W H-C	S H-C
General Chemistry 104, 105	7-5	6-5	
General Chemistry 102 (organic)			5-4
Elementary Human Anatomy & Physiology	6-4	6-4	
English Composition 111, 112	3-3	3-3	
Physical Education	3-1	3-1	3-1
Dental Anatomy I	3-1		
Dental Hygiene I, II, III	8-4	8-4	6-2
Dental Procedures I, II		1-1	3-1
Elementary Microbiology			6-4
Oral Roentgenology I			1-1
Fundamentals of Speech			3-3
First Aid			3-3
	30-18	27-18	30-19

*H-hours, C-credits

Second Year	F H-C	W H-C	S H-C
General Sociology	3-3	3-3	3-3
Periodontology for Dental Hygienists I, II	1-1		1-1
Oral Biology I, II	4-2	4-2	
Dental Procedures III, IV, V	2-2	2-2	3-3
Oral Roentgenology II, III, IV	4-2	4-2	2-1
Dental Hygiene IV, V, VI	9-3	9-3	9-3
Dental Health Education I, II, III	2-2	1-1	4-2
Nutrition	3-3		
Physical Education		3-1	3-1
Disease Control I, II		1-1	3-1
Personal Health			3-3
	28-18	27-15	31-18

COURSES

DH 223 Dental Disease Control I (1 class hr/wk) 1 credit

DH 224 Dental Disease Control II (3 class hrs/wk) 1 credit

Theoretical and clinical application of preventing decay by stressing education, diet, nutrition, food theories, and fluoride theories.

DH 113 Dental Anatomy (3 lab hrs/wk) 1 credit

Anatomy and physiology of the teeth and their supporting structures. A laboratory course combined with a self-teaching course of instruction provided in a seven volume series of textbooks developed at the University of Oregon Dental School. The laboratory work involves the drawing of individual teeth and detailed study of the anatomy of teeth through the use of clay restorations on plaster models. Prerequisite: Admission to the dental hygiene program.

DH 240, 241, 242 Dental Health Education I, II, III

Fall Term—(2 class hrs/wk) 2 credits

Winter Term—(1 class hr/wk) 1 credit

Spring Term—(1 class, 3 lab hrs/wk) 2 credits

Planning, developing and evaluating instructional materials for various age levels (pre-school through geriatric group). Field experiences in the Eugene Public Schools; classroom talks; visual aids in education; motivation for acceptance of dental health.

DH 118, 119, 120, 221, 222, 223, Dental Hygiene I, II, III, IV, V, VI

First Year—4 credits Fall and Winter Terms, 2 credits Spring Term.

Second Year—3 credits Fall, Winter and Spring Terms.

Theory of stains and hard deposits on the teeth; principles and methods for removal of these deposits. Beginning with laboratory techniques on manikins, the student proceeds to their performance of the oral prophylaxis on live patients during winter term, first year. Routine examination procedures, charting of oral conditions, patient appointment procedures, and recalls. Dental assisting techniques; fluoride application, theory, and techniques; the child patient, and child management.

DH 130, 131, 232, 233, 234 Dental Procedures I, II, III, IV, V

First Year—1 class hr/wk, 1 credit Winter; Spring Term 1 lab hr/wk, 1 credit

Second Year—2 class hrs/wk, 2 credits Fall and Winter Terms;

3 class hrs/wk, 3 credits Spring Term.

Designed to familiarize the student with procedures used in dentistry; orientation to dentistry, dental materials, operative dentistry, endodontics, oral surgery, prosthetic dentistry, four-handed dental assisting, medical emergencies, polishing of alloy restorations, dentistry in public health, and pharmacology.

106 Paradental-Paramedical

DH 228, 229 Oral Biology I, II (4 class hrs/wk) 2 credits each

Fall term will be devoted to oral embryology and microscopic anatomy. An understanding of the development of the face and oral cavity, the basic structure, the oral tissues is essential to the dental hygienist. The second term will be basic pathology and oral pathology. Oral manifestations of disease.

DH 109, 210, 211, 212 Oral Roentgenology I, II, III, IV

First Year—Spring Term, 1 class hr/wk, 1 credit;

Second Year—Fall and Winter Terms, 4 class hrs/wk, 2 credits;
Spring Term, 2 class hrs/wk, 1 credit

Lecture and laboratory course covering theory and development of x-ray films, and the correct use of x-ray machines. Techniques for exposing, processing, and mounting films with clinical practice on the patient.

DH 226, 227 Periodontology for Dental Hygienist I, II (1 class hr/wk)

1 credit each

Review of the etiology, classification and treatment of periodontal diseases; prevention is emphasized. Principles of therapy.

For course descriptions of the following, refer to indicated department:

General Chemistry 104, 105 & 102 (organic)	Science
Elementary Human Anatomy & Physiology	Science
English Composition 111, 112	Language Arts
Physical Education	Health & P.E.
Elementary Microbiology	Science
Fundamentals of Speech	Mass Communications
First Aid	Health & P.E.
General Sociology	Social Science
Nutrition	Home Economics
Personal Health	Health & P.E.

Inhalation Therapy

TWO YEAR ASSOCIATE DEGREE PROGRAM

Inhalation Therapy is an allied health specialty concerned with the treatment, management, control, and care of patients with deficiencies and abnormalities associated with respiration. It involves the therapeutic use of medical gasses, air and oxygen administering apparatus, environmental control systems, humidification and aerosols, drugs and medications, ventilatory control, postural drainage, chest physiotherapy and breathing exercise, respiratory rehabilitation assistance with cardiopulmonary resuscitation, and maintenance of natural, artificial and mechanical airways. There is urgent need for inhalation therapists to work with physicians and nurses in a team approach to patients with respiratory disease. Applicants must have completed high school or the equivalent, and must have taken high school algebra and chemistry within the last five years.

A letter of recommendation, a personal interview and an entrance examination are required. Class size is limited. Applications close on or about March 1. Hospital affiliation is Sacred Heart General Hospital, Eugene, Oregon.

CURRICULUM

First Year

	F H-C*	W H-C	S H-C
Human Relations II		3-3	
General Chemistry 104, 105, 106	7-5	7-5	7-5
Nursing Fundamentals	4-4		
Human Anatomy & Physiology	6-4	6-4	
Elementary Microbiology			6-4

Paradental-Paramedical 107

Fundamentals—Inhalation Therapy I, II, III	4-2	4-2	7-3
First Aid		3-3	
Supervisory Management			3-3
Medical Terminology	2-2		
Pathology			2-2
	<hr/>	<hr/>	<hr/>
*H-hours, C-credits	23-17	23-17	25-17

Second Year	F	W	S
	H-C	H-C	H-C
English Composition, Wr 111, 112	3-3	3-3	
Elective			3-3
Pharmacology	3-3		
Inhalation Therapy Application & Procedures I, II, III	15-6	15-6	15-6
Inhalation Therapy Clinical Practice I, II, III	15-5	15-7	15-7
	<hr/>	<hr/>	<hr/>
	36-17	33-16	33-16

Substitution may be made for First Aid and Medical Terminology with approval of the medical director.

COURSES

- 5.700 Fundamentals of Inhalation Therapy I** (1 class, 3 lab hrs/wk) 2 credits
Basic equipment processes; oxygen; manufacturing, handling and storage; safety rules and regulation; piping methods and control. Hospital and field trip observation.
- 5.701 Fundamentals of Inhalation Therapy II** (1 class, 3 lab hrs/wk) 2 credits
Resuscitation and airway management; methods of resuscitation and maintenance of patient airway by natural and artificial means, e.g., tracheotomy. Hospital observation; surgery and PAR under direction of anesthesiologist. Prerequisite: Inhalation Therapy I.
- 5.702 Fundamentals of Inhalation Therapy III** (1 class, 6 lab hrs/wk) 3 credits
Mechanical function of equipment used in assisted ventilations; methods of routine assisted ventilation; indications for therapy and its effectiveness; lung physiotherapy; hospital observation and discussion with inhalation and physical therapists. Prerequisite: Inhalation Therapy II.
- 5.703 Inhalation Therapy Application & Procedures I**
(3 class, 12 lab hrs/wk) 6 credits
Mechanical function of equipment used in controlled ventilation. Application of assisted and controlled ventilation; monitoring of patients on these units. Hospital observation and discussion with therapists and physicians. Prerequisite: Inhalation Therapy III.
- 5.704 Inhalation Therapy Application & Procedures II**
(3 class, 12 lab hrs/wk) 6 credits
Mechanical function of equipment used for the administration of oxygen and other gases; methods and procedures; humidification; use of testing and analysing equipment. Prerequisite: Inhalation Therapy Application & Procedures I.
- 5.705 Inhalation Therapy Application & Procedures III**
(3 class, 12 lab hrs/wk) 6 credits
Continuation of Inhalation Therapy Application & Procedures II. Mechanical function of nebulization and aerosol equipment; methods and procedures; special emphasis on preventive maintenance and sterilization of inhalation therapy equipment. Hospital observation e.g., CDR.
- 5.707 Inhalation Therapy Clinical Practice I** (3 class, 12 lab hrs/wk) 5 credits
Supervised clinical experience designed to provide competent and efficient administration of various therapies prescribed by the physician; group discussions with physicians and therapists. Prerequisites: Fundamentals of Inhalation Therapy III.

108 Paradental-Paramedical

- 5.708 Inhalation Therapy Clinical Practice II** (3 class, 12 lab hrs/wk) 7 credits
Continuation of Clinical Inhalation Therapy Experience I.
- 5.709 Inhalation Therapy Clinical Practice III** (3 class, 12 lab hrs/wk) 7 credits
Continuation of Clinical Inhalation Therapy Experience II with special emphasis on supervisory and administrative duties.
- 5.710 Pathology** (2 class hrs/wk) 2 credits
Study of the nature and cause of disease which involves changes in structure and function.
- 5.711 Pharmacology** (3 class hrs/wk) 3 credits
The study of drugs, their origin, nature, properties and their effects upon living tissues.

Medical Office Assistant

ONE YEAR PROGRAM

The medical office assistant is a member of the paramedical health team. As an office assistant, she acts as secretary, receptionist, and bookkeeper. As a technical assistant, she prepares patients for examination or treatment, takes temperatures, measures height and weight, sterilizes instruments, stands by to assist the physician as he examines or treats patients. She may perform certain simple laboratory tests, take x-rays, and give other medical assistance to patients under the physician's supervision.

CURRICULUM

	F	W	S
	H-C*	H-C	H-C
Typing I, II, III	5-3(2)**	5-3(2)	5-3(2)
Office Procedures I, II, III	4-3	4-3	4-3
Bookkeeping I, II	4-3	4-3	
Community Relationships	2-2		
Health Sciences	4-4		
Medical Office Assistant		3-3	
Medical Terminology	2-2		
Medical Law & Ethics		2-2	
Elective		3-3	
Laboratory Orientation			3-3
Occupational Internship			20-6
	21-17	21-17	32-15

*H-hours, C-credits

**3 credits if taken for vocational credit; 2 credits if taken for college transfer.

COURSES

- 5.480 Community Relationships** (2 class hrs/wk) 2 credits
Community resources available to the ill, health agencies which may assist the patients or which help maintain the health and welfare of the community, function of the caseworker.
- 5.483 Medical Terminology** (2 class hrs/wk) 2 credits
Medical terminology; pronunciation, meaning, and derivation.
- 5.484 Medical Law & Ethics** (2 class hrs/wk) 2 credits
Ethics of the profession, laws governing the profession.
- 5.485 Laboratory Orientation** (3 lab hrs/wk) 3 credits
Laboratory procedures and how to do them: Hematology, urinalysis, radiology, electrocardiology, immunology.
- 5.486 Occupational Internship** (20 lab hrs/wk) 6 credits
Students are assigned to clinical practices in medical offices. This is similar to on-the-job training.

- 5.410 Health Sciences** (4 class hrs/wk) 4 credits
 Structure and function of cells, tissues, organs, and systems of the human body.
- 5.482 Medical Assistant** (3 class hrs/wk) 3 credits
 Specifics of medical office assisting: Examination room techniques, sterilization of instruments, injection techniques, geriatrics, cardiac resuscitation.

For course descriptions of the following refer to indicated department:

Typing I, II, III	Business
Office Procedures I, II, III	Business
Bookkeeping I, II	Business

Dentistry

PREPROFESSIONAL PROGRAM

This curriculum has been approved by the University of Oregon Dental School. Students should be informed that admission to professional schools of dentistry is highly competitive. Students are advised to devote a minimum of three years to their pre-professional education. Those beginning a pre-dentistry program at a community college should plan to transfer to an accredited, four-year institution experienced in pre-dental education upon completion of their freshman year.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Ch 104, 105, 106 General Chemistry	4	4	4
Mth 101 College Algebra ²	4		
Mth 102 Trigonometry		4	
Mth 200 Calculus with Analytical Geometry			4
Social Science sequence (OSU, UO, OCE, EOC, SOC)	3	3	3
Z 201, 202, 203 General Zoology (PSU)	3	3	3
Physical Education	1		1
Personal Health		2	
	<hr/> 15-16	<hr/> 16-17	<hr/> 12-13

Total: 46-49 hours

¹Students planning to transfer to PSU should complete Wr 111 and 6 hours of humanities or social science. The second and third terms of English Composition will be completed after transfer during the sophomore and junior years. Students transferring to OCE should complete Wr 111, Sp 111 Fundamentals of Speech, and 3 hours of electives. Students transferring to UO, OSU, SOC, or EOC should complete Wr 111, 112.

²Students should register in mathematics at level indicated by placement test scores.

Medical Technology

PROFESSIONAL PROGRAM

This curriculum has been approved by the University of Oregon Medical School and the colleges and universities in the Oregon State System of Higher Education offering curricula for students interested in medical technology.

Students should be informed that admission to professional schools of medical technology is competitive. Preprofessional studies must include stipulated courses in the basic sciences and general education courses required for a baccalaureate degree. The preprofessional program is three years in length.

Those beginning the preprofessional program at a community college should plan to transfer to an accredited, four-year institution upon completion of the freshman year.

110 Paradental-Paramedical

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Ch 104, 105, 106 General Chemistry (or Ch 101, 102, 103)	4	4	4
Mth 95 Intermediate Algebra ²	4		
Mth 101 College Algebra		4	
Mth 102 Trigonometry			4
Social science sequence (UO, OSU, OCE, EOC)	3	3	3
Z 201, 202, 203 General Zoology (PSU, SOC)	3	3	3
Physical Education	1		1
Personal Health		2	
	<hr/> 15-16	<hr/> 16-17	<hr/> 12-13

Total: 46-49 hours

¹Students planning to transfer to PSU should complete Wr 111 and 6 hours of humanities or social science. The second and third terms of English Composition will be completed after transfer during the sophomore and junior years. Students transferring to OCE should complete Wr 111, Sp 111 Fundamentals of Speech, and 3 hours of electives. Students transferring to UO, OSU, SOC, or EOC should complete Wr 111, 112.

²Students should register for mathematics at the level indicated by placement test scores.

Medicine

PREPROFESSIONAL PROGRAM

This curriculum has been approved by the University of Oregon Medical School and the colleges and universities in the Oregon State System of Higher Education offering premedical curricula as suitable for Oregon community college students interested in premedicine.

Students should be informed that admission to professional schools of medicine is highly competitive. Preprofessional studies must include stipulated courses in the basic sciences and general education courses required for a baccalaureate degree. A minimum of three years is required to complete the preprofessional program. Many students complete four years of study before applying for admission to a medical school.

Those beginning a premedical program at a community college should plan to transfer to an accredited, four-year institution experienced in premedical education upon completion of the freshman year.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Ch 104, 105, 106 General Chemistry	4	4	4
Mth 101 College Algebra ²	4		
Mth 102 Trigonometry		4	
Mth 200 Calculus with Analytic Geometry			4
Literature sequence (OSU, UO, OCE, EOC, SOC)	3	3	3
Z 201, 202, 203 General Zoology (PSU)	3	3	3
Physical Education	1		1
Personal Health		2	
	<hr/> 15-16	<hr/> 16-17	<hr/> 12-13

Total: 46-49 hours

¹Students planning to transfer to PSU should complete Wr 111 and 6 hours humanities or social science. The second and third terms of English Composition will be completed after transfer during the sophomore and junior years. Students transferring to OCE should complete Wr 111, Sp 111 Fundamentals of Speech, and 3 hours of electives. Students transferring to UO, OSU, SOC, or EOC should complete Wr 111, 112.

²Students should register in mathematics at level indicated by placement test scores.

³All students should complete 12 hours of mathematics during the freshman year.

Performing Arts

Chairman: Edward Ragazzino

Faculty: Nathan Cammack, Wayte Kirchner, David Sherman

The Performing Arts Department brings together the performing disciplines of music, drama, and dance. The objective of all three is the same: theory, technique, and performance. The department is not solely for the undergraduate student, but is intended to make facilities and staff available to the community for whatever its cultural interests may be.

DANCE COURSES

Ballet

Offered through the Adult Education Department; non-credit, non-graded.

Contemporary Dance

Offered through the Adult Education Department: non-credit, non-graded.

DRAMA COURSES

Sp 229 Interpretation (3 class hrs/wk) 2 credits
Art of re-creating prose fiction, poetry, or drama through the medium of oral reading by an interpreter to an audience.

Sp 250 Speech and Theatre Workshop
(3 class hrs/wk) 2 credits each term (6 hrs. max.)
Beginning course in acting for any level of competence. Study of the methods, techniques, and theory of acting as an art form. Performance of laboratory exercises and cuttings from plays is the basic teaching approach. Individual instruction is provided; no prior acting experience required.

Sp 261, 262, 263 Theatre Principles (3 class hrs/wk) 1 credit each
Development of the physical theatre; mechanics of its stage and shops; planning and construction of stage settings and properties, basic principles of stage lighting.

Sp 264, 265, 266 Production Workshop (3 class hrs/wk) 3 credits each
Practical experience in construction, painting, and handling of scenery, and the lighting of plays. Prerequisite: Sp 261, 262, 263, or concurrent registration.

Sp 267, 268 Appreciation of Drama (3 class hrs/wk) 2 credits
The theatre as an art form. A non-performance course to make the spectator a more intelligent playgoer and to make theatre a part of his cultural life.

MUSIC COURSES

Mus 50 Basic Piano (2 class hrs/wk) 1 credit each term (3 hrs. max.)
Classroom instruction to fit the needs of beginners.

Mus 51 Basic Voice (2 class hrs/wk) 1 credit each term (3 hrs. max.)
For beginners in vocal music. Deals primarily with the development of breath control, tone production, articulation, and enunciation in a group situation. Classroom performance of songs. Study of song literature.

Mus 111, 112, 113 Music Theory I (5 class hrs/wk) 4 credits each
Thorough groundwork in the elements of music: melody, harmony and rhythm. Entering students should be well-versed in the materials of music: key signature, time signature, scales, and notational style.

112 Performing Arts

Mus 190 Performance Studies

(1 or 2 half-hour lessons/wk) 1 credit any term—max. 6 credits
(No more than six hours credit may be earned in Mus 190 and 290, singly or combined.) Individual instruction in technical and stylistic aspects of artistic solo performance. Students specializing in performance normally enroll for 2 half-hour lessons per week in their major instrument each term during their undergraduate years. Non-music specialists enroll for 1 half-hour lesson per week. Prerequisite: Permission of instructor.

Mus 195 Band (3 class hrs/wk) 1 credit each term (6 hrs. max.)
To give woodwind, brass and percussion students rehearsal and performance opportunities in concert and stage band literature.

Mus 196 Orchestra (3 class hrs/wk) 1 credit (6 hrs. max.)
To give string instrument students (violin, viola, cello, string bass and piano) an opportunity to study and perform Baroque through Contemporary chamber orchestra literature.

Mus 197 Chorus (3 class hrs/wk) 1 credit each term (6 hrs. max.)
College Concert Choir. No prior choral experience necessary.

Mus 201, 202, 203 Introduction Music and its Literature

(3 class hrs/wk) 3 credits each
Enjoyment and understanding of music through listening and study of its elements, forms and historical styles.

Mus 211, 212, 213 Music Theory II (4 class hrs/wk) 3 credits each
Continued studies in the elements of music, with emphasis upon composition, analysis of various musical styles and trends, and increased keyboard facility. Mus 213 is devoted to the analysis of 20th Century music plus increased emphasis upon composition in the modern vein.

Mus 214, 215, 216 Keyboard Harmony (1 class hrs/wk) 1 credit each
Application of theoretical principles to the piano; exercises in modulation, transposition and the development of extempore playing. To be taken concurrently with Mus 211, 212, 213.

Mus 290 Performance Studies

(1 or 2 half-hour lessons/wk) 1 credit any term—max. 3 credits
See Mus 190 description. Prerequisite: Satisfactory completion of Mus 190 or permission of instructor.

Music

SUGGESTED TRANSFER CURRICULUM

This program has been approved by the University of Oregon, Oregon State University, Portland State University, and Southern Oregon College. Students successfully completing it with appropriate options will be able to transfer to the institution of their choice and, subject to proficiency examinations in performance and music theory, complete requirements for a bachelor of arts degree in music with two additional years of work. Students may also transfer to the University of Oregon and complete a B.Mus. degree program. Bachelor of science degree programs, which do not require completion of a foreign language, are offered at OSU, PSU, and SOC. Those planning to transfer to these programs should complete science and social science sequences instead of the two years of foreign language. Students planning to become music teachers in the public schools should complete Psy 201, 202 and Sp 111 during the sophomore year in place of one of the general education sequences.

Freshman Year

	F	W	S
Wr 111, 112, English Composition ¹	3	3	
Mus 111, 112, 113 Music Theory I	4	4	4
Mus 190 Applied Music	1	1	1
Mus 195 Band or Mus 196 Orchestra or Mus 197 Chorus	1	1	1
First or Second Year French or German	4	4	4
HE 250 Personal Health			2
Physical Education	1	1	
Mus 50 Basic Piano (optional) ²	1	1	1
	14-15	14-15	13

Sophomore Year

	F	W	S
Mus 211, 212, 213 Music Theory II	3	3	3
Mus 214, 215, 216 Keyboard Harmony	1	1	1
Mus 190 or 290 Applied Music	1	1	1
Mus 195 Band or Mus 196 Orchestra or Mus 197 Chorus	1	1	1
Literature sequence	3	3	3
Second Year French or German ³	4	4	4
Mus 201, 202, 203 Introduction to Music and its Literature (UO, OSU)	3	3	3
Science or social science sequence (PSU)	3	3	3
Three hours of humanities (excluding literature, Sp 111 Fundamentals of Speech, and 2 hours elective (SOC)	3	3	3
Physical Education ⁴	1	1	1
	17	17	16-17

Total: 93 hours⁴¹Students planning to transfer to OSU or PSU should complete Wr 111, 112, and 3 hours of electives. Students transferring to UO or SOC should complete Wr 111, 112.²Students who cannot pass the proficiency examination for Mus 214, 215, 216 Keyboard Harmony should complete work in Mus 50 Basic Piano as required to attain this proficiency during the freshman year.³If the second year language was completed during the freshman year, students should complete a science sequence meeting general education requirements of the institution to which transferring.⁴Students may find it necessary to delay completion of the physical education requirement until after transfer, in order to hold transfer credits within the 93-hour limitation.

Science

Chairman: John W. Jacobs

Faculty: Mabel Armstrong, Charles Bentz, Robert J. Boettcher, Victor E. Favier, Richard T. Fraga, Glenn R. Heiserman, Hayden Hodges, Stephen W. John, Bernard Kirk, Jay R. Marston, Michael H. Mitchell, Eugene Z. Parro, Wendell Pepperdine, Freeman Rowe, Jack D. Scales, Floyd Weitzel

Science

COURSES

- 4.300 Practical Physics I** (3 class, 2 lab hrs/wk) 4 credits
Introductory practical physics covering heat, light, and sound.
- 4.302 Practical Physics II** (3 class, 2 lab hrs/wk) 4 credits
Introductory practical physics covering matter, measurements, mechanics, and machines. Prerequisite: Mathematics I (4.200), or equivalent.
- 4.304 Practical Physics III** (3 class, 2 lab hrs/wk) 4 credits
Introductory practical physics covering magnetism and electricity. Prerequisite: Mathematics II (4.202), or equivalent.

114 Science

- 6.370 Applied Physics I** (3 class, 2 lab hrs/wk) 4 credits
Mechanics of measurement, vectors, kinematics, work power-energy, machines and rotational motion. Prerequisite: Technical Math I concurrently or approval of department head.
- 6.371 Applied Physics II*** (3 class, 2 lab hrs/wk) 4 credits
Structure of matter, heat, sound, and light. Prerequisite: Technical Math II or approval of department head.
- 6.366 Applied Physics III*** (3 class, 2 lab hrs/wk) 4 credits
Magnetism and electricity, including basic electric currents, sources, electromagnetism, alternating current, generators, and motors. Prerequisite: Technical Math II or approval of department head.

*Special sections for nurses are also included.

Ph 201, 202, 203 General Physics

(3 lecture, 1 discussion, 3 lab hrs/wk) 4 credits each
Study of energy and physical phenomena, including the fundamental principles of mechanics, heat, sound, light, electricity, magnetism, and a brief introduction to modern physics. Course series may be started with a sequence. Prerequisite: Math 102, Trigonometry, or equivalent high school trigonometry.

Ph 207, 208, 209 Introductory Classical Physics

(2 lecture, 2 recitation, 3 lab hrs/wk) 4 credits each
Mechanics, heat, light, sound, electricity, and magnetism. For students in engineering and the physical sciences.

- GS 104, 105, 106 Physical Science** (3 class, 2 lab hrs/wk) 4 credits
Principles of physics, chemistry, astronomy, geology; development and application of the scientific method. Prerequisite: One year of high school algebra, or equivalent. Students may enter any term.

- G 201, 202, 203 Geology** (3 class, 3 lab hrs/wk) 4 credits each
Earth materials, processes and forms, formation of economic mineral deposits, the main events in earth history. Field work where applicable.

- Ch 101, 102, 103 Elementary Chemistry** (3 class, 3 lab hrs/wk) 4 credits each
Terminal service course for students with no previous training in chemistry. Course cannot be used for a prerequisite for further training in chemistry. Algebra recommended.

Ch 104, 105, 106 General Chemistry

104: (3 lecture, 1 recitation, 3 labs hrs/wk) 5 credits
105, 106: (3 lecture, 3 lab hrs/wk) 5 credits each
Prepares students for further work in chemistry; requires no chemistry background but assumes a working knowledge of algebra.

- Ch 226, 227 Organic Chemistry** (3 lecture, 6 lab hrs/wk) 5 credits each
For students not majoring in chemistry or chemical engineering. A systematic coverage of aliphatic and aromatic chemistry. Prerequisites: Ch 106 with grade of C or better.

- Ch 234 Quantitative Analysis** (3 lecture, 6 lab hrs/wk) 5 credits
Gravimetric and volumetric analysis and an introduction to instrumental analysis. Prerequisite: Ch 106 with grade of C or better.

- Bi 101, 102, 103 General Biology** (6 lecture, lab hrs/wk) 4 credits each
Basic principles of Biology and the methods and purposes of scientific research as a human activity. Student may enter any term with consent of instructor. For non-majors only—no Biology majors allowed.

Bi 101, 102, 103 General Biology (N series)

(6 lecture, lab hrs/wk) 4 credits each
A field course emphasizing natural history of native Oregon animal and plant species. Field trips, lecture, lab, and projects. The course carries the same credits as Bi 101, 102, 103, and will be limited to elementary education majors and biology majors. Student may enter any term.

Bi 121, 122 Elementary Human Anatomy & Physiology

(3 class, 3 lab hrs/wk) 4 credits each

Medically oriented study of the human body, beginning with the single cell and continuing through histology to the skeletal, muscular, and nervous systems. Previous chemistry or chemistry concurrently is recommended.

Bi 123 Elementary Microbiology (3 class, 3 lab hrs/wk)

4 credits

Medically oriented study of bacteria and other microorganisms concerned with normal and pathogenic behavior.

Bot 201, 202, 203 General Botany (6 lecture, lab hrs/wk)

4 credits each

201: Structure of cells and seed plants, metabolism and growth.

202: Reproduction and genetics. Taxonomy of lower plants.

203: Taxonomy of vascular plants, identification of native plants, ecology, evolution.

Student may enter first or second term. Prerequisite: Bot 202.

Z 201, 202, 203 General Zoology (2 lectures, 3 lab hrs/wk)

3 credits each

For Forestry, fish and game, pharmacy, agriculture and home economic students and others. Students may enter any term.

Bi 210, 211, 212, 213 Core Biology

(4 lecture/lab hrs/wk—8 hrs/wk) 5 credits each

For majors in the medical and biological sciences. This sequence will transfer for Bi 211, 212, 213 at Oregon State and for 301, 302, 303 at the University of Oregon. The course will include two quarters of cellular biology and two quarters of organismal biology. Prerequisite: Ch 104, 105. Bi 210: Cell Theory, membrane and nuclear cell structure and molecular biology of the gene.

Bi 211: Bioenergetics, thermodynamics, respiration, photosynthesis, enzymes and all related cell structure.

Bi 212: Comparative morphology, behavior, and physiology with related taxonomy, reproduction and development.

Bi 213: Genetics, evolution and ecology.

210 given spring term only. Biology majors may enter 211 with instructor approval.

Applied Science

Recommended for those who plan to transfer in applied science to Portland State College. Upon satisfactory completion of this two-year program, students may transfer to Portland State College ready to begin the second year of applied science.

CURRICULUM

Freshman Year

	F	W	S
GE 101, 102, 103 Engineering Orientation	2	2	2
Mth 95 Intermediate Algebra ¹	4		
Mth 101 College Algebra		4	
Mth 102 Trigonometry			4
Ch 104, 105, 106 General Chemistry ²	4	4	4
Wr 111, 112 English Composition	3	3	
Electives	2	2	3
Physical Education	1	1	
Personal Health			2
	<hr/> 16	<hr/> 16	<hr/> 15

116 Science

Sophomore Year

	F	W	S
Mth 200, 201, 202 Calculus with Analytic Geometry	4	4	4
Ph 207, 208, 209 Introductory Classical Physics	4	4	4
Ec 201, 202, 203 Principles of Economics	3	3	3
Physical Education	1	1	1
Elective (social science or humanities sequence)	3	3	3
	<hr/> 15	<hr/> 15	<hr/> 15

Total: 92 hours

ONE YEAR TRANSFER PROGRAM

Students whose high school records and entrance examination scores show high ability in science and mathematics and readiness to begin calculus may complete this first-year program and transfer to Portland State University ready to begin the second year of applied science studies.

	F	W	S
Mth 200, 201, 202 Calculus with Analytic Geometry	4	4	4
Ph 207, 208, 209 Introductory Classical Physics	4	4	4
Ch 104, 105, 106 General Chemistry	4	4	4
Wr 111 English Composition	3		
Electives		3	3
Physical Education	1	1	1
	<hr/> 16	<hr/> 16	<hr/> 16

Total: 48 hours

¹Students should begin work in mathematics at the level indicated in placement tests.

²Or Ch 101, 102, 103 and 241.

Core Biology

For majors in Biology, Botany, Zoology, Entomology, General Science-Biological Science Option, Microbiology, Pre-Dental, Medical Technology, Pre-Medical and Oceanography with Biology Major.

Recommended for students who plan to transfer in any of the above fields to the University of Oregon, Portland State University, Eastern Oregon College, Southern Oregon College and Oregon State University. Requirements for the baccalaureate degree may be completed with two additional years of work at the four-year institution.

Freshman Year	F	W	S
Wr 111, 112, 113 English Composition	3	3	3
Math (lead to Mth 106 by end of 2nd Year)	4	4	4
Ch 104, 105, 106 General Chemistry	4	4	4
Social Science or Humanities or if desired Biology B Series	3-4	3-4	3-4
Bi 210 Core Biology			5
Physical Education	1	1	
	<hr/> 15-16	<hr/> 15-16	<hr/> 16

Sophomore Year	F	W	S
Ch 226, 227 Organic Chemistry	5	5	
Humanities or Social Science			3
Bi 211, 212, 213 Core Biology	5	5	5
Elective-Recommend General Physics 201, 203	4	4	4
Physical Education	1	1	1
Personal Health			2
	<hr/> 15	<hr/> 15	<hr/> 15

Chemistry

Recommended for those who plan to transfer in chemistry to the University of Oregon, Oregon State University, Portland State University, or Southern Oregon College. Because of the highly professional and exacting nature of the instruction, students wishing to complete a major program in chemistry within the normal four-year period should plan to take all work on a campus offering a major program. However, those students who prefer to begin their studies at a community college may complete the program outlined below, realizing, however, that more than three years will be required to complete remaining requirements after transfer. The amount of time required to complete the major program will depend upon the requirements of the department, the ability and industry of the student, and his level of achievement in mathematics at the time of transfer.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Mathematics ²	4	4	4
Ch 104, 105, 106 General Chemistry	4	4	4
GL 50, 51, 52 First-year German (UO, PSU) ³	4	4	4
Bi 101, 102, 103 General Biology (OSU)	4	4	4
Social science, foreign language, or literature sequence (SOC)	3-4	3-4	3-4
Physical Education	1		1
Personal Health		2	
	<hr/> 15-16	<hr/> 16-17	<hr/> 12-13

Total: 46-49 hours

¹PSU students should complete Wr 111 and 6 hours of social science or humanities.

²Students should enroll in mathematics at the level indicated by placement scores.

³UO: German language study strongly recommended. PSU: students should complete work in German or Russian.

General Science General Studies in Science

Recommended for those who plan to transfer in general science to the University of Oregon and Oregon State University or in general in science to Portland State University, Eastern Oregon College, Oregon College of Education, Southern Oregon College. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Mathematics ²	4	4	4
Bi 101, 102, 103 General Biology	4	4	4
Physical Education	1		1
Personal Health		2	
	<hr/> 15	<hr/> 16	<hr/> 12

118 Science

Sophomore Year

	F	W	S
Social science sequence	3	3	3
Select two:			
Ch 104, 105, 106 General Chemistry (or			
Ch 101, 102, 103)			
Ph 201, 202, 203 General Physics (or			
Geol 101, 102, 103)	3-4	3-4	3-4
Foreign language or second humanities sequence	3-4	3-4	3-4
Physical Education	1	1	1
Electives to bring total hours to 93	0-3	0-3	0-3
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

Total: 93 hours

¹Students planning to transfer to OSU, OCE, or PSU should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112.

²Students should enroll in mathematics at the level indicated by entrance examination scores. Students transferring to OSU or UO must complete mathematics through Mth 201 Calculus with Analytic Geometry before end of sophomore year.

Geology

Approved by Oregon State University and Portland State University for students who plan to transfer in geology. Requirements for the baccalaureate degree may be completed with two additional years of work. The University of Oregon also offers a major program in geology.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Mathematics ²	4	4	4
G 201, 202, 203 Geology	3	3	3
G 204, 205, 206 Geology Laboratory	1	1	1
Physical Education	1		1
Personal Health		2	
	<hr/> 15	<hr/> 16	<hr/> 12

Sophomore Year

	F	W	S
Ph 201, 202, 203 General Physics	4	4	4
Ch 104, 105, 106 General Chemistry	4	4	4
Physical Education	1	1	1
Electives to bring total hours to 93 ³	6-7	6-7	6-7
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

Total: 93 hours

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112 and 3 hours of electives.

²Students should enroll in mathematics at the level indicated by placement test scores. Mth 201 Calculus with Analytic Geometry must be completed by the end of the sophomore year.

³Portland State University recommends Ec 201, 202, 203 Principles of Economics.

Prepharmacy

This prepharmacy curriculum prepares a student for admission to the Oregon State University School of Pharmacy. The pharmacy curriculum at OSU embraces three years of progressional study, during which time courses in the humanities and social sciences are also taken. Transfer stu-

dents may enter the program as sophomores or juniors. A total of five academic years, with 240 quarter hours, is required for the bachelor's degree.

Freshman Year

	Term Hours
Wr 111, 112 English Composition ¹	6
Mathematics ²	8
Z 201, 202, 203 General Zoology	9
Ch 204, 205, 206 General Chemistry ³	15
Ec 115 Outlines of Economics	3
Physical Education	3
	<hr/> 44

Sophomore Year

Ch 234 Quantitative Chemistry	4
Microbiology	5
Ch 226, 227, 228, 229 Organic Chemistry ³	10
Ph 201, 202 Physics	8
BA 302 Organ. Management Theory	3
BA 217 Basic Accounting & Fin. Anal.	3
Sp 111 Fundamentals of Speech	3
Electives	9
Physical Education	3
	<hr/> 48

¹A year sequence in English composition should be completed before transfer. However, English at Oregon State University (Wr 101, 202, 303) is offered in freshman, sophomore, and junior years.

²Students should enroll in mathematics at the level indicated by placement test scores. However, trigonometry and calculus are required. Math 163 may replace calculus.

³Or equivalent.

Physics

Recommended for those who plan to transfer in physics to Oregon State University, the University of Oregon, or Portland State University. Upon satisfactory completion of the two-year program outlined below, students should be ready to begin the second year of physics studies.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Mathematics ²	4	4	4
Ch 104, 105, 106 General Chemistry	4	4	4
Physical Education	1		1
Personal Health		2	
	<hr/> 15	<hr/> 16	<hr/> 12

120 Social Science

Sophomore Year

	F	W	S
Mathematics (Mth 201, 202, 203)	4	4	4
Ph 207, 208, 209 Introductory Classical Physics	4	4	4
Social science sequence ³	3	3	3
Physical Education	1	1	1
Electives to bring total hours to 93	3-4	3-4	3-4
	<hr/>	<hr/>	<hr/>
Total: 93 hours	15-16	15-16	15-16

ONE YEAR PROGRAM

Students whose high school records and entrance examination scores show high ability in science and mathematics and readiness to begin calculus may complete the following first-year program and transfer to Oregon State University, University of Oregon, or Portland State University ready to begin the second year of physics studies.

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Mth 200, 201, 202 Calculus with Analytic Geometry	4	4	4
Ph 207, 208, 209 Introductory Classical Physics	4	4	4
Ch 104, 105, 106 General Chemistry	4	4	4
Physical Education	1		1
Personal Health		2	
	<hr/>	<hr/>	<hr/>
Total: 49 hours	16	17	13

¹Students planning to transfer to OSU should complete Wr 111, 112 and 3 hours of electives. PSU students should complete Wr 111 and 6 hours of humanities or social science. Students transferring to UO, EOC, or SOC should complete Wr 111, 112.

²Students should register in mathematics at level indicated by placement test scores.

³Students who plan to teach in the secondary schools should complete Psy 201, 202, General Psychology.

Social Science

Chairman: William J. Beals, Jr.

Faculty: John Baughman, Joanna Cohen, David Croft, Gregory Delf, Dale Gramley, Joyce Hops, Marvin Jaegers, Lloyd Klemke, John R. Klobas, Paula Lutz, Milton Madden, Paul M. Malm, John R. McCulloch, Ronald F. Mitchell, Harold Molenkamp, Bill Mullin, Gary H. Searl, Peter Simpson, Gordon Wehner

Fire Prevention Technology

TWO YEAR ASSOCIATE DEGREE PROGRAM

The majority of fire fighters employed in Oregon have learned their skills on the job. Complexities in the science of fire fighting, and increasing knowledge of better methods of fire fighting, have created a need for a comprehensive training program in this field.

Demand for qualified fire fighters is greater than the supply of trained personnel. Training in this program could qualify a student to work in the Safety Division of an industrial firm or provide background for fire underwriting. Persons interested in entering this field should be in good physical health and be able to demonstrate stamina under physical strain.

The curriculum is designed for pre-employment training as well as for employed persons in fire protection and allied occupations. Options include single courses in specialized areas of study, a one-year core of selected subjects from a two-year pre-employment curriculum, and advanced courses at the company officer level.

During the 1970-71 College year this program will be offered only to employed firemen.

First Year

	Credits
Communications Skills I	3
Communications Skills II	3
Mathematics II	3
Introduction to Fire Protection	3
Practical Physics I	3
Introduction to Psychology	3
Drafting I	2
Fire Science	4
Fire Fighting Skills I	3
Fire Department Hydraulics	4
Fire Company Organization & Management	3
Electives	14
	<hr/>
	47

Second Year

	Credits
Fire Fighting Skills II	3
Fire Fighting Skills III	3
American Institutions	3
Fire Pump Construction & Operation	4
Hazardous Materials I	3
Hazardous Materials II	4
Building Construction for Fire Protection	3
Fire Dept. Communications & Alert Systems	3
First Aid	3
Fire Service Rescue Practices	4
Water Distribution Systems	3
Fixed Systems & Extinguishers	3
Fire Investigation	4
Fire Fighting Tactics & Strategy	3
	<hr/>
	46

122 Social Science

COURSES

- 5.264 Building Construction for Fire Prevention** 3 credits
Classification of buildings; structural features affecting fire spread; effect of fire on structural strength; fire stops and rating of materials; fire retardants; Sanborne maps.
- 5.258 Company Organization and Station Assignment** 3 credits
Fire company organization and operation; company responsibilities in station: record keeping, state communications; and watch, housekeeping and house privileges, tours and public relations, company organization for response to alarms, company morale.
- 5.253 Fire Apparatus and Equipment** 3 credits
Familiarization with different types of fire apparatus; principles of application, care, and preventive maintenance; safe operating practices, emergency and non-emergency; National Board standards.
- 5.267 Fire Department Communications & Alerting Systems** 3 credits
Dispatching, receiving, and radio communication procedures; FCC regulations; municipal box alarm; telephone and tone-activated alarm; recording messages; tap-out procedures, running cards.
- 5.257 Fire Department Hydraulics** 3 credits
Review of basic mathematics hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculations to hydraulic problems; fire ground water-supply problems: Underwriters' requirements for pumps and accessories.
- 5.250 Fire Fighting Skills I** 3 credits
Individual skills using small tools and minor equipment, practice in forcible entry, use of masks.
- 5.251 Fire Fighting Skills II** 3 credits
Practice in team skills used in fire ground operation, including hose and ladder evolutions, salvage, overhaul, rescue, fire attack.
- 5.252 Fire Fighting Skills III** 3 credits
Practice in skills involving multi-company operations, including simultaneous activities of ladder, engine, and salvage companies; manning large stream appliances, coordinating communications.
- 5.274 Fire Fighting Tactics & Strategy** 3 credits
Response and size-up; fire ground tactics; analysis and postmortem; pre-fire survey and planning.
- 5.273 Fire Investigation** 4 credits
Effect on 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.
- 5.263 Fire Pump Construction and Operation** 4 credits
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.
- 5.256 Fire Science** 4 credits
Characteristics and behavior of fire; fundamentals of physical laws and chemical reactions occurring in fire and fire suppression; analysis of factors contributing to fire and to its confinement, control, and extinguishment.
- 5.268 Fire Service Rescue Practices** 4 credits
Electrical; use of rescue tools; common rescue carries; search and rescue procedures; handling nets; care of victim, excavation emergencies; evacuations.

- 5.272 Fixed Systems and Extinguishers** 3 credits
Portable extinguisher equipment; sprinkler system; protection systems for special hazards; fire alarm and detection system; ventilating systems.
- 5.260 Hazardous Materials I** 3 credits
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 for fire control of these materials.
- 5.261 Hazardous Materials II** 4 credits
Methods for combating fire in hazardous chemicals and similar materials; radiation hazards of the fire service; space age fuel; highway transportation explosives.
- 5.254 Introduction to Fire Protection** 3 credits
Philosophy, history of fire protection, loss of life and property by fire; role and responsibility of fire department in the community; organizations, sources of professional literature; survey of professional career opportunities.
- 5.269 Water Distribution Systems** 3 credits
Main systems; hydrants; residential and commercial districts; fire flow requirements; pumping stations, high pressure systems, storage tanks and cisterns; mobile supplies.

Law Enforcement

TWO YEAR ASSOCIATE DEGREE PROGRAM

The law enforcement curriculum is designed for young men and women desiring to pursue an educational program which will prepare them for career employment in police departments, sheriffs' offices, and various other law enforcement-related agencies. It also provides opportunities for those persons already engaged in law enforcement occupations to obtain further training for additional competency, or retraining that will help them qualify for higher-level positions.

The curriculum, which leads to an Associate of Science Degree, has been developed cooperatively by the State Department of Education and the State Advisory Board on Police Standards and Training. The program of studies covers basic police science knowledge, skills, and techniques.

Those who meet minimum physical, emotional, intellectual, citizenship, and moral standards are eligible for the program, provided they meet the school entrance requirements. These minimal requirements are directly related to statutory requirements and common hiring practices which limit entrance into law enforcement occupations. Local police departments make a routine investigation, including fingerprinting, of all applicants. Students may participate in the program on a full-time or part-time basis.

CURRICULUM

First Year	F H-C*	W H-C	S H-C
Introduction to Law Enforcement	3-3		
Patrol & Traffic I, II, III	5-3	5-3	5-3
First Aid I, II, III	2-1	2-1	2-1
Physical Education (including defensive tactics)	3-1		
Communications Skills I, II	3-3	3-3	
Typing I, II	5-3	5-3	
Administration of Justice		3-3	

124 Social Science

Criminal Law I			3-3
Elective			2
Introduction to Psychology			3-3
	<hr/>	<hr/>	<hr/>
	21-14	18-13	13-12

*H-hours, C-credits

Second Year	F	W	S
	H-C	H-C	H-C
Criminal Law II	3-3		
Police Report Writing I, II, III	4-2	4-2	4-2
Criminal Investigation I, II, III	3-3	3-3	3-3
Problems of Physical and Photographic Evidence I, II, III	3-1	3-1	3-1
Public Speaking	3-3		
Juvenile Procedures		5-3	
Firearms I, II		2-1	2-1
American Institutions		3-3	
Police and Community Relations		3-3	
Criminal Evidence			3-3
Jail Procedures			2-1
Human Relations I			3-3
	<hr/>	<hr/>	<hr/>
	16-12	23-16	20-14

Twelve additional hours of approved electives are required to qualify for an Associate Degree.

COURSES

- 5.202 Administration of Justice** (3 class hrs/wk) 3 credits
Review of court systems; procedures from incident to final disposition; principles of constitutional, federal, state, and civil laws as they apply to and affect law enforcement.
- 5.222 Criminal Evidence** (3 class hrs/wk) 3 credits
Kinds and degrees of evidence and the rules governing the admissibility of evidence in court.
- 5.216 Criminal Investigation I** (3 class hrs/wk) 3 credits
Fundamentals of investigation; crime scene search; sketching and recording; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information interviews and interrogation, follow-up, and case preparation.
- 5.217 Criminal Investigation II** (3 class hrs/wk) 3 credits
Continuation of Criminal Investigation I.
- 5.218 Criminal Investigation III** (3 class hrs/wk) 3 credits
Continuation of Criminal Investigation II.
- 5.208 Criminal Law I** (3 class hrs/wk) 3 credits
The structure definitions and the most frequently used section of the Penal Code and other criminal statutes.
- 5.238 Criminal Law II** (3 class hrs/wk) 3 credits
Continuation of Criminal Law I.
- LE 113 Elements of Law for Police Officers** (3 class hrs/wk) 3 credits
Overview of the salient principles of law which have special application to police work, including criminal law, law of arrests, search, seizure, and evidence, automobile law. Discussion of court procedures.

- 5.226 Firearms I** (2 lab hrs/wk) 1 credit
Moral aspects, legal provisions, safety precautions, and restrictions covering the use of firearms, firing of the sidearm riot shotgun and other weapons. Combined lecture and laboratory (range).
- 5.227 Firearms II** (2 lab hrs/wk) 1 credit
Law enforcement uses of rifles, shotguns, Thompson submachine guns; legal and moral aspects. Use of rifles and shotguns in sports and the laws pertaining to such.
- 5.200 Introduction to Law Enforcement** (3 class hrs/wk) 3 credits
The philosophy and history of law enforcement; crime and police problems; organization and jurisdiction of local, state and federal law enforcement agencies; survey of professional career opportunities, qualifications required, and police ethics.
- 5.232 Jail Procedures** (2 lab hrs/wk) 1 credit
Receiving, booking, and searching, care and custody of prisoners; laws relating to commitments, holding orders, and warrants; duties and responsibilities of the officer as outlined in the law regarding property and belongings of prisoners. Detention of prisoners for outside agencies.
- 5.236 Juvenile Procedures** (2 class, 3 lab hrs/wk) 3 credits
The organization, functions, and jurisdiction of juvenile agencies; processing and detention; case disposition; statutes and court procedures.
- LE 112 Organization and Administration of Law Enforcement Agencies**
(3 class hrs/wk) 3 credits
Application of the principles of organization and administration to law enforcement agencies at the federal, state, and municipal levels.
- 5.209, 5.210, 5.211 Patrol and Traffic Procedures I, II, III**
(2 class, 3 lab hrs/wk) 3 credits each
Purposes and types of patrols, assignments, response to emergencies, action to be taken. Traffic law enforcement, regulation and control; fundamentals of traffic accident investigation; Oregon Motor Vehicle Code.
- 5.242 Police and Community Relations** (3 class hrs/wk) 3 credits
Police and minority groups, social change and law enforcement, and principles of programming in police and community relations.
- LE 111 Police and Society** (3 class hrs/wk) 3 credits
Agencies dealing with the administration of justice. Requirements for entering police service. Origin and evolution of law enforcement agencies. Police problems, functions of the course, prosecuting and defense attorneys, correctional measures; American and foreign police systems.
- 5.239, 5.240, 5.241 Police Report Writing I, II, III**
(2 class, 2 lab hrs/wk) 2 credits each
Knowledge of the principles of composition and basic forms of writing reports.
- 5.233, 5.234, 5.235 Problems of Physical and Photographic Evidence I, II, III**
(3 lab hrs/wk) 1 credit each
Various uses of photography in police work. Techniques of locating, collecting and identifying physical evidence. Use of fingerprinting, casts and molds, photography and sketching.

For course descriptions of the following, refer to the department:

First Aid I, II, III	Health & P.E.
Physical Education	Health & P.E.
Communications Skills I, II	Language Arts
Typing I, II	Business
Public Speaking	Mass Communications

Anthropology

Anth 101, 102, 103 General Anthropology

(2 lecture, 1 discuss. hr/wk) 3 credits each

101: Physical Anthropology; 102: Archeology: study of historic cultures; 103: Organization and functioning of culture. May be taken out of sequence.

Economics

EC 201, 202, 203 Principles of Economics (3 class hrs/wk)

3 credits each

General economics principles and policies and their relation to specific goals and policies of our national economy. Prerequisite: Sophomore standing, 201 prerequisite for 202.

Geography

Geog 105, 106, 107 Introductory Geography (2 class, 1 lab hr/wk) 3 credits each

Introduction to field of geography. 105: Physical and regional survey of the world. 106: Economic geography. 107: Cultural geography. Must be taken in sequence.

Geog 221 Field Geography (3 class hrs/wk)

3 credits

In-depth study of a limited area near Eugene; a basis for introductory training in the interpretation of interrelated physical and cultural constituents of a total environment within Lane County, and the compilation of data and the construction of maps. Prerequisite: One sequence in Social Science.

History

Hst 101, 102, 103 History of Western Civilization (3 class hrs/wk) 3 credits each

101: Origins and development of western civilization from ancient times to the middle ages. 102: The end of the middle ages to 1789. 103: From 1789 to the present. May be taken out of sequence.

Hst 201, 202, 203 History of the United States (3 class hrs/wk) 3 credits each

201: The United States in the 17th and 18th centuries. 202: Development of political, social, and economic institutions in the American democracy, Civil War, and industrial revolution in the 19th century. 203: Changes occurring in the 20th century technical revolutions and global conflicts. May be taken out of sequence.

Hst 210 Black Man in American History (3 class hrs/wk)

3 credits

This course is designed to trace the part the Black man has played in American history. Further, it will concern itself with how the Black American's role in society has changed and how his role in the past affects his present situation.

Philosophy

Phl 201, 202, 203 Problems of Philosophy (3 class hrs/wk)

3 credits each

Introduction to philosophical problems through the study of philosophical classics. May be taken out of sequence.

Political Science

- PS 201, 202, 203 American Governments** (3 class hrs/wk) 3 credits each
 201: Principles of American constitutional system, political process, and organization of national government; 202: Powers and functions of national government; prerequisite 201; 203: Practical operations and contemporary reforms in government at state and local level.
- PS 205 International Relations** (3 class hrs/wk) 3 credits
 Analysis of the nature of relations among states; contemporary international issues; a study of the motivating factors; nationalism, imperialism, economic rivalries, quest for security.

Psychology

- 0.500 Orientation to College** (2 class hrs/wk) 2 credits
 Role of the student, his opportunities at Lane Community College, Courses, programs, services and facilities. Focus is on the individual in terms of his vocational and educational choice, self-awareness and effective study.
- 0.515, 0.516 Career Analysis I, II** (2 class hrs/wk) 2 credits
 A course to help students explore and plan their future careers. An examination of work values, interests, and aptitudes. Focus will be on the individual in the world of work. Course will be taught in small discussion group.
- 1.606 Introduction to Psychology** (3 class hrs/wk) 3 credits
 Concept of human behavior and an understanding of the fundamental motivational drives. Relationship of the individual to his social environment.
- 1.608 Human Relations I** (3 class hrs/wk) 3 credits
 Principles of psychology for understanding of personal relationships on the job. Motivations, feelings, emotions, and principles of learning are considered with particular reference to "on-the-job" problems.
- 1.609 Human Relations II** (3 class hrs/wk) 3 credits
 A follow-up study of the relationship of executive, managerial, supervisory, and worker relationships. Continues study of personal and group dynamics so that the student may learn to apply the basic attitudes of behavioral science to business. Prerequisite: Social Psychology Psy 215.
- Psy 201, 202, 203 General Psychology** (3 class hrs/wk) 3 credits each
 Basic principles and theories of behavior. Sophomore standing recommended. May be taken out of sequence.
- Psy 215 Social Psychology** (3 class hrs/wk) 3 credits
 Individual behavior in relation to culture. Features of human nature which man shares with other animals and those features which are unique; special attention to the social behavior of animals, to language and communication, and to man's attitude towards social issues.
- 4.500 Employer-Employee Relations** (2 class hrs/wk) 2 credits
 The objective of this course is to provide an understanding of the rights and responsibilities of employees and employers. A study of population, economic and unemployment trends, hours and working conditions, role played by labor organizations, government laws covering collective bargaining, state and federal laws, unemployment assistance, employee-employee and employee-employer relations are covered.
- Psy 210 Complexity & Change in American Racial Patterns:**
A Social Psychological View (3 class hrs/wk) 3 credits
 The course consists of an application of the principles of psychology to an analysis of the source, nature, effects, and potential for change in American racial patterns.

128 Social Science

Psy 217 Human Development and Individual Differences

(3 class hrs/wk) 3 credits

Study of the development of behavior and personality through the pre-natal period, infancy, childhood, adolescence, and adult life. Prerequisite: General Psychology, Psy 201, 202.

Sociology

1.600 American Institutions (3 class hrs/wk)

3 credits

A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker in business and industry.

Soc 204, 205, 206 General Sociology (3 class hrs/wk)

3 credits each

Introduction to the sociological perspective with particular emphasis on the analysis and understanding of modern society and contemporary social problems. Prerequisite: 204 prerequisite for 205.

SUGGESTED CURRICULUMS

Anthropology

Approved by the University of Oregon for students who plan to transfer in anthropology. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition	3	3	
Anth 101, 102, 103 General Anthropology ¹	3	3	3
GS 101, 102, 103 General Biology	4	4	4
First year foreign language ² or Literature sequence	3-4	3-4	3-4
Physical Education	1		1
Personal Health		2	
	<hr/> 14-15	<hr/> 14-15	<hr/> 11-12

Sophomore Year

	F	W	S
Second year foreign languages ² or electives	4	4	4
Second science sequence ³	3-4	3-4	3-4
Social Science sequence	3	3	3
Literature sequence (if not taken in freshman year or second humanities sequence)	3	3	3
Physical Education	1	1	1
Electives to bring total hours to 93	0-3	0-3	0-3
	<hr/> 14-17	<hr/> 14-17	<hr/> 14-17

Total: 93 hours

¹Students planning to transfer to UO may substitute Anth 207, 208, 209 Introduction to Cultural Anthropology. Students should not take both Anth 101, 102, 103 and 207, 208, 209.

²Students planning to do graduate study should complete two years of German, French, or Spanish.

³Students transferring to UO may use Psy 201, 202, 203 toward completing the science requirement provided laboratory work is completed after transfer.

Economics

Recommended for those who plan to transfer in economics to the University of Oregon, Oregon State University, or Portland State University. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Mathematics ²	4	4	4
Social Science sequence	3	3	3
Physical Education	1		1
Personal Health		2	
	<hr/> 14	<hr/> 15	<hr/> 11

Sophomore Year

	F	W	S
Ec 201, 202, 203 Principles of Economics	3	3	3
BA 211, 212, 213 Principles of Accounting (PSU)	3	3	3
BA 232 Introduction to Business Statistics (OSU)	3		
First or second year foreign language (OSU)	4	4	4
Second humanities sequence	3	3	3
Second science sequence (with lab) ³	3-4	3-4	3-4
Physical Education	1	1	1
Electives to bring total hours to 93	2-4	2-7	2-7
	<hr/> 15-17	<hr/> 15-17	<hr/> 15-17

Total: 93 hours

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112,, and 3 hours of electives. Students transferring to UO should complete Wr 111, 112.

²Students should enroll in mathematics at level indicated by placement test scores. Courses must be completed through Mth 200 to meet group requirement at University of Oregon.

³Students planning to transfer to UO may use Psy 201, 202, 203 to meet science requirement if laboratory work is completed after transfer.

Elementary Education

Successful completion of this program will permit students to transfer to any institution of the Oregon State System of Higher Education offering a program in elementary education and, upon admission to the professional teacher educational program, complete requirements for a baccalaureate degree with two additional years of work. Programs in elementary education are offered at Eastern Oregon College, Oregon College of Education, Oregon State University, Portland State University, Southern Oregon College, and the University of Oregon. Admission to the professional program is based on several qualifications—academic, personal, social and ability to speak and write adequately. Application for admission should be made immediately upon transfer to the four-year institution.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Mth 191, 192 Mathematics for Elementary Teachers ²	3	3	
GS 104, 105, 106 Physical Science	4	4	4
Literature sequence ³	3	3	3
Physical Education	1		1
Personal Health		2	
Elective			3
	<hr/> 14	<hr/> 15	<hr/> 11

130 Social Science

Sophomore Year

	F	W	S
Psy 201, 202 General Psychology	3	3	
Sp 111 Fundamentals of Speech			3
Hst 201, 202, 203 History of the United States (UO, OSU, SOC, EOC)			
Hst 101, 102, 103 History of Western Civilization (OCE)	3	3	3
Soc 204, 205, 206 General Sociology or Anth 101, 102, 103 General Anthropology (PSU)			
GS 101, 102, 103 General Biology	4	4	4
Geog 105, 106, 107 Introductory Geography ¹	3	3	3
Physical Education	1	1	1
Electives to bring total hours to 93 ²	2-3	2-3	2-3
	<hr/> 16-17	<hr/> 16-17	<hr/> 16-17

Total: 93 hours

¹Students planning to transfer to OSU, PSU, or OCE should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112.

²SOC students should take AA 201 Survey of Visual Arts, Mus 201 Introduction to Music and Its Literature, and Sp 111 Fundamentals of Speech or electives. AA 201, Mus 201, and Sp 111 should be completed sometime during the transfer program.

³Students transferring to EOC or SOC should take Eng 107, 108, 109 World Literature.

⁴UO requires 105; OSU, EOC, OCE, 105 and 106; PSU and SOC, 105, 106, 107.

⁵Recommended: Hst 201, 202 History of the United States (PSU); AA 201 Survey of the Visual Arts and Mus 201 Introduction to Music and Its Literature (EOC); Hst 101, 102, Soc 204, 205, 206, or Anth 101, 102, 103 (SOC); courses in one of the following areas of concentration: art, English, mathematics, modern languages, music, physical education and health, science, speech (OSU).

Secondary Education

Those planning to become high school teachers should enroll in the transfer program for the subject they plan to teach, being sure to include Psy 201, 202 General Psychology. Students who will complete their programs at PSU, SOC, EOC, or UO should also take Sp 111 Fundamentals of Speech. Students planning to teach social studies should complete the transfer program in general social science. Admission to the professional program in education is based on several qualifications—academic, personal, social, and ability to speak and write adequately. Application for admission should be made immediately upon transfer to the four-year institution.

Subject Norms

Teacher Preparation Programs at System Institutions (Four-Year Basic Norm)

Subject Norms

	Institutions					
	OSU	UO	PSU	EOC	OCE	SOC
Art ¹	x	x	x	x	x	x
Biology	x	x	x	x	x	x
Business ²	x	x	x	x		x
Chemistry	x	x	x	x	x	x
French	x	x	x	x	x ⁶	x
General Science—Physical Science	x	x	x	x	x	x
German	x	x	x	x		x
Health and Physical Education ³	x	x	x	x	x	x
Home Economics	x	x ⁴				
Industrial Arts ⁵	x					
Latin		x				
Journalism	x ⁶	x	x ⁶	x ⁶	x ⁶	x ⁶
Literature, Writing, and Language	x	x	x	x	x	x

Mathematics	x	x	x	x	x	x
Music	x	x	x	x	x	x
Physics	x	x	x	x		x
Russian	x	x	x ⁶			
Social Studies	x	x	x	x	x	x
Spanish	x	x	x	x	x ⁶	x
Speech and Drama	x	x	x	x ⁶	x ⁶	x ⁶

¹See Art

²See Business

³See Physical Education

⁴Student teaching not offered. Students should plan to complete requirements in an additional teaching field.

⁵Transfer program not available at present because of specialized course work required.

⁶Students interested in this area should plan also to complete requirement in an additional teaching field.

General Social Science

Recommended for those who plan to transfer in general studies or a divisional major program in general social science to Eastern Oregon College, Oregon College of Education, Oregon State University, Portland State University, Southern Oregon College or University of Oregon. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence ²	3	3	3
Science sequence (with laboratory or 12 hours of mathematics numbered 101 and above) ³	3-4	3-4	3-4
History sequence	3	3	3
Physical Education	1		1
Personal Health		2	
Elective	2		0-2
	<hr/> 15-16	<hr/> 14-15	<hr/> 11-12

Sophomore Year

	F	W	S
Second humanities or science sequence	3-4	3-4	3-4
Social science sequences (select three different: anthropology, sociology, economics, geography, political science, psychology, religion) ⁴	9	9	9
Physical Education	1	1	1
Electives to bring total to 93 hours ⁵	2-3	2-3	2-3
	<hr/> 16	<hr/> 16	<hr/> 16

Total: 93 hours

¹Students planning to transfer to OSU, PSU, or OCE should complete Wr 111, 112, and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112.

²Students transferring to PSC may substitute a foreign language or philosophy. Students planning to teach should take philosophy.

³PSU students may take a non-laboratory science. Mth 95 is acceptable.

⁴Students planning to teach should complete Psy 201, 202; students planning to transfer to PSU, OCE, or SOC should fill out the year's schedule with Sp 111 Fundamentals of Speech. Students planning to transfer to the UO may use Psy 201, 202, 203 to meet science requirement provided laboratory work is completed after transfer. UO will also accept philosophy toward the social science major.

⁵OSU students should complete both a second humanities and a second science sequence during the sophomore year. Students planning to teach should note that certification requirements call for courses in five different social sciences: U.S. and world history, geography, political science, economics, and sociology or anthropology.

Geography

Recommended for those who plan to transfer in geography to the University of Oregon or Portland State University or the program in physical and resource geography at Oregon State University. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Geog 105, 106, 107 Introductory Geography	3	3	3
G 201, 202, 203 Geology	3	3	3
G 204, 205, 206 Geology Laboratory	1	1	1
First year foreign language (recommended UO and PSU)	4	4	4
Mathematics through Mth 102 Trigonometry (OSU)	4	4	4
Physical Education	1		1
Personal Health		2	
	<hr/> 15	<hr/> 16	<hr/> 12

Sophomore Year

	F	W	S
Ch 101, 102, 103 or 201, 202, 203 General Chemistry (recommended OSU, PSU)	4	4	4
Ph 201, 202, 203 General Physics (recommended UO) ²	4	4	4
Social Science sequence ³	3	3	3
Literature sequence	3	3	3
Second year foreign language or social science sequence (UO, PSU)	3-4	3-4	3-4
Bot 201, 202, 203 General Botany (OSU)	4	4	4
Physical Education	1	1	1
Electives to bring total hours to 93	0-3	0-3	0-3
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

Total: 93 hours

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO should complete Wr 111, 112.

²Ph 201 requires Mth 101 College Algebra previously or parallel. If student's placement test scores indicate the need to complete this course, it should be taken in place of the elective hours fall term. If the student does not have the background to take Mth 101, he should take the appropriate chemistry sequence instead of physics.

³Students planning to teach should complete Psy 201, 202. Students planning to transfer to PSU should fill out the program with Sp 111 Fundamentals of Speech. Ec 201, 202, 203 is recommended for students transferring to OSU.

History

Recommended for those who plan to transfer in history to the University of Oregon, Oregon State University, Portland State University, Eastern Oregon College, or Southern Oregon College. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Hst 101, 102, 103 History of Western Civilization	3	3	3
Science sequence (with laboratory, or 12 hours of mathematics) ²	3-4	3-4	3-4
Foreign language or humanities sequence ³	3-4	3-4	3-4
Physical Education	1		1
Personal Health		2	
Electives	0-2	0-2	0-2
	<hr/> 15	<hr/> 16	<hr/> 12

Sophomore Year

	F	W	S
Hst 201, 202, 203 History of the United States	3	3	3
Literature sequence (UO, OSU, EOC, SOC)	3	3	3
Second science sequence (UO, OSU, EOC, SOC) ⁴	3-4	3-4	3-4
Second humanities or science sequence (PSU) ⁴	3-4	3-4	3-4
Second year foreign language or social science sequence other than history	3-4	3-4	3-4
Physical Education	1	1	1
Electives to bring total to 93 hours ⁵	0-6	0-6	0-6
	15-16	15-16	15-16

Total: 93 hours

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112, and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112.

²PSU students may complete requirements with a non-laboratory science.

³A foreign language is required for students transferring to the UO and is recommended for those transferring to OSU. The language requirement for the B.A. degree may be met in any one of the following ways: (1) Two years (normally 24 term hours) of college work in a foreign language; (2) One year of college work at the second-year or higher level or (3) Examination showing language competence equivalent to that attained at the end of two years of college study. PSU students wishing to teach should complete a humanities sequence in philosophy. For those wishing the B.A., the humanities sequence should be foreign language or, if the foreign language requirement can be met by examination, literature or philosophy.

⁴Students planning to teach should complete Psy 201, 202 instead of a second science. Those planning to transfer to PSU, EOC, or SOC should fill out the year with Sp 111 Fundamentals of Speech. Students transferring to UO may use Phy 201, 202, 203 to meet science requirements provided laboratory work is completed after transfer.

⁵Students planning to teach should notice that certification requirements call for courses in five different social sciences: U.S. and world history, geography, political science, economics, and sociology or anthropology.

Law, Preprofessional

As a general rule a baccalaureate degree is required before entry into the School of Law at the University of Oregon. In exceptional cases applicants, who have completed three academic years of undergraduate work and whose background and academic record clearly demonstrate outstanding potential for legal studies, may be admitted without a baccalaureate degree at the discretion of the School of Law.

No particular form of prelegal education is prescribed. Intellectual maturity and breadth of educational background are more important than particular subject matter. The School of Law does emphasize the importance of well developed writing skills. The applicant's entire background, including his academic achievement, educational experience, and extra-curricular activities will be considered in connection with his application.

The community college student should follow the transfer curriculum indicated for the field of study and institution in which he plans to complete his baccalaureate degree. However, the University of Oregon School of Law recommends that the following courses, which contain substantive material or emphasize specific skills desirable as background for the study of law, be included in the student's community college program if possible.

For course descriptions of the following, refer to indicated department:

PS 201, 202, 203 American Governments.....	Social Science
Ec 201, 202, 203 Principles of Economics.....	Social Science
BA 211, 212, 213 Principles of Accounting.....	Business
Wr 226 Expository Writing.....	Language Arts

Law Enforcement, Transfer

Recommended for those who plan to transfer to the Certificate Program in Law Enforcement at Portland State University or Southern Oregon College. To earn this certificate at Portland State University the student must also earn a baccalaureate degree in political science, psychology, or sociology. Students must earn a baccalaureate degree in general studies in the social sciences at Southern Oregon College. Requirements for a degree and certificate may be completed with two years additional work at the four-year institutions.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
LE 111, 112, 113 Law Enforcement and Society	3	3	3
Soc 204, 205, 206 General Sociology	3	3	3
Science sequence ²	4	4	4
Physical Education	1		1
Personal Health		2	
	<hr/> 14	<hr/> 15	<hr/> 11

Sophomore Year

	F	W	S
Psy 201, 202, 203 General Psychology	3	3	3
PS 201, 202, 203 American Governments	3	3	3
Hst 201, 202, 203 History of the United States	3	3	3
Humanities sequence ³	3	3	3
Second humanities sequence ⁴	3	3	3
Physical Education	1	1	1
	<hr/> 16	<hr/> 16	<hr/> 16

Total: 93 hours

¹Students planning to transfer to PSU should complete Wr 111, 112 and 3 hours of elective.

²Students planning to transfer to PSU are urged to take 12 hours of mathematics. Students planning to transfer SOC should take GS 101, 102, 103 General Biology or another laboratory science.

³Students planning to transfer to SOC should complete three courses from AA 201, Survey of Visual Arts, Mus 201 History of Music and Its Literature, Phl 201 Introduction to Philosophy, and Sp 111 Fundamentals of Speech. Students planning to transfer to PSU should complete Sp 111, 112, 113 Fundamentals of Speech.

⁴Students planning to transfer to SOC should take this second sequence in Introduction to Literature or World Literature.

Philosophy

Recommended for those who plan to transfer in philosophy to the University of Oregon or Portland State University. Requirements for the baccalaureate degree may be completed with two additional years of work at the four-year institution.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Science sequence (with laboratory or 12 hours of mathematics numbered 101 or above)	3-4	3-4	3-4
Physical Education	1	1	1
Social Science sequence	3	3	3
	<hr/> 13-14	<hr/> 14-15	<hr/> 10-11

Sophomore Year

	F	W	S
Hst 101, 102, 103 History of Western Civilization	3	3	3
Select three:			
Phl 201 Problems of Philosophy			
Phl 202 Elementary Ethics			
Phl 203 Elementary Logic			
Phl 204 Elementary Aesthetics			
or			
Phl 201, 202, 203 Problems of Philosophy	3	3	3
Second science sequence ²	3-4	3-4	3-4
Second humanities sequence ²	3	3	3
Physical Education	1	1	1
Electives to bring total hours to 93	2-3	3-4	3-4
	<hr/> 16-17	<hr/> 16-17	<hr/> 16-17

Total: 93 hours

¹Students transferring to PSU should complete Wr 111, 112 and 3 hours of electives. The third term of English Composition will be completed during the junior year.

²Students transferring to UO may use Psy 201, 202, 203 General Psychology to meet science requirement if laboratory work is completed after transfer. PSU students should complete either a second science or a second humanities sequence and electives to bring total hours to 93.

Political Science

This program has been approved by Oregon State University, the University of Oregon, and Portland State University for those who plan to transfer in political science. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Science sequence (with laboratory or 12 hours of mathematics ² numbered 101 and above)	3-4	3-4	3-4
Hst 101, 102, 103 History of Western Civilization	3	3	3
Physical Education	1		1
Personal Health		2	
Electives ²	2-3	0-2	2-3
	<hr/> 15-16	<hr/> 15-16	<hr/> 12-13

Sophomore Year

	F	W	S
PS 201, 202, 203 American Governments	3	3	3
Second humanities sequence (OSU, UO)	3	3	3
Second science sequence (OSU, UO)	3-4	3-4	3-4
Second humanities or science ² sequence (PSU)	3-4	3-4	3-4
Physical Education	1	1	1
Social Science sequence (History of the U.S., economics, geography, sociology, anthropology, or psychology ³)	3	3	3
Electives to bring total hours to 93 ³	2-6	2-6	2-6
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

Total: 93 hours

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112 and 3 hours of electives.

²The science requirement at PSU need not be met with a laboratory course. Mth 95 is acceptable as part of a mathematics sequence.

Psychology

Recommended for students who plan to transfer in psychology to the University of Oregon, Oregon State University, or Portland State University. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112, English Composition ¹	3	3	
Literature sequence	3	3	3
Science sequence (with laboratory or 12 hours of mathematics ² numbered 101 and above)	3-4	3-4	3-4
Social science sequence (anthropology or sociology recommended)	3	3	3
Physical Education	1		1
Personal Health		2	
Electives	0-2	0-2	0-2
	<hr/> 15-16	<hr/> 15-16	<hr/> 12-13

Sophomore Year

	F	W	S
Psy 201, 202, 203 General Psychology	3	3	3
Second science sequence ²	3-4	3-4	3-4
Second humanities sequence	3	3	3
Physical Education	1	1	1
Electives (additional science or social science; foreign language if planning to do graduate work) ³	5-6	5-6	5-6
	<hr/> 15-16	<hr/> 15-16	<hr/> 15-16

Total: 93 hours

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO should complete Wr 111, 112.

²Students planning to transfer to OSU should complete Bi 101, 102, 103 and 12 hours of mathematics, according to placement. UO students should select biology, physics, chemistry, or mathematics as one of their science sequences.

³OSU students should complete Hst 101, 102, 103; anthropology or sociology, whichever is not completed during the freshman year, is recommended as additional elective hours. UO recommends biology or mathematics, if not already taken to meet science requirement.

Sociology

Recommended for those who plan to transfer in sociology to the University of Oregon, Oregon State University, or Portland State University. Requirements for the baccalaureate degree may be completed with two additional years of work.

Freshman Year

	F	W	S
Wr 111, 112 English Composition ¹	3	3	
Literature sequence	3	3	3
Science sequence (with laboratory or 12 hours of mathematics numbered 101 and above)	3-4	3-4	3-4
Social science sequence (anthropology or History of Western Civilization recommended)	3	3	3
Physical Education	1		1
Personal Health		2	
Electives	0-2		0-2
	<hr/> 15-16	<hr/> 15-16	<hr/> 12-13

Sophomore Year

	F	W	S
Soc 204, 205, 206 General Sociology	3	3	3
Ec 201, 202, 203 Principles of Economics ²	3	3	3
Second science sequence (OSU, UO) ³	3-4	3-4	3-4
Foreign language or second humanities sequence (OSU, UO)	3-4	3-4	3-4
Physical Education	1	1	1
Second humanities or science sequence (PSU) ⁴	3-4	3-4	3-4
Electives to bring total hours to 93 ⁵	0-6	0-6	0-6
	<hr/>	<hr/>	<hr/>
Total: 93 hours	15-16	15-16	15-16

¹Students planning to transfer to OSU or PSU should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO should complete Wr 111, 112.

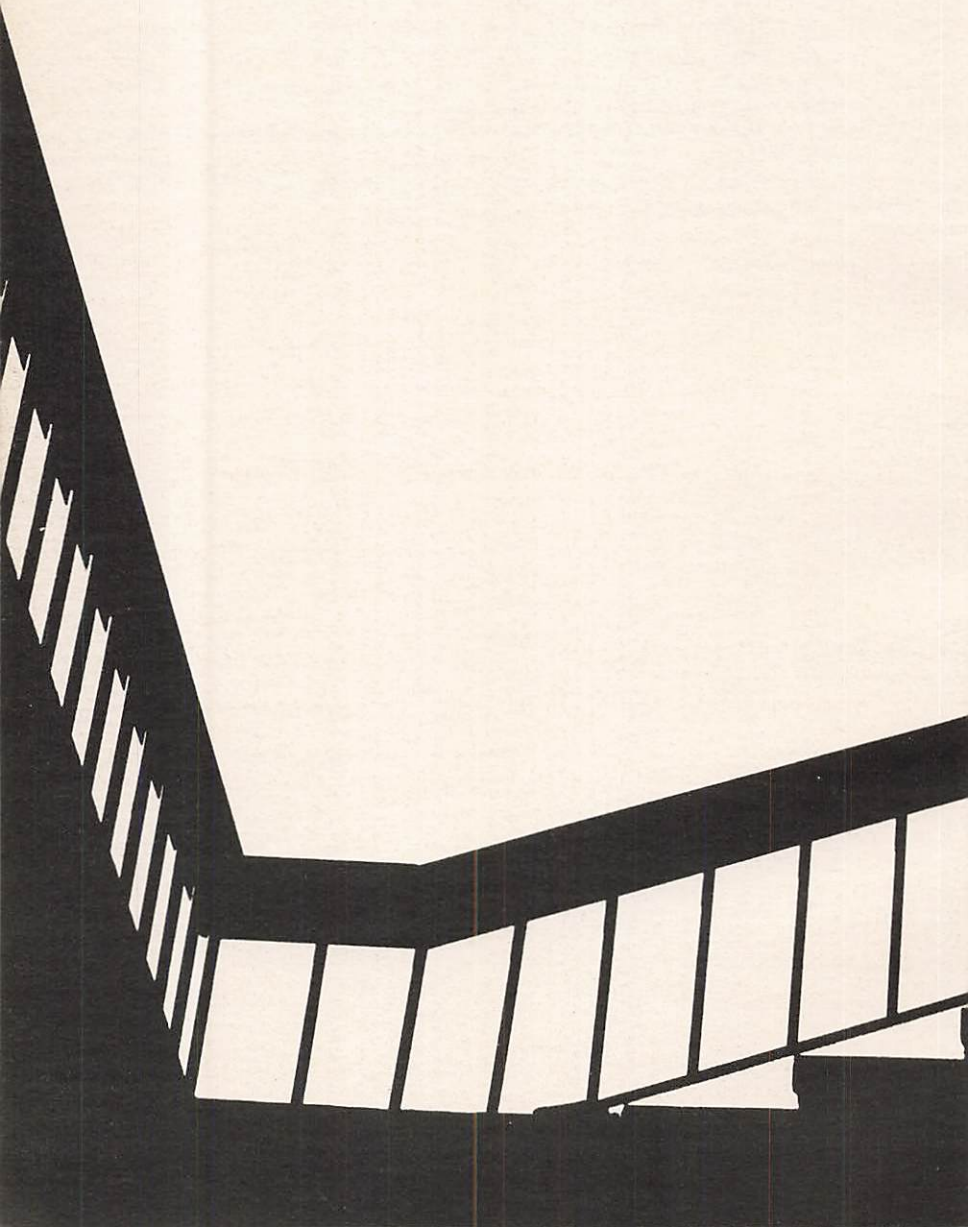
²Psy 201, 202, 203 is recommended as an acceptable alternative for students transferring to PSU. OSU students should take Hst 101, 102, 103 if they did not already do so in the freshman year.

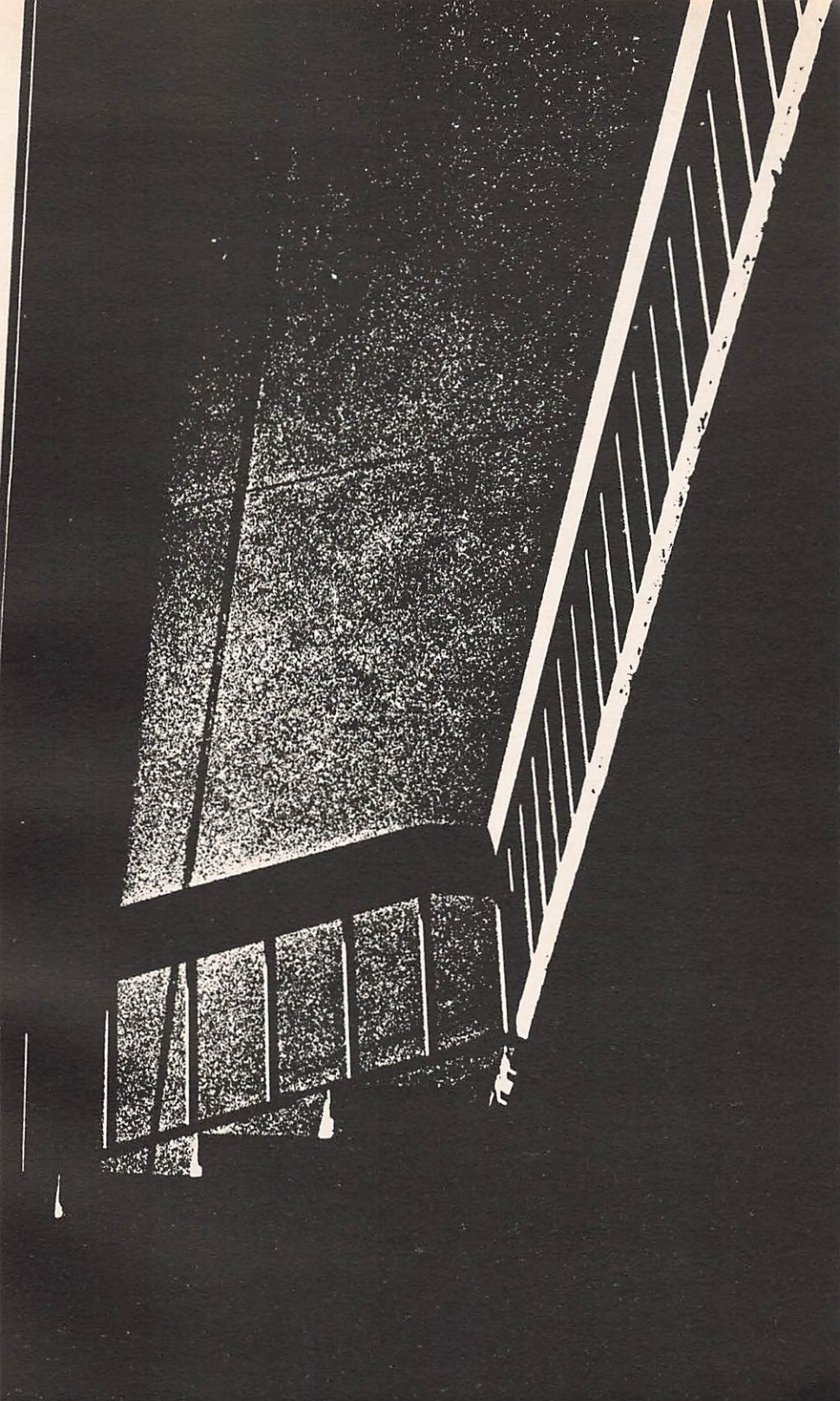
³Students transferring to UO may use Psy 201, 202, 203 to meet science requirement provided laboratory work is completed after transfer.

⁴The science requirement at PSU need not be met with a laboratory course. Mth 95 is acceptable.

⁵PSU students who do not have a satisfactory score on the mathematics placement examination should complete mth 95 Intermediate Algebra.

Special Programs





Adult Education

Director: Nile G. Williams

Coordinators: Joris O. Johnson, Elizabeth Kepner, Raymond Proctor

The Adult Education Department offers approximately 200 non-credit, no grade courses each year in vocational-technical training, business, home arts, language arts, and mathematics, and in avocational areas such as citizenship, astrology, and driver education.

In addition to this core, the Department is willing and usually able to establish other courses on request. The establishment of a course hinges on the location of a qualified instructor and the registration of at least 12 students.

All courses offered are held in the educational facility nearest the majority of enrollees. Classes are taught at the time, day or evening, which is most convenient to the majority of the students. Counseling and guidance are available on the main campus days and evenings.

Enrollment in most courses is open to anyone interested, though a few have prerequisites. A list of course offerings is issued quarterly and students can simply enroll for the course at the first class meeting. Books and other class materials can be purchased at the College Bookstore.

Classes usually meet for 30 hours of instruction at a tuition charge of \$12. The cost may vary with the number of instruction hours and the type of course. There may be an extra charge if a cooperating agency charges a rental fee for facilities. No refunds are made after the second meeting of a class. In some classes a material fee may be assessed.

An exception to the usual tuition rate is made in the case of senior citizens. A person 65 years or older may enroll in as many classes as he wishes at a tuition rate of only \$6 per term.

Tuition Schedule

State Approved Occupational Courses	30 clock hours—\$12 per course
Self Improvement, Avocational Courses	30 clock hours—\$20 per course
Driver Education	15 clock hours—\$47 per course
High School Completion	36 clock hours—\$12 per course

TYPICAL COURSE OFFERINGS:

Vocational-Technical

Commercial Pilot Ground School, Investments, Taxidermy, Automotive Tuneup, Blueprint Reading and Sketching, Cabinetmaking, Construction Estimating, Critical Path Scheduling, Drafting, Front End Alignment, Radio Theory, Hydraulics, Machine Shop, Radio Telephone Operator License Preparation, Welding, Retail Selling Fundamentals, Dental Radiology.

Business

Bookkeeping, Briefhand, Civil Service Preparation, Lumber Secretary, Office Procedures, Shorthand, Typing, Certified Professional Secretary Preparation, Elements of Supervision, Basic Psychology for Supervisors, Business Machines, Key punch.

Home Arts

Bishop Sewing and Tailoring, Sewing Knits and Fashion Fabrics, Fitting Techniques, Gourmet Cooking, Upholstery, Furniture Refinishing, Interior Decorating, Home Maintenance and Repair for Women.

Language Arts

Accelerated Reading, Public Speaking, Creative Writing, Sign Language, Writing Workshop, English Essentials, French, German, Spanish, Russian.

Mathematics

Algebra, Business Mathematics, Slide Rule.

Avocational

Astrology, Beauty Workshop, Citizenship, Common Sense Horsemanship, Driver Education, Genealogy, Physical Fitness, Film Techniques, Jazz Dance, Oil Painting, Pottery, Sculpture.

Apprentice Training

The Adult Education Department maintains an Apprentice Training system to provide young people with the skills and knowledge necessary for competent performance in skilled occupations. Since apprentices learn their skills through on-the-job work experiences and related classroom experience, the program involves cooperation among schools, labor, and management. Minimum terms and conditions of apprenticeship are required by state and local statutes or agreements.

Apprenticeship programs include training in the following trades: Carpentry, Floor Covering, Industrial Maintenance Electrician, Inside Wireman, Maintenance Electrician, Meterman, Painters, Plasterer, Plumber, Power Lineman, Roofer, Sheet Metal, Station Wireman, Steamfitter.

Acceptance by a joint apprenticeship committee, composed of four employees and four journeymen who administer the local apprenticeship system, is the most important requirement for admittance to the Apprentice Training program. In addition, 16 years is a general minimum age requirement and there is a preference for high school graduates. Prospective students should be in good health and physically fit.

The Apprentice program provides students with a number of advantages, including paid employment. Working with the latest methods and tools, with the personal attention and supervision of a competent journeyman, the student develops self-reliance and an expertise in his field at a comparatively early age. Students have an opportunity to use or install thousands of dollars worth of equipment during their training. They attend classes for six hours each week to learn those things which cannot be taught economically in the shop or on the job. Work reports, class grades, and attendance are reviewed by the joint apprenticeship committee before each wage increase.

In conducting classes, the Adult Education Office cooperates with the State Division of Vocational Education and the State and Federal Bureaus of Labor, through the State Apprenticeship and Training Council. Classes are established upon request of the local trade committees when a sufficient number of indentured apprentices are available.

Persons interested in apprenticeship training should first contact the State Apprenticeship Representative, State Office Building, Room 1, Seventh and Pearl Streets, Eugene, Oregon (telephone 342-1361).

High School Diploma

The High School Completion program offers those who have not completed high school an opportunity to earn a diploma. Entrance is usually limited to persons 19 years of age and older. On request of a school district or a court, where circumstances warrant, the College will cooperate to advance the education of students under 19.

142 Developmental Education

Normally, the program consists of six basic courses: English Grammar, American Literature, U. S. History, Modern Problems, and fundamental science, and mathematics courses. One course is offered at a time, ordinarily on Monday and Thursday evenings from 7-10 p.m. for a six-week period. A person may enter at the beginning of any of the classes. Proven proficiency in these six fields will merit an Adult Education diploma awarded through the participating school district.

Classes are offered in all school districts in the College District where interest is sufficient. Counseling and guidance services are available at the LCC campus for persons interested in the program.

Developmental Education

Director: Howard F. Bird

Faculty: Jerry Berg, Jacqueline Bonner, James Ellison, Leland Halberg, Rosa Marks, Wilcey Winchell

The Developmental Education Department serves the students through its operation of the Study Skills Center, located on the fourth floor of the Center Building. The Study Skills Center is a laboratory facility which provides students with the specialized equipment, materials, tools, and trained personnel necessary to improve their proficiency in learning techniques and basic skills.

Learning assistance is offered in accelerated and developmental reading, spelling, study skills, English grammar and composition, vocabulary, music appreciation, electronics, physiology, chemistry, shorthand, typing, 10-key calculating, nursing, psychology, air technology, mathematics, and foreign languages.

Most of the programs offered are individually planned and combine instruction with tutorial guidance. Some group credit is offered in such areas as accelerated reading and study skills.

The Study Skills Center has a wide variety of teaching machines, film strips, tapes, typewriters, record players, programmed textbooks, and other printed materials available for use. Cassette players and programmed material can be checked out for overnight and extended use, permitting the student to broaden his education background through independent study; he can, therefore, remedy deficiencies without being confined to a classroom.

For the student whose education has been interrupted and who is now returning to college, the Center is a place to "get back into the swing of things" before entering regular classes. For the adult who has never been to college, it affords an opportunity to experience the learning process without classroom pressures or demands. For the non-reading adult it is an opportunity to correct a handicap without exposing himself to embarrassment. And for the student with a specific learning problem, it is an avenue of personal and immediate attention.

Attendance at the Study Skills Center is voluntary. No tuition is charged LCC students; non-LCC students are charged \$15 per term. The facilities are open to everyone in the college district, but priority is given LCC students.

Special Training Programs

Director: Larry D. Murray

Faculty: Rosemary Grant, Norma Hucka, Betty James, Lucille Lamoreaux, Helen Loomis, Helen Lynn, Mary Merrill, George Mobley, Mildred Wilson.

This department provides training opportunities in a wide variety of courses varying from Adult Basic Education, a pre-occupational course, to Environmental Technology and Ornamental Horticulture.

Adult Basic Education

(Indeterminate length)

Tuition-free, open to persons 16 years of age and over. This course is offered in most geographical areas in Lane County, and students can attend during the day or evening. Basic mathematics, reading, and spelling are taught, with the program planned to provide individual help. Students are encouraged to develop and prepare themselves for later occupational or academic training.

Ornamental Horticulture

This is a planned sequence of courses which leads to a certificate of completion after successfully completing the program requirements. The curriculum is designed to help students acquire knowledge, understanding, and the skills in the production, maintenance, distribution and use of ornamental plants and landscaping materials. The emphasis in this program is landscape preparation and maintenance.

The program will begin its first year of operation in the fall of 1970. Prospective students should apply immediately. The curriculum is to be announced.

Environmental Technology

Air pollution is an environmental health problem which has grown to staggering proportions. This planned two year curriculum is designed to assist in the identification, analysis and control of sources of air pollution.

Graduates may find opportunities for employment with public air control pollution agencies, private businesses and many industries.

The program is expected to begin the fall term, 1970. Information concerning the curriculum can be obtained by inquiring at the College.

Custodial Maintenance and Repair

The Custodial Maintenance and Repair Training Program gives the student the basic instruction and training required for employment as a custodian or basic maintenance man in most businesses or industries.

Instruction covers floor maintenance (stripping, sealing, waxing, and polishing), maintenance of grounds, general maintenance including plumbing, safety job requirements, and employer relationships.

144 Special Training Programs

Two Term Course	Hours	
	1st	2nd
Custodial & Maintenance Orientation	3	
Products & Resources	5	
Custodial Skills & Methods 1, 2	5	5
Floor Maintenance	3	
Electrical Maintenance Service and Systems	4	
Communication Skills 1	3	
Custodial Problems		2
Custodial Job Training (OJT)		10
Custodial Safety		3
Exterior Maintenance		5
Employer-Employee Relations		3
Interior Hardware Maintenance		5
	<hr/> 23	<hr/> 33

Heavy Truck Operation

(one term 8 - 12 weeks program)

This program is planned for the school year 1970-71. The curriculum, which will include highway safety, road courtesy and truck handling, is to be announced.

Manpower Development & Training Act Work Incentive Programs

Some courses and students are selected and sponsored by local and state agencies. Those interested in participating may obtain information concerning requirements, qualifications and types of programs by inquiring at the department office on the second floor of the Apprenticeship Building.

A wide variety of programs have been offered in the past. They include: Clerk Typist (24 weeks), Clerk Steno (36 weeks), Dinner Cook (24 weeks), Nurse Aide (12 weeks), and Welding (12 weeks).

Board of Education

Clifford Matson, chairman. Representative of Zone 2, which includes the Junction City, Bethel, Harrisburg, Harris, Wyatt and Monroe Elementary School Districts. A Junction City dentist, his term expires in 1971.

Robert Ackerman, vice-chairman. Representative of Zone 3, which includes the Marcola, Springfield and McKenzie School Districts. A Springfield attorney, his term expires in 1973.

Albert Brauer. Representative of Zone 1, which includes the Florence, Mapleton, Blachly, Fern Ridge and Crow-Applegate School Districts. A Florence physician, his term expires in 1972.

Dean Webb. Representative of Zone 4, which includes the Creswell, Pleasant Hill, South Lane, Lowell, Westfir and Oakridge School Districts. A Cottage Grove dentist, his term expires in 1972.

Richard Williams, Representative of the District-at-large. A Eugene hospital administrator, his term expires in 1971.

Robert Mention, Representative of the District-at-large. A Eugene architect, his term expires in 1970.

Administration

Robert Pickering, President. B.S., Ed. M., University of Minnesota; Ed.D., Columbia University.

Lewis Case, Dean of Instruction. B.S., Public Address, Syracuse University; M.A., Rhetoric, University of Pittsburgh; Honorary Doctor of Laws, Harding College.

I. S. Hakanson, Dean of Students. B.A., Physical Education, Linfield College; M.Ed., Guidance, Oregon State University.

William Watkins, Business Manager.

Merlin Ames, Manager of Food Services. Oregon Vocational Certificate.

William Cox, Superintendent of College Facilities. A.B., M.A., Colorado State College of Education; Oregon Vocational Certificate.

Bert Dotson, Administrative Assistant to the President. B.S., Education; M.Ed., University of Oregon.

Henry Douda, Federal Funding Accountant. B.S., Business Administration, University of Oregon.

Dick Eymann, Director of Funding & Governmental Affairs Specialist. A.B., M.C.S., Business Administration, Dartmouth College.

Patrick Grant, Purchasing Agent. Oregon Vocational Certificate.

Orley Gunderson, Administrative Intern. B.S., Agricultural Education, University of Minnesota; M.S., Agricultural Education, Pennsylvania State University.

Ramon La Grandeur, Associate Dean of Instruction. B.S., Zoology, University of Washington; M.Ed., Administration, D.Ed., Educational Administration, University of Oregon.

William Mansell, Controller. B.S., Business Administration, University of Oregon.

Marston Morgan, Director of Institutional Research. B. Arch., M.A., University of Oregon.

Gerald Rasmussen, Associate Dean of Instruction. B.S., M.A. History, University of Oregon.

Larry Romine, Director of Information & Publications. B.A., Sociology, Midland College; M.S., Journalism, University of Oregon.

Lyle Swetland, Director of Development.

Walter Van Orden, Plant Supervisor. B.S., Business Administration, University of Oregon.

Floyd Wilkes, Director of Data Processing. B.S., Accounting, Brigham Young University; Oregon Vocational Certificate.

Ada Zinser, Bookstore Manager. Certificate, Oregon College of Education.

Faculty

Evan Alford, Language Arts Department. B.S., University of Oregon; O.D., Northern Illinois College.

Evelyn Alford, Nursing Department. B.S., Nursing, Wayne State University; M.S., Health Education, University of Oregon.

Robert T. Allen, Industrial Technology Department. B.S., Civil Engineering, Iowa State University; Oregon Vocational Certificate.

Irving Allen, Aerospace Department. FAA A&P Mechanic Certificate, Seattle Community College.

Merlin S. Ames, Director of Food Technology. Oregon Vocational Certificate.

Catherine Anderson, Language Arts Department. B.S., University of Illinois; M.A., University of Oregon.

Becky Armstrong, Paradental-Paramedical Department. R.D.H., University of Oregon Dental School.

Jeanne Armstrong, Home Economics Department. B.S., Home Economics, Oregon State University; M.Ed., Early Childhood Education, University of Oregon.

Mabel Armstrong, Science Department. B.S., Chemistry, Oregon State University; M.S., Biochemistry, Oregon State University.

Paul Armstrong, Language Arts Department. B.A., Chico State College; M.A., University of Oregon.

Richard Arnold, Business Department. B.S., Business Administration, Portland State College; M.S., Business Education, Portland State College; Oregon Vocational Certificate.

Chester Aubrey, Industrial Technology Department. A.S., Welding Technology, Oregon Technical Institute; State Welding Certificate; Oregon Vocational Approval.

John Bascom, Health & P.E. Department. B.S., M.S., Zoology, Kansas State University; M.D., Northwestern University Medical School; Ph.D., Surgery, University of Minnesota. Part-time.

John Baughman, Social Science Department. B.A., Exp. Psychology, Central Washington State; M.S., Exp. Psychology, Central Washington State.

Maurine Bayes, Business Department. C.P.S. Rating; Oregon Vocational Approval.

William Beals, Jr., Chairman, Social Science. B.A., History, Franklin & Marshall College; M.A., History, University of Southern California.

Gladys Belden, Chairman, Home Economics & Textiles. B.S., Home Economics, Oklahoma State University; M.S., Home Economics, Oregon State University.

Marie Bell, Paradental-Paramedical Department. R.D.H., University of Oregon Dental School; B.S., Health Education, University of Oregon.

James Bennett, Paradental-Paramedical Department. M.S., D.M.D., University of Oregon Dental School.

148 Faculty

- Steven Bennett, Paradental-Paramedical Department. M.D., University of Oregon Medical School.
- Charles Bentz, Science Department. B.A., Chemistry, Kansas University; B.S., Education, Kansas University; M.S., General Science, Oregon State University.
- Jerry Berg, Developmental Education Department. M.Ed., University of Oregon.
- Arthur Berwick, Health & P.E. Department. B.A., Food Technology, Oregon State University; M.S., Health Education, University of Oregon. Part-time.
- Howard Bird, Director of Developmental Education. B.S., Elementary Education, Brigham Young University; M.Ed., Special Education, Wayne State University; Ph.D., Educational Psychology, University of Minnesota.
- Samuel E. Blackwell, Language Arts & Mass Communications Departments. B.S. Abilene Christian College; M.S., Syracuse University.
- Thomas Blodgett, Fine & Applied Arts Department. B.S., Art, Lewis & Clark College; M.F.A., Fine & Applied Arts, University of Oregon.
- Carl Blood, Chairman, Industrial Technology. B.S., M.Ed., Industrial Arts, Oregon State University; Oregon Vocational Certificate.
- Robert Boettcher, Science Department. B.A., Biology, Jamestown College; M.A., Biology, University of Oregon.
- Ruth Boman, Language Arts Department. B.A., M.A., Colorado State University.
- Jacqueline Bonner, Developmental Education Department. B.S., General Science, Oregon State University; B.S., Education, Eastern Oregon College; M.S., Journalism, University of Oregon; M.S., Interdisciplinary Studies, University of Oregon. Part-time.
- Vicki Bradford, Paradental-Paramedical Department. Dental Assistant LCC.
- Carole Brubaker, Health & P.E. Department. B.S., Physical Education, Ball State University; M.S., Physical Education, University of Oregon.
- Penney Burtraw, Food Technology Department. Oregon Vocational Approval.
- Nathan Cammack, Performing Arts Department. B.S., M.S., Music, University of Washington.
- Carl Carmichael, Mass Communications Department. B.A., English-Speech, Westminster College; M.A., Rhetoric, Louisiana State University; Ph.D., Communications Research, University of Iowa. Part-time.
- Richard Coalwell, Mathematics Department. B.S., General Science, University of Oregon; M.S., Mathematics, Boston College.
- Sharon Cochran, Health & P.E. Department. B.A., Physical Education, University of Washington; M.S., Physical Education, University of Oregon.
- Joanna Cohen, Social Science Department. A.A., Psychology, Phoenix Junior College; B.A., Psychology, Arizona State; M.A., Psychology, California State College.
- Terry Conrad, Fine & Applied Arts Department. B.A., Art, Montana State University; M.A., Art History, University of Oregon.
- James Cox, Business & Data Processing Departments. B.S.E.E., University of Washington; M.B.A., Production Management & Data Processing, Utah State University; Oregon Vocational Certificate.
- David Croft, Social Science Department. B.A., M.A., History, Northern Illinois University.
- Delpha Daggett, Health & P.E. Department. B.S., Physical Education, Oregon State University; M.A., Physical Education, University of Oregon.
- Lawrence Davis, Mechanics Department. A & P Certificate; I.A. Rating; Oregon Vocational Approval; F.A.A. Mechanic Examiner.

- Bruce Dean, Fine & Applied Arts Department. B.F.A., Drawing, Painting & Illustration; Art Institute of Chicago; M.F.A., Painting & Print Making, University of Illinois.
- Virginia DeChaine, Chairman, Mass Communications. B.S., M.S., Speech & Radio-Television, University of Oregon.
- Gregory Delf, Social Science Department. A.A., Social Science, Blackhawk College; B.A., M.A., History, University of Iowa.
- Norman Delue, Mass Communications Department. B.A., Speech & Theater, Western Michigan University; M.A., Theater, St. Louis University. Part-time.
- Donald Dickinson, Mechanics Department. A&P Certificate; Oregon Vocational Approval.
- John Dickson, Director, Paradental-Paramedical. D.M.D., University of Oregon Dental School; Fellowship, International College of Dentists.
- Pauline Dixon, Language Arts Department. B.A., M.E., University of Oregon.
- Howard Dull, Mechanics Department. Oregon Vocational Certificate.
- Jack Dunham, Paradental-Paramedical Department. D.M.D., University of Oregon Dental School.
- Ron Edelman, Mathematics Department. B.S., Mathematics, South Dakota School of Mines & Technology; M.S., Interdisciplinary Studies, University of Oregon.
- Joann Ellingson, Home Economics Department. B.S., Education, University of Oregon; Miss Wood's Kindergarten School, Macalester College.
- James Ellison, Developmental Education Department. B.S., Biology, Oregon State University; M.S., Biological Science, Oregon State University.
- German Ellsworth, Mechanics Department. B.S., Aeronautics, Utah State University; FAA A&P Certificate; Oregon Vocational Approval.
- Richard Eno, Business Department. B.A., Business Education, Colorado State; M.Ed., Business Education, Oregon State University; Oregon Vocational Certificate.
- James Evans, Business Department. B.S., Agricultural Economics, University of Idaho; M.S.B.A., Management & Accounting, University of Colorado; Oregon Vocational Certificate; Licensed Public Accountant, Washington.
- Casey Fast, Mathematics Department. B.S., Education, Portland State University; M.A., Mathematics, University of Oregon.
- Victor Favier, Science Department. B.A., Zoology, University of Colorado; M.S., Biology, University of Oregon; Oregon Vocational Approval.
- Mary Fiorentino, Director of Nursing. B.S., Nursing, Seattle University; M. of Nursing, University of Washington.
- Mary Forestieri, Mass Communications Department. B.A., Speech, Western Michigan University; M.F.A., Speech, University of Oregon. Part-time.
- Jeanne Fox, Paradental-Paramedical Department. R.D.H., University of Oregon Dental School.
- Werner Fraenkel, Paradental-Paramedical Department. D.M.D., University of Oregon Dental School.
- Richard Fraga, Science Department. B.S., Botany, Oregon State University; M.S., Biology, University of Oregon.
- Helen Franz, Paradental-Paramedical Department. R.D.H.
- E. D. Furrer, Paradental-Paramedical Department. M.D., University of Oregon Medical School.

150 Faculty

- Sheila Gardipee, Nursing Department. B.S., Nursing, Carroll College.
- Melvin Gaskill, Chairman, Mechanics. Curtis-Wright Technological Institute of Aeronautics; FAA ground school certificate; FAA A&P Mechanics Certificate; FAA Parachute Technicians Certificate; Oregon Vocational Certificate.
- Robert Gault, Industrial Technology Department. A.S., Engineering, Central Washington College; Oregon Vocational Certificate.
- Florence Goulding, Health & P.E. Department. B.S., Physical Education, University of Utah; M.S., University of California at Los Angeles; Ph.D., Physical Education, University of Oregon.
- Dale Gramley, Social Science Department. A.B., Economics, Davidson College; M.Ed., Secondary Education, University of North Carolina.
- Rosemary Grant, Special Training Programs. Oregon Vocational Certificate. Part-time.
- Patricia Green, Nursing Department. B.S., Nursing, University of Oregon; M.S., Nursing, University of Michigan.
- Don Greenlund, Mechanics Department. Oregon Vocational Approval.
- George Gyorgyfalvy, Health & P.E. Department. B.S., Physical Education, Hungarian College of Physical Education; M.S., Physical Education, University of Colorado.
- Leland Halberg, Mass Communications & Developmental Education Departments. B.S., Education, Wisconsin State College; M.S., Mathematics & Physics, University of Oregon; Oregon Vocational Approval.
- Britta Hansen, Language Arts Department. B.A., University of Nevada; M.A., University of Oregon.
- Peggy Hanson, Food Technology Department. Pantry Training, Eastern Montana College.
- Keith Harker, Director of Library-Learning Resource Center. B.S., Library Science, University of Utah; M.S., Librarianship, University of Oregon.
- Joyce Harms, Mass Communications Department. B.A., M.A., Speech, University of Oregon.
- Barrie Hartman, Mass Communications Department. B.A., Journalism, Washington State University; M.S., Journalism, University of Oregon. Part-time.
- Millie Hartstrom, Business Department. B.S., Finance & Business Environment, M.S., Business Administration, University of Oregon; Oregon Vocational Certificate.
- Marilyn Haugan, Business Department. B.S., M.S., Business, Oregon State University; Oregon Vocational Approval.
- John Hauge, Fine & Applied Arts Department. B.F.A., Painting & Drawing, San Francisco Art Institute; M.F.A., Painting, University of Oregon.
- John Haurigan, Mechanics Department. Air Cadet Training; University of North Dakota; Oregon Vocational Approval.
- Lillian Heilpern, Home Economics Department. Graduate National Society of Childrens Nurseries, London.
- Glenn Heiserman, Science Department. B.S., M.S., Biology, University of Michigan.
- Cecil Hodges, Chairman, Health & Physical Education. B. Ed., M.S., Health & Physical Education, University of Oregon.
- Hayden Hodges, Science Department. B.S., Industrial Arts, M.A.T. Physics, Colorado State University.
- Kathryn Honey, Home Economics Department. B.A., Home Economics, Oregon State University; MHEc., Clothing, Oregon State University.

- Michael Hopkinson, Mass Communications Department. B.S., Psychology, University of Utah; M.S., Speech, University of Oregon.
- Joyce Hops, Social Science Department. B.A., Psychology & Biology, University of British Columbia; M.Ed., Educational Psychology/Guidance & Counseling, University of Toronto; D.Ed., Counseling & Psychology, University of British Columbia.
- Roger Houglum, Chairman, Electronics. B.S., Economics, M.Ed., University of Oregon; FCC Radiotelephone First Class License; Oregon Vocational Certificate.
- Marvin Hovland, Chief Pilot, Aerospace. F.A.A. Gold Seal Certificate; S.M.E.L. Rating, Instrument Instructors Certificate; Advanced Ground Certificate; Oregon Vocation Approval.
- John Howard, Chairman, Language Arts. B.S., M.A., University of North Dakota.
- Norma Hucka, Special Training Programs. B.S., Psychology, University of Oregon.
- Lon Humphries, Food Technology Department.
- James Huntington, Electronics Department. FCC Radiotelephone First Class License; Oregon Vocational Certificate.
- John Jacobs, Chairman, Science. B.S., M.S., Biological Science, Oregon State University.
- Marvin Jaegers, Social Science Department. B.S., M.S., Education, Indiana University.
- Betty James, Special Training Programs. B.S., University of Oregon. Part-time.
- Ron Janson, Fine & Applied Arts Department. B.A., M.F.A., Painting, University of Oregon.
- Roger Jay, Mathematics Department. B.A., M.A., Mathematics, Texas Technological College.
- Stephen John, Science Department, B.S., Chemistry, Ft. Lewis College; M.S., Chemistry, University of Oregon.
- Robert Johnson, Business Department. B.A., Social Science, Moorhead State College; M.B.A. Personnel & Industrial Management, University of Oregon; Oregon Vocational Certificate.
- Edith Jones, Business Department, B.S., Education, Nebraska Wesleyan University; Oregon Vocational Certificate.
- Daryl Jossart, Mechanics Department. Oregon Vocational Approval.
- Sheila Juba, Language Arts Department. B.A., M.A., University of Oregon.
- Foster Keene, Paradental-Paramedical Department. M.D., Stanford University.
- Thomas Kepner, Language Arts Department. B.A., University of Michigan; M.A., University of Oregon. Part-time.
- Marcia King, Home Economics Department. B.S., Food & Nutrition, Walla Walla College; M.S., Nutrition & Dietetics, Loma Linda University.
- Janice Kinman, Nursing Department. B.S., Nursing, University of Oregon.
- Wayte Kirchner, Performing Arts Department. B.A., M.A., Music, Central Washington State College.
- Bernard Kirk, Science Department. B.S., Forestry, University of California at Berkeley; M.S., Forestry, Michigan State University; M.A., Science Education, University of Michigan; M.S., Physics, Purdue University.
- Lloyd Klemke, Social Science Department. B.A., M.A., Sociology, San Fernando State College; Ph.D., University of Oregon.
- John Klobas, Social Science Department. B.A., Science, Oregon State University; M.A., Sociology, University of Oregon.

152 Faculty

- Ronald Kluth, Aerospace Department. A.S., Aviation, Big Bend Community College.
- Edwin Koch, Fine & Applied Arts Department. B.S., Architecture & Applied Arts; M.F.A. Painting, University of Oregon.
- Melvin Krause, Health & P.E. Department. B.S., M.S., Health & Physical Education, University of Oregon.
- John Kreitz, Chairman, Business. B.B.A. Merchandising & Selling, University of Minnesota; M.S., Management, University of Colorado; Oregon Vocational Certificate.
- Howard Kubler, Paradental-Paramedical Department. D.M.D., University of Oregon Dental School.
- Charles Lamb, Data Processing Department. Oregon Vocational Approval.
- Lucille Lamoreaux, Special Training Programs. B.A., German & Russian, University of Oregon. Part-time.
- Karen Lansdowne, Language Arts Department. B.A., M.A., M.Ed., University of Oregon.
- Eleanor Latterell, Home Economics Department. B.S., Saint Benedict College; M.S., Foods & Nutrition, Ohio State University.
- Carl Lemke, Mechanics Department. FAA Certificate A&P Mechanic; FAA Mechanic Examiner & Ground School Instructor; Oregon Vocational Certificate.
- Tom Lichty, Mass Communications Department. B.S., Speech, University of Oregon; FCC Radiotelephone First Class License; Oregon Vocational Certificate.
- Howard Lindstrom, Audio Visual Coordinator. B.S., Elementary Education, Southern Oregon College; M.A., Curriculum Materials & Institutional Technology, San Jose State College.
- Helen Loomis, Special Training Programs. B.A., Education, University of Minnesota, Part-time.
- John Loughlin, Mathematics Department. B.A., Mathematics, Montclair State College; M.A., Mathematics, Villanova University.
- George Luck, Mechanics Department. Oregon Vocational Certificate.
- Paula Lutz, Social Science Department. B.S., M.A., Anthropology, University of Oregon.
- Helen Lynn, Special Training Programs & Business Department. Oregon Vocational Certificate. Part-time.
- Darwin McCarroll, Electronics Department. FCC Radiotelephone First Class License; Oregon Vocational Certificate.
- Alice McCarthy, Nursing Department. B.S., Nursing, Carroll College; M.S., Nursing, Montana State University.
- John McCulloch, Social Science Department. B.S., Law, L.L.B., Law, University of Oregon; Oregon Vocational Approval.
- Milton Madden, Social Science Department. B.Mus., Ed., Music, Morningside College; M.M.Ed., Music & History, University of Arizona.
- William Madill, Data Processing Department. B.S., Mathematics, Stanford University.
- Paul Malm, Social Science Department. B.A., History, Southern California College; M.A., History, Claremont University.
- Rosa Marks, Developmental Education Department. M.A., Education & Learning Difficulties, University of Oregon.

- Jay Marston, Science Department. B.S., Biology, Eastern Montana College; M.S., Biology, University of Oregon.
- Del Matheson, Catalog & Reference Librarian. A.A., B.S., English, Mankato State College; M.S., Library Science, University of Oregon.
- Robert Maxwell, Mechanics Department. Oregon Vocational Approval.
- Gerald Meier, Industrial Technology Department. B.S.F., Forest Management, Pennsylvania State University.
- Henning Melvej, Food Technology Department. Denmark Business College; Dannish Certified Pantry Chef; Oregon Vocational Approval.
- Mary Merrill, Special Training Programs. Oregon Vocational Certificate. Part-time.
- O. Jed Merrill, Industrial Technology Department. B.S., University of Oregon; Oregon Vocational Certificate.
- Roland Meyer, Mechanics Department. Oregon Vocational Certificate.
- Frank Miller, Language Arts Department. B.S., Portland State College; M.A., University of Washington. Part-time.
- Margaret Milne, Nursing Department. B.A., Biology, University of Oregon; M.A., Biology, University of Oregon; Graduate Royal Infirmary, Scotland; Graduate Simpson Memorial Maternity Pavilion, Scotland.
- Michael Mitchell, Science Department. B.S., M.A.T., Physical Science, Washington State University.
- Ronald Mitchell, Social Science Department. B.A., Psychology, Fresno State College.
- Jack Mitchum, Paradental-Paramedical Department. M.S., D.M.D., University of Oregon Dental School.
- George Mobley, Special Training Programs. Certified Welding Instructor.
- Harold Molenkamp, Social Science Department. B.A., M.A., Philosophy, University of Denver.
- Bill Mullin, Social Science Department. B.S., Secondary Education, Oregon College of Education; M.S., Interdisciplinary Studies, University of Oregon.
- Larry Murray, Director of Special Training Programs. B.S., Business Education; M.S., Accounting, University of North Dakota.
- Henry Naessens, Mechanics Department. Diploma, Aero Mechanics, Aeronautical University of Chicago; Oregon Vocational Certificate.
- Jerry Nehring, Data Processing Department. Oregon Vocational Approval.
- John Neely, Mechanics Department. Oregon Vocational Approval.
- Virginia Nelson, Language Arts Department. B.A., M.A., Southern Illinois University. Part-time.
- Richard Newell, Health & P.E. Department. B.S., Physical Education, University of Illinois; M.S., Health, University of Oregon.
- Ann Newton, Nursing Department. B.S., Nursing, University of Oregon.
- Ray Nott, Electronics Department. Oregon Vocational Certificate.
- Ada Orcutt, Language Arts Department. B.A., Willamette University. Part-time.
- Donald Ownbey, Acquisitions Librarian. B.A., History, M.Ed., Linfield College; M.L.S., Library Science, University of Oregon.
- Audrey Parker, Food Technology Department.
- Eugene Parro, Science Department. B.E., Trade Industrial Education, Colorado State University; Oregon Vocational Certificate.
- Paul Patrick, Mechanics Department. M.S., Agriculture, Oregon State University; Oregon Vocational Certificate.

154 Faculty

Horace Pendergrass, Food Technology Department.

Wendell Pepperdine, Science Department. B.S., University of California at Berkley; M.S., Chemistry, University of Oregon.

Muriel Peterson, Paradental-Paramedical Department. R.D.H., University of Oregon Dental School; Oregon Vocational Approval.

Melvin Pfel, Food Technology Department. Oregon Vocational Approval.

John Phillips, Industrial Technology Department. B.S., Forestry, University of California; M.Ed., Oregon State University; Licensed Surveyor; Oregon Vocational Certificate.

Jack Powell, Language Arts Department. B.A., M.A., University of Portland. Part-time.

Raymond Proctor, Coordinator Adult Education. B.S., Business Administration, Oregon State University; M.Ed., School Psychology Services, University of Oregon; Oregon Vocational Certificate.

Herb Pruett, Mechanics Department. B.S., M.Ed., Trade Industrial Education, Oregon State University; Oregon Vocational Certificate.

Robert Radcliff, Health & P.E. Department. B.S., M.S., Health & Physical Education, University of Oregon.

Edward Ragozzino, Chairman, Performing Arts. B.S., M.S., Speech, University of Oregon.

L. C. Raynes, Electronics Department. FCC Radiotelephone First Class License; Oregon Vocational Certificate.

Thomas Reimer, Mathematics Department. B.S., Mathematics, Seattle Pacific College; M.S., Mathematics, Oregon State University.

Claus Reschke, Language Arts Department. B.A., M.A., University of Oregon.

Gary Rholl, Business Department. B.A., Business Education, University of Iowa; M.B.A., Finance, University of Oregon; Oregon Vocational Certificate.

Ray Rickett, Paradental-Paramedical Department. D.M.D., University of Oregon Dental School.

Antoinette Robinson, Language Arts Department. B.A., College of Notre Dame; M.A., University of Nevada.

Richard Romanek, Electronics Department. B.S., Radio Engineering, Tri-State College; B.S., Physics, University of Oregon; M.Ed., University of Oregon.

Theodore Romoser, Language Arts Department. B.A., M.A., Southern Illinois University.

Michael Rose, Language Arts Department. B.A., M.A., University of Oregon.

Irvin Roth, Health & P.E. Department. B.A., Physical Education, Willamette University; M.Ed., University of Oregon.

Freeman Rowe, Science Department. B.S., Biology, Pacific University; M.S., Science, Oregon State University.

Fred Sackett, Health & P.E. Department. B.A., Physical Education, Washington State University; Registered Physical Therapist, Mayo Clinic.

Delta Sanderson, Language Arts Department. B.A., M.A., University of Oregon.

Jack Scales, Science Department. B.S., Technical Education, Oklahoma State University; Oregon Vocational Certificate; A.D. Electrical Technology, Oregon State University.

Celeste Schneider, Language Arts Department. B.A., M.A., University of Oregon.

Vernon Schwin, Mathematics Department. B.A., Mathematics, Olivet Nazarene College; M.S., Interdisciplinary Studies, University of Oregon.

Edward Seabloom, Mathematics Department. B.S., General Science, Oregon State University; M.S., Interdisciplinary Studies, University of Oregon.

- Gary Searl, Social Science Department. B.B.A., Business Administration, M.S., Interdisciplinary Studies, University of Oregon.
- David Sherman, Performing Arts Department. B.S., Speech, M.S., Interdisciplinary Studies, University of Oregon.
- John Shuster, Industrial Technology Department. Welding Certificate Federal Department of Interior; Oregon Vocational Approval.
- Peter Simpson, Social Science Department. B.A., M.A., History, University of Wyoming.
- Donald Smith, Language Arts Department. B.A., M.A., University of Oregon.
- Hazel Smith, Mathematics Department. B.A., Education, University of Alberta; M.S., Mathematics, Michigan State University.
- James Snow, Mathematics Department. B.A., Mathematics & Chemistry; M.A., Mathematics, Colorado State University.
- Terry Strong, Paradental-Paramedical Department. C.D.A., University of Oregon Dental School.
- William Sweet, Language Arts Department. B.A., M.F.A., University of Oregon. Part-time.
- Allen Tarpening, Health & P.E. Department. B.S., Physical Education, Linfield College; M.Ed., Pacific University.
- Cherry Taylor, Language Arts Department. B.S., University of Oregon; M.S., University of Southern California.
- Elaine Taylor, Paradental-Paramedical Department. R.D.H., University of Oregon Dental School.
- Arthur Tegger, Language Arts Department. B.A., Westmont College; M.A., Pacific University.
- Dale Tobin, Paradental-Paramedical Department. R.D.H., University of Oregon Dental School; B.S., Health Education, University of Oregon Dental School.
- Ron Tyvan, Paradental-Paramedical Department. Inhalation Therapist, Sacred Heart General Hospital.
- Arlene Underhill, Nursing Department. R.N., Sacramento City College; B.S., University of Oregon.
- Adrian Vaaler, Industrial Technology Department. B.S., University of North Dakota; C.E., University of North Dakota; Licensed Professional Engineer, Oregon; Oregon Vocational Certificate.
- Ruby Vonderheit, Language Arts Department. B.A., M.A., University of Oregon. Part-time.
- Gordon Wehner, Business & Social Science Departments. B.A., Accounting, Economics & Humanities, Lewis & Clark College; M.A., Accounting & Business Statistics, University of Oregon.
- Floyd Weitzel, Science Department. B.A., Biology, George Fox College; M.A., Zoology, University of Colorado.
- Jonathan West, Industrial Technology Department. Tuskegee Institute; California College Engineering Services.
- Bruce Wild, Fine & Applied Arts Department. B.A., Central Washington College; M.F.A., Ceramics, University of Oregon.
- Floyd Wilkes, Director, Data Processing. B.S., Accounting, Brigham Young University; Oregon Vocational Approval.
- Nile Williams, Director, Adult-Education. B.A., Social Science, College of Idaho; M.Ed., University of Oregon.

156 Counselors

- Mildred Wilson, Special Training Programs. B.A., Elementary Education, Oregon College of Education. Part-time.
- Wilcey Winchell, Developmental Education Department. B.S., Education, University of Oregon; M.Ed., University of Oregon.
- Marvin Winger, Mechanics Department. Oregon Vocational Approval.
- Arden Woods, Language Arts Department. B.A., M.A., University of Oregon. Part-time.
- Rosco Wright, Chairman Fine & Applied Arts Department. B.S., Education; M.S., General Studies (Art), University of Oregon.
- Thomas Young, Health & P.E. Department. B.S., Physical Education; M.Ed., Springfield College.
- Howard Zink, Chairman, Mathematics. B.A., Mathematics, Northwestern College; M.S., Mathematics, University of Colorado.

Counselors

- Wilbert (Buck) Bailey, Director of Placement. B.A., Vocational Agriculture; M.Ed., Counseling, Pennsylvania State University.
- John Bernham, Coordinator of Testing. B.A., English, Cascade College; M.Ed., Counseling, University of Oregon.
- Janice Brandstrom, Counselor. B.S., Chemistry, University of Washington; M.Ed., Counseling & Psychology, University of Oregon.
- Ralph Burns, Counselor-Instructor. B.S., Industrial Education; B.S., Agricultural Education; M.S., Agriculture, Oregon State University.
- Jack Carter, Director of Student Activities. B.S., Education, Southern Oregon College; M.Ed., University of Oregon.
- Pauline Dixon, Counselor-Instructor. B.A., Journalism; M.Ed., Counseling, University of Oregon.
- Betty Ekstrom, Counselor-Instructor. B.A., Journalism, University of Oregon.
- Patrick Fraleigh, Counselor. B.A., English, History & Music, University of British Columbia; P.B., Secondary Education, University of British Columbia.
- Ellène Goldsmith, Coordinator of Student Health Services. B.S., Nursing Education, University of Minnesota; R.N., L.P.N., M.S., Health Education, University of Oregon; Oregon Vocational Certificate.
- Steve Hanamura, Counselor. B.A., Psychology, Lindfield College; M.A., Counseling, University of Oregon.
- Dallas Haverland, Counselor-Instructor. B.S., Special Education; M.Ed., Secondary Education, University of Oregon; M.S., Guidance and Counseling, Purdue University.
- Frances Howard, Director of Financial Aids. B.S., Business; M.Ed., Guidance, University of Oregon.
- Jay Jones, Counselor. B.A., English, Southern Illinois University; M.S., Educational Psychology, University of Oregon.
- Robert Marshall, Director of Admissions-Registrar. B.S., M.A., Industrial Vocational Education, Pennsylvania State University; Oregon Vocational Certificate.
- Irene Parent, Coordinator of Foreign Students. B.S., Physical Education, Pacific University; M.Ed., Oregon State University.
- Jack Powell, Counselor-Instructor. A.A., English, Clark College; B.A., English, University of Portland; M.S., English, University of Portland.

- David Roof, Coordinator of Veterans Affairs. B.A., Geology, Hanover College; M.A., Ed., Science, Western Kentucky University.
- Arthur Schaefer, Counselor-Instructor. Certificate in Finance & Banking, University of Washington; Oregon Vocational Approval.
- Gene Sorenson, Counselor. B.A., Secondary Education, Montana State University; M.Ed., Montana State University.
- Helene Stadler, Counselor. B.A., Sociology & Psychology, M.S.W., Social Work, University of Minnesota.
- Jonathan West, Counselor-Instructor. A.A., Tuskegee Institute; A.A., California College Engineering Services.
- William Wright, Acting Director of Counseling. B.A., Science Education, M., Guidance & Counseling, Oregon State University.

INDEX

Academic Calendar	1	Clubs and Organizations	9
Academic Council	15	College District	3
Academic Information	12	Construction Technology	59
Academic Probation	14	Core Biology	116
Accounting/Clerical	21	Costs	7
Activities	9	Counseling	11
Administration	146	Counselors	157
Admission Procedures	6	Credit by Examination	13
Adult Basic Education	143	Custodial Maintenance and Repair	143
Adult Education	140	Data Processing	35
Advanced Placement	13	Degrees	14
Aerospace	18	Dental Assistant	102
Agricultural and Industrial Equipment Technology	84	Dental Hygiene	104
Agriculture	49	Dentistry	109
Airframe and Powerplant Mechanics	87	Design, Applied	46
Anthropology	126, 128	Determination of Residence	8
Appliance Service	38	Developmental Education	142
Applied Science	115	Diesel Technology	92
Apprentice Training	141	Diplomas	15, 141
Architecture, Interior Architec- ture, Landscape Architecture	46	Domestic Refrigeration Service	37
Art and Applied Design	46	Drafting, Technical	65
Art Education	47	Economics	126, 129
Art History	48	Education, Elementary	129
Arts and Letters, General	72	Education, Secondary	130
Arts and Letters, General Studies	72	Electronics	36
Athletics	9	Electronics Technician (Communication)	39
Attendance	14	Electronic Engineering Technician	41
Auditing	13	Elementary Education	129
Auto Body and Fender	87	Engineering	60
Automotive Painting	87	Engineering, Civil and Structural	60
Automotive and Diesel Technology	89	Engineering, Electronic	41
Automotive Technology	89	English	71
Biology	116	Entomology	116
Board of Education	146	Environmental Technology	143
Books, Supplies and Tool Kits	9	Equipment, Agricultural and Industrial	84
Bookstore	10	Facilities	10
Botany	116	Faculty	147
Broadcasting, Radio	75	Fees, Special	8
Broadcasting, Television	77	Fees, Miscellaneous	9
Building Materials Management	58	Financial Assistance	11
Business	21	Fine and Applied Arts	45
Business Administration and General Studies-Business	22	Fire Prevention Technology	121
Business Education	23	Flight Technology	18
Cafeteria and Restaurant	10	Food Technology	49
Calendar, Academic	1	Foreign Languages	71
Campus Events	10	Forest Technician	61
Certificates	15	Forestry	64
Chemistry	117	General Arts and Letters	72
Child Care Services	56	General Information	4
Civil and Structural Engineering Technology	60	General Science	118
Clerk/Typist	22	General Social Science	131
		General Studies, Arts and Letters	72

General Studies, Business	22	Oceanography	116
General Studies, Humanities	72	Organizations and Club	9
General Studies, Science	118	Ornamental Horticulture	143
Geography	126, 132	Paradental-Paramedical	101
Geology	118	Performing Arts	111
Glossary of Terms	12	Philosophy	126, 134
Grading	12	Photography	80
Health and Physical Education ..	50	Physical Education	54
Heavy Truck Operation	144	Physics	120
High School Diploma	141	Political Science	127, 125
History	126, 132	Powerplant Mechanics	87
History, Art	48	Practical Nursing	99
Home Appliance Service	38	Prepharmacy	119
Home Economics	54	Programs	16
Honor Lists	13	Psychology	127, 136
Horticulture, Ornamental	143	Publications	10
Housing	11	Radio	10
Humanities, General Studies	72	Radio Broadcasting	75
Industrial Equipment		Radio and Television Service ..	43
Technology	84	Refrigeration Service, Domestic	37
Industrial Technology	58	Refunds	9
Inhalation Therapy	106	Residence, Determination of	9
Insurance Adjusters	93	Restaurant and Cafeteria	10
Interior Architecture	46	Sales and Marketing	26
Journalism	79	Schedule of Classes	14
Key Punch	25	Science	113
Landscape Architecture	46	Science, General Studies	118
Language Arts	69	Secondary Education	130
Late Enrollment	14	Secretarial	26
Law, Preprofessional	133	Secretarial Science	27
Law Enforcement	123	Social Science	121
Learning Resource Center, Library	10	Sociology	128, 136
Library, Learning Resource Center	10	Special Fees	8
Machine Shop	95	Special Programs	138
Manpower Development and Training Act/Work Incentive Programs	144	Special Training Programs	143
Marketing and Sales	26	Speech	73
Mass Communications	73	Structural Engineering	60
Mathematics	81	Student Activities	9
Mechanics	84	Student Facilities	10
Medical Office Assistant	108	Student Government	10
Medical Technology	109	Student Services	11
Medicine	110	Study Skills Center	11
Microbiology	116	Technical Drafting	65
Middle Management	25	Television Broadcasting	77
Music	112	Television, Radio Service	43
Non-Credit Courses	13	Testing	11
Nursing	97	Tool Kits	9
Nursing	101	Transfer Credits	13
Nursing Assistant	101	Tuition	7
Nursing, Associate Degree	97	Typist, Clerk	22
Nursing, Practical	99	Unsatisfactory Work	14
		Welding Technology	67
		Withdrawal From Class	14
		Zoology	116

**LANE COMMUNITY COLLEGE
ARCHIVES
(DO NOT CIRCULATE)**

**Lane
Community
College**

Accredited by Northwest Association of
Secondary and Higher Schools
Member: American Association of Junior Colleges
Member: Northwest Association of Junior Colleges
Member: Oregon Community College Association



Lane Community College

4000 E. 30th Avenue
Eugene, Oregon 97405