LANE COMMUNITY COLLEGE

Catalog...1966-67

LANE COMMUNITY COLLEGE

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LANE COMMUNITY COLLEGE

1966-67 CATALOG



"The open door to careers and personal improvement"

200 N. MONROE EUGENE, OREGON 97402 TELEPHONE 342-4931

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ADULT EDUCATION

BUSINESS

COMMUNICATIONS

CONSTRUCTION

ELECTRONICS

FINE ARTS

HEALTH & P.E.

MATH & SCIENCE

M.D.T.A.

MECHANICS

NURSING & HOME EC.

SOCIAL SCIENCE

SUMMER SESSION 1966

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CALENDAR FOR 1967

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1966-67 CALENDAR

SUMMER SESSION 1966

June 20 (Monday) Registration
June 21 (Tuesday) Classes Begin

July 4(Monday)Independence Day HolidayAugust 12(Friday)Eight-week Session Ends

FALL TERM 1966-67

Sept. 19-23 (Mon.-Fri.) New Student and Registration Week

Registration

Registration

Sept. 26 (Monday) Classes Begin

Nov. 24-27 (Thurs.-Sun.) Thanksgiving Holiday

Dec. 17 (Saturday) Fall Term Ends

WINTER TERM 1966-67

Jan. 3 (Tuesday) Registration

Jan. 4 (Wednesday) Classes Begin

Mar. 18 (Saturday) Winter Term Ends

SPRING TERM 1966-67

Mar. 27

Mar. 28 (Tuesday) Classes Begin
May 30 (Tuesday) Memorial Day Holiday
June 10 (Saturday) Spring Term Ends

(Monday)

(Monday)

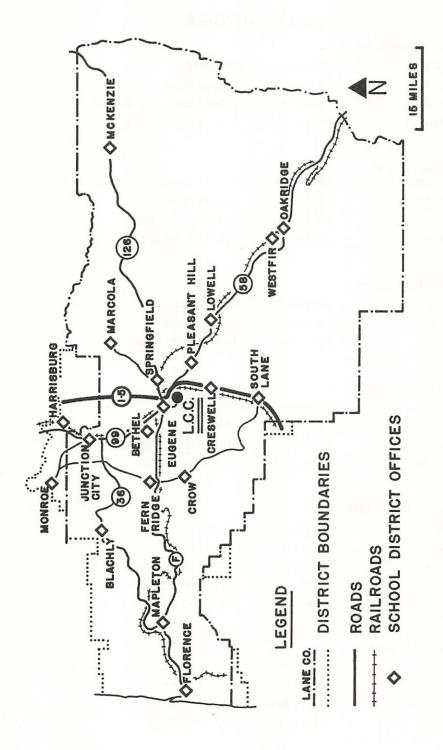
SUMMER SESSION 1967

June 19

June 20(Tuesday)Classes BeginJuly 4(Tuesday)Independence Day HolidayAugust 11(Friday)Eight-week Session EndsSept. 1(Friday)Eleven-week Session Ends

FALL TERM 1967-68

Sept. 17-23 (Sun.-Sat.) New Student and Registration Week
Sept. 25 (Monday) Classes Begin
Nov. 23-26 (Thurs.-Sun.) Thanksgiving Holiday
Dec. 16 (Saturday) Fall Term Ends



LANE COMMUNITY COLLEGE DISTRICT MAP

BOARD OF EDUCATION



Dean Webb Vice Chairman

William Bristow, Jr. Chairman

Lyle Swetland Clifford Matson Albert Brauer Dale Parnell College President

Olga Freeman Robert Ackerman

Functions of the Lane Community College Board are similar to those of any school board. The Board is given the primary responsibility under the law for all aspects of the College District.

Seven individuals are elected by the people of the District to the Board of Education. The District is divided into five zones with two positions at large.

The Board of Education constantly endeavors to formulate and re-evaluate policies for the guidance of its Staff and for the benefit of the people who will be affected by them. The Board delegates to the President its authority for administering the laws and policies governing the Community College.

ADMINSTRATIVE STAFF



President DALE PARNELL



Dean of Instruction WILLIAM HEIN



Dean of Business Affairs WILLIAM COX



Dean of Students
I. S. HAKANSON



Dean of Adult Education C. S. OBITZ



Asst. to the Dean of Instruction G. R. BLOOMQUIST



Asst. to the President BERT DOTSON



Governmental Affairs and Funding Specialist RICHARD EYMANN



Adult Education Occupational Education Coordinator JORIS JOHNSON



Asst. to the Dean of Adult Education WILLIAM MORRIS



Adult Education General Education Coordinator NILE WILLIAMS

DIVISION CHAIRMEN



Construction CARL BLOOD



Mechanics MELVIN GASKILL



Nursing and Home Economics ELLENE GOLDSMITH



Health and Physical Education CECIL HODGES



Electronics ROGER HOUGLUM



Communications JOHN HOWARD



Math and Science JOHN JACOBS



MDTA ROBERT MARSHALL



Social Science
GERALD RASMUSSEN



Library-Learning Resources Center JAMES SIMMONS



Business Education Acting Chairman RUTH THYGESEN

COUNSELORS













WILBERT BAILEY

RALPH BURNS

PAULINE DIXON

KENNETH HILLS

FRANCES HOWARD

WILLIAM WRIGHT

ADMINISTRATIVE AND INSTRUCTIONAL STAFF

All members of the staff of Lane Community College have been carefully selected for their proficiency or background in the positions they are holding. Instructors must meet the approval of the State Department of Education or the State System of Higher Education. The secretarial and custodial personnel have been assigned key responsibilities in working in the various divisions to help the instructional program. We are extremely proud of each individual staff member as an employee of Lane Community College.

- ALFORD, EVAN C., Communication Skills—B.S., University of Oregon
- ALLEN, ROBERT T., Civil Engineering—B.S., Civil Engineering, Iowa State University
- ARMSTRONG, MABEL, Chemistry B.S., Chemistry, Oregon State University; M.S., Biochemistry, Oregon State University
- ARMSTRONG, PAUL, English Composition—B.A., Chico State College, Calif.; M.A., English, University of Oregon
- BAILEY, WILBERT G., MDTA Counselor—B.A., Vocational Agriculture, M.Ed., Counseling, Pennsylvania State
- BELDEN, GLADYS, MDTA Basic Education—Home Economics B.A., Oklahoma State
- BERNHARDT, DR. NORMA, English Composition and Literature — B.A., English and Piano, Salem College, N.C.; M.Ed., Ph.D., Education, University of North Carolina
- BLOOD, CARL A., Construction, Division Chairman, Drafting B.S., M.Ed. Oregon State University

- BLOOMQUIST, GILBERT R., Asst. to Dean of Instruction—B.S., University of Oregon, M.Ed., Oregon State University
- BURNS, RALPH E., Counselor & Placement Coordinator—B.S., B.S., M. Agriculture, Oregon State University
- CHACKO, KURIEN, Biology, Botany & Zoology—B.S., University of Trivandrum, India; M.S., University of Oregon
- COX, W. W., Dean of Business Services-Deputy Clerk—A.B., M.A., Colorado State College of Education
- CROCKER, C. N., Machine Shop—Oregon Vocational Certificate
- DAGGETT, DELPHA, Physical Education—B.S., Physical Education, Oregon State University; M.A., University of Oregon
- deBROEKERT, CARROL M., History of Western Civilization—B.A., M.A., Political Science & History, University of Oregon
- DELLINGER, WILLIAM, Physical Education B.S., Physical Education, M.Ed., University of Oregon

- DICKINSON, DONALD, Airframe & Powerplant Mechanics—A & P Certificate, Vocational Certificate
- DIXON, PAULINE, Counselor B.A., Journalism, M.Ed., Counseling, University of Oregon
- DOTSON, BERT J., Administrative Assistant to the President—B.S., M.Ed., University of Oregon
- ELLSWORTH, GERMAN C. M., Aircraft—B.S., Aeronautics, Utah State University; A & P Certificate
- EYMANN, RICHARD, Governmental Affairs Specialist, Assistant to the President for Funding & Development—M.A., Bus. Adm., Dartmouth College
- FIELD, OLIVE E., MDTA Basic Education—30 Years Instr. Experience
- FLEMMING, BERNICE, American Government B.A., University of Maryland; M.A., American University
- GASKILL, MELVIN C., Division Chairman, Mechanics—Oregon Vocational Certificate, Curtiss Wright Tech., FAA Certificate, A & P Mechanics
- GOLDSMITH, ELLENE M., Division Chairman, Nursing & Home Economics—B.S., University of Minnesota; R.N., L.P.N., M.S., Health Education, University of Oregon
- GRANT, PATRICK, Small & Major Appliance Repair—Oregon Vocational Certificate
- GUBRUD, ALLEN, Physical Science & Physics — B.A., Pacific University; M.S., Syracuse University
- HAKANSON, I. S., Dean of Students— B.S., Linfield College; M.Ed., Oregon State University
- HALBERG, LELAND R., Math II, III & Physics—B.S., Education, Wisconsin State College; M.S., Physics, University of Oregon
- HAMILL, ROBERT, Administrative Intern—M.Ed. University of Oregon
- HARTSTROM, MILDRED E., Business Education — B.A., Finance & Business Environment, University of Oregon

- HEIN, WILLIAM, Dean of Instruction —B.A., Education, M.A., Education Administration, San Francisco State College
- HILLS, DR. KENNETH D., Counselor
 —B.A., Northwest Nazarene College;
 M.A., PhD., University of Wyoming
- HODGES, CECIL M., Division Chairman Health & Physical Education—B.Ed., M.S. in Health & P.E., University of Oregon
- HODGES, MARCIA J., English Composition—B.A., William Smith College, N.Y.; M.A., Cornell University, N.Y.
- HOUGLUM, ROGER J., Division Chairman, Electronics—B.S., M.Ed., University of Oregon; FCC Radiotelephone First Class License
- HOWARD, FRANCES, Counselor B.S., Business, Ed.M., Guidance, University of Oregon
- HOWARD, JOHN E., Division Chairman Communications—B.A., Education & English, M.A., English, University of North Dakota
- HUNTINGTON, JAMES R., Electronics
 —Radio Announcer & Engineering,
 Vocational Certificate
- ISAACSON, DONALD W., Welding— Vocational Certificate
- JACOBS, JOHN W., Division Chairman Math & Science—B.S., M.S., Biological Sciences, Oregon State University
- JOHNSON, JORIS O., Adult Education Coordinator of Occupational Education—Oregon Vocational Certificate
- KLEMKE, LLOYD, Sociology B.A., M.A. in Sociology, San Fernando State
- LANSDOWNE, KAREN, Communications—B.A., M.A. in English & Language, University of Oregon
- LEMKE, CARL, Airframe & Powerplant — Oregon Vocational Certificate, F.A.A. certified A & P Mechanic, F.A.A. Mechanic Examiner & ground school instructor
- LUCK, GEORGE, Body & Fender Repair—Oregon Vocational Certificate

- MARSHALL, ROBERT B., MDTA Supervisor—B.S., M.A., Industrial Vocational Education, Pennsylvania State University
- MAST, GEORGE L., Diesel Mechanics
 —Oregon Vocational Certificate
- McCARROLL, DARWIN, Radio, TV, Repair—Oregon Vocational Certificate, FCC Radio Telephone First Class License
- MERRILL, O. J., Civil & Structural Engineering — Oregon Vocational Certificate, B.S., University of Oregon
- MORRIS, WILLIAM R., Assistant Dean of Adult Education—B.S., Agriculture Education, M.Ed., Education, University of Oregon
- NOTT, JR., RAY, Major Appliance— MDTA Oregon Vocational Certificate
- OBITZ, CLARENCE S., Dean of Adult Education—B.S., M.S., Bucknell University
- PARENT, IRENE, Counselor B.S., Pacific University; M.Ed., Oregon State University
- PARKER, PHILIP, Civil & Structural Engineering Technician — B.S., Missouri School of Mines & Technology
- PARNELL, DALE P., President—B.A., Willamette University; M.Ed., D.Ed., University of Oregon
- PARRO, EUGENE Z., Carpentry & Cabinetmaking Oregon Vocational Certificate
- PETERSON, MURIEL A., Dental Assistant MDTA, Graduate Dental Hygienist, University of Oregon
- PHILLIPS, JOHN M., Forestry—B.S., Forestry, University of California
- PIRTLE, Cora I., MDTA-Basic Education—B.A., M.A., University of Oregon
- PRUETT, HERBERT, Related Subjects
 —B.E., Trade & Industrial Education, Oregon State University

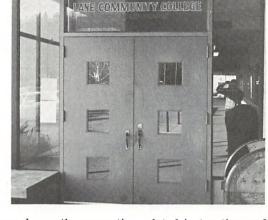
- RASMUSSEN, GERALD, Division Chairman Social Science—B.S., History, M.A., History, University of Oregon
- RUSHING, ROY D., Welding—Oregon Vocational Certificate
- SCALES, JACK D., Physics—B.S., Technical Education, Oklahoma State University
- SIMMONS, JAMES W., Director Learning Resource Center — B.A., English & Library Science, M.A., Librarianship, University of Washington
- SMITH, HAROLD A., Speech B.S., Speech, University of Oregon
- SMITH, HAZEL, Math & Science B.A., Education, University of Alberta; M.S., Math, Michigan State University
- THYGESEN, RUTH, Business Education—Oregon Vocational & Adult Education Certificate
- TRIPPETT, LEE, Electronics Engineering Technician B.S., Physics, University of Oregon
- UNA, EVA MAE, Practical Nursing, Pre-Nursing — University of Idaho Sacred Heart School of Nursing, 3 years; Spokane, Washington, Graduate; RN
- WEHNER, GORDON, Social Science— B.A., Accounting, Economics & Humanities, Lewis & Clark College, M.S. University of Oregon
- WHITTLE, ALDIN V., MDTA Basic Education—B.A., Science Education, M.Ed., Guidance & Counseling
- WILLIAMS, NILE, Adult Education Coordinator of General Education— B.A., Social Science, College of Idaho; M.Ed., University of Oregon
- WINGER, MARVIN, Mechanics (Auto)
 —Oregon Vocational Certificate
- WRIGHT, WILLIAM A., Counselor—B.A., Science Education, M., Guidance & Counseling, O.S.U.



General Information

PURPOSES OF LANE COMMUNITY COLLEGE:

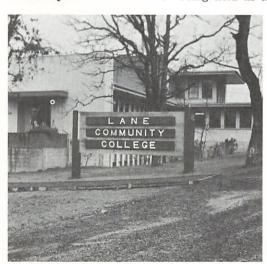
- Counseling and guidance in vocational and educational planning.
- Occupational education for preparation for employment in technical and vocational fields.
- General education for personal growth, enrichment and advancement.
- 4. Adult evening courses to provide for job improvement, personal growth, apprentice related instruction and general information.
- 5. Liberal arts and pre-professional lower division collegiate education for transfer to higher institutions offering baccalaureate degrees.



ORGANIZATION AND DEVELOPMENT:

Lane Community College was voted into existence October 19, 1964 by voters of Lane County and Harrisburg Union High School District, and Monroe Elementary District. The college began operating as a legally constituted tax supported institution on July 1, 1965.

The Eugene Vocational School, which was organized in 1938 and later became known as the Eugene Technical-Vocational School, has become an integral part of the Lane Community College. The Eugene School District facilities are being leased and will be used for the technical-vocational programs until a new campus is developed. Classes are also being held in the Georgia-Pacific office building



in Springfield. High schools in Eugene, Springfield, Cottage Grove, Florence, Junction City, Oakridge, Harrisburg and Monroe have provided facilities for classes at night.

Lane Community College is organized in accordance with the provisions of the Oregon Community College Act, Chapter 602, Oregon Laws.

Lane Community College is a two-year educational institution which provides for advanced study varying from one course to the complete offerings necessary for an Associate of Arts or Associate of Science degrees. The college maintains an open door policy which affords an opportunity for all individuals to avail themselves of its facilities. Every effort is made to provide complete curricular offerings day and night.

During the first year of operation the student body selected the nickname the "Titans" after Greek mythology; chose blue and white as the school colors; named the monthly school paper "The Torch"; and published an annual, "The Titan."

ACCREDITATION

Lane Community College is accredited as a community college by the Oregon State Board of Education. Its charter was presented by the Governor of the State of Oregon in Eugene, Oregon, on September 28, 1965. All credit courses, instructors and programs have been approved.

College transfer courses have been approved by the Oregon State System of Higher Education. Instructors teaching college transfer courses have been approved by the Oregon State System of Higher Education. Students may transfer up to 93 quarter hours of credit work of lower division standing to Oregon four-year institutions.

Occupational curriculums have been approved by the Oregon State Department of Education. Occupational instructors are certified to teach in their assigned field.

Lane Community College has applied for accreditation from the Northwest Association of Secondary and Higher Education. The College has been accepted into full membership in the American Association of Junior Colleges.

NEW CAMPUS

Plans are underway for building a complete new campus for Lane Community College located at 30th Avenue and Interstate 5 Freeway south of Eugene. It is anticipated that the first phase of construction will be completed by the fall of 1968. Until that time LCC will continue to hold classes in scattered locations.



New campus site on E. 30th Ave., Eugene

STUDENT SERVICES

Counseling and Guidance Services: One of the advantages of having a community college in an area is the availability of a counselor to help students in realistic appraisal and planning toward maximum development. The services of a staff of qualified and dedicated counselors are continuously and conveniently available to students enrolled at Lane Community College as well as to all who are seeking educational and vocational guidance.

Counseling offices are located at the major campuses, and counselors are on duty from 8:00 a.m. to 9:00 p.m. daily throughout the entire year. No appointment is necessary to see one of them.

At any time counselors will meet with students to help plan programs, regis-

ter for or withdraw from classes, help locate housing, aid in obtaining employment or financial assistance, or arrange student activities. They are always ready to assist with answers to any of the major and minor questions that arise in the daily pursuit of further education. Students are reminded to seek these services as the needs occur.

Scholarships: A limited number of tuition scholarships are available to students. Information about applying for these can be obtained at the counseling office.

The Board of Education awards one scholarship to a current graduate of each of the high schools in the college district. In addition the following



trict. In addition, the following local organizations awarded scholarship aid to one or more students during the 1965-66 school year: (More are in the process of being established.)

Cottage Grove High School Associated Student Body

Creswell High School Future Farmers of America

Drain High School Chapter of the National Honor Society

Elmira Grange

Eugene Junior Chamber of Commerce

Eugene Kiwanis

Eugene Rotary Club

Guy Lee Parent Teacher Association, Springfield, Oregon

Lane County Labor Council

Lassen, California Union High School Spanish Club

Lassen, California Union High School Chapter of Future Teachers of America

Oregon State Scholarship Commission

Thurston High School Future Business Leaders of America

Timber Bowl, Springfield, Oregon

Zonta Club of Eugene, Oregon

As of the date of publication, additional scholarships to be awarded for the coming year have been guaranteed by the following people or organizations in the amount of: (Full tuition for one year contingent upon satisfactory performance each term)

Altrusa Club of Eugene.

Dr. Albert Brauer—To be awarded to a student from the Florence area.

Stu Burge Builders—To be awarded to a student from the Cottage Grove area in Construction.

Eugene Rotary Club.

Florence Rotary Club—To be awarded to a student from the Florence area.

Dr. Dean Webb—To be awarded to a student from the Cottage Grove, Creswell, Pleasant Hill, Oakridge area.

Loans: Student loans are available from various sources and the Financial Aids Officer in the counseling center will be glad to discuss the various possibilities.

Housing: The college does not provide campus housing although the counseling office will furnish information about living accommodations available to students. The college assumes no responsibility in negotiating housing agreements, however, since these arrangements are the responsibility of the student and his parents.

Job Placement: A counselor has the responsibility of job placement for graduates. He works closely with students and businesses and is successful in placing graduates in positions which satisfy them most.

Employment: Lane Community College has available some funds from government grants to provide part-time employment for full-time students who can qualify economically for such work. In addition, counselors will help students locate part-time employment in the local community.

Testing: General entrance testing is not required; however, many types of testing are available upon request. The General Aptitude Test Battery is given to assist in the selection of occupational objectives. The Engineering, Physical Science Aptitude Test is used in screening for engineering technician programs. Individual tests of intelligence, interest and aptitude are also available.

Study Skills Center: The study skills center is designed to provide students with specialized equipment, materials, tools, and trained personnel for the purpose of improving their proficiency in learning techniques and basic skills. Assistance will be given in the areas of reading, writing, oral communication, mathematics, study habits, and memory training.

ADMISSIONS AND REGISTRATION

Lane Community College was organized and operates to meet the needs and desires of those in the community who wish to continue their education. Students must apply for admission as outlined below.

Admission Procedure:

- 1. Each applicant must complete and submit an Application for Admission.
- The application must be accompanied by a non-refundable \$10 tuition deposit. This fee will be credited toward tuition if the student enrolls in school the ensuing term.
- 3. The student must file with the admissions office a copy of his high school transcript and transcripts of all post high school work he has taken.

- He must file with the admissions office a Certificate of Health signed by a physician. Forms for these examinations may be obtained in the counseling center.
- 5. In cases where students have taken college entrance tests such as the College Entrance Examination Board test or the American College Testing examination, such scores should be filed with the admissions office.

In addition, particular programs have special admission requirements as follows:

- Students wishing to enter college transfer programs must be high school graduates or have a high school equivalency certificate by receiving a qualifying score on the General Educational Development Test.
- Those desiring to enroll in Electronic Technology or Civil Engineering Technology must be high school graduates and must receive a satisfactory score on a qualifying examination.
- 3. Students applying to enter one of the occupational programs must be 18 years of age and must, in the judgment of the administration, be able to profit from the instruction offered. Since enrollment in all the occupation programs is limited by the facilities available, in-district students will be admitted to these programs on a first-come, first-serve basis. Admission to all vocational programs is limited to students living in the college attendance area until September 1st at which time admission of all applicants will be considered in order of the date of application.

SPECIAL STUDENTS:

In special cases, exceptions to the above procedure may be granted. Such requests are considered by the Dean of Students upon receipt of a letter asking for exceptions.

Notification of Admission:

When all the requirements for admission have been satisfied, the student will be sent a card notifying him that he has been admitted to Lane Community College.

Registration Procedure:

- 1. Pre-registration counselor conference.
 - a. The Counseling Center is open throughout the summer with trained counselors present to talk with prospective students concerning plans for college. The College recommends that incoming students take advantage of this opportunity. The College offers a consulting service which includes general educational planning, analysis of course progression, interpretation of test information, orientation to campus life, and discussion of study habits and scheduling of time. Parents are invited to these sessions. The advantages of a summer interview are many; counselors are able to give more time to each individual; the interested student does not need to feel the pressure of other activities nor of other people; the general atmosphere is conducive to leisurely but thorough planning. Students register for classes at the beginning of each new quarter. Unless otherwise specified in the admission procedure, each student entering for the first time must present transcripts of records from previous institutions and proof that pre-registration tests have been taken before permission to complete registration is granted. Deadline dates for registration may be found in the official calendar in the front of this catalog.
- 2. Arrangement of time schedule and selection of classes with a counselor.
- 3. Arrangement for payment of fees. A student is not considered registered and cannot attend classes until he has made arrangements to meet his financial obligations for the quarter.

Change of Classes:

If a student wishes to change a class after he has registered for it, he must make the change with a counselor. A fee of \$1 must accompany each course change.

Auditing Classes:

Students regularly enrolled may request admittance to a class as an auditor. Auditors will be accepted only if space is available in the class. Charges for auditing will be made on the same basis as regular fees.

Selective Service Classification: All students enrolled in a full-time program are given a special classification by the Selective Service Boards. No distinction is made between the occupational and college transfer students for this classification which is continuous as long as a student receives satisfactory grades. Selective Service forms are available in the Counseling Offices for students who wish to apply for student deferments.

High School Student Policy:

Lane Community College working in cooperation with the local school districts will accept some selected high school students on a part time basis in many LCC programs. Application should be made through the local high school Counselor.

TUITION, FEES, AND COSTS

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

All the programs offered by Lane Community College are approved for reimbursement by the state and federal Veterans' Administrations and the Oregon Division of Vocational Rehabilitation.

*Resident Tuition:

Full-time student (10 credit hours or more)\$55	per term
If more than 50 miles from school\$25	per term
40 to 50 miles from school\$30	per term
30 to 39 miles from school\$40	per term

Part-time student: \$6 per credit hour per term up to 9 credits.

Out-of-District but In-State Tuition:

Full-time student	\$110 per term
Part-time student	\$12 per credit hour
Out-of-State Tuition Full-time student	\$200 per term
Special Fees: Radio Communications, Auto Body and Fend	der, or Diesel\$10 per term

Welding......\$10 per term
Physical Education Fee.....\$2 per term

*Permanent Residence: A resident is a student whose parents are bona fide residents of Lane County, Monroe elementary school, or Harrisburg school districts. He qualifies for enrollment as a resident student. In addition, a student who is 21 or more years old, who is married, or who is entirely self-supporting may qualify as a resident if he can satisfactorily present evidence that he has established his permanent residence in the Lane Community College district at least three months prior to his registration for the term. All other students are required to pay a non-resident fee.

Registration Fee: Each student registering for one or more credit classes will be required to make a non-refundable \$10 tuition deposit at the time of pre-registration. This money will be applied toward the tuition charge if the student completes registration.

Special Fees: Some courses require the use of special materials which must be purchased for class use. Instead of asking students to buy these materials piece by piece, they are purchased by the departments and made available to students at a flat rate of \$10 per term.

Physical Education Fees: A charge of \$2 is assessed all students registered for physical education classes. In addition, a few classes such as bowling, where special facilities must be rented, cost the student a modest fee above the regular tuition charge.

Books, Supplies and Tool Kits: An average of \$5 to \$10 for books for each course should be budgeted by students. In addition, many vocational programs require tool kits. Information regarding the cost of these is available in the Counseling Center.

Late Registration: Students will be assessed a late fee of \$1 a day for each day after classes begin.

Change of Course: For many reasons students choose to change their schedules or add classes after they have registered for a term. Such changes involve clerical work and costs to the school; therefore, a charge of \$1 will be made for each change of course.

Withdrawal: A student may withdraw from classes up through the 7th week without penalty upon agreement with the counselor and the instructor.

Refunds: Students withdrawing from school by the end of the third week will receive a full refund of tuition less the \$10 registration fee. Withdrawals after that date will receive no refund.

Transcript Charge: The first request for a transcript of a student's work will be honored without charge. After this, a charge of 50 cents will be made for each transcript issued.

Insurance: Group Insurance is available through the school at registration time. Information may be obtained at the business office.

ACADEMIC POLICIES

Grading System: The grading system at Lane Community College is comparable to that of other colleges and universities in Oregon.

- A—Exceptional work.
- B-Above-average work.
- C-Average work
- D—Passing but below average work.
- F-Failing work. No credit is given for failing work.

All the grades earned by a student are recorded on his permanent record to apply on a degree or certificate program. Certain courses may be transferred for credit to four year schools of higher education in the state.

Grade Point Average: A student's GPA is computed in the same manner as is used by other colleges and universities. Term grades are assigned points as follows:

A—4 points B—3 points C—2 points D—1 point F—0 points

The number of credit hours earned in a course times the number of points allowed for the grade a student receives is computed and added together. This gives the total number of grade points. GPA is determined by dividing the total grade points by the number of hours carried for the term. A GPA is usually computed to two decimal places. Students receiving all A's will have a GPA of 4.00.

Honor Roll: Each term an honor roll is published. Those full-time students receiving 3:50 and above are chosen to be on the President's List while those receiving a 3.00 to 3.49 are selected for the Dean's List.

Challenging Courses: Any student who enrolls at Lane Community College with a background which would indicate that he has already covered the work of a course which is required for his program may challenge the course. To do this, he should write a letter to the Academic Council through the Office of the Dean of Students explaining the background which makes him feel he already has an adequate knowledge of the course content. This should be accompanied with request to be excused from the course. If the committee feels his request is justified, he will be permitted to take the final examination; and if he satisfactorily passes it, he will be excused from the course. If the Academic Council rejects a request, the student will be notified with an explanation.

Attendance: Regular attendance in a class is essential for a student's success. For this reason, an attendance policy has been established at Lane Community College. As a guide to instructors any student whose absences exceed twice the number of times a class meets each week will be dropped from the roll.

Adding a Course: Students may add courses to their programs for two weeks after classes begin; however, anyone making late additions should realize that they will be at a disadvantage since no special consideration is given late entrants.

Withdrawal from a Class: A student may withdraw from a class without affecting his grade any time through the seventh week of a term. After that date, he may withdraw without penalty only if he has a grade of C or better.

No-Grade Courses: A limited number of courses are offered which provide an opportunity for a student to enrich his background in preparation for college work. Examples of such courses are Study Skills, Mathematics Laboratory, and Writing 10 or Remedial English. These classes are included as part of a student's work load, but he will not receive credit toward a degree for such work.

Transfer Credits: Because the Lower Division courses and instructors at Lane Community College are approved by the Oregon State Board of Higher Education, work satisfactorily completed at other Oregon public colleges is accepted for credit. Likewise, credit earned at Lane Community College is transferrable to other state colleges or universities. After a student has completed 93 term hours of Lower Division work toward the hour requirement for the baccalaureate degree in any combination of institutions, the remaining hour requirements must be completed

at a four year institution. Community college students are responsible for determining the requirements of the institution and program into which they plan to transfer. In some professional fields, transfer must be made at the end af the freshman year.

Probation: A student receiving less than a 2.00 any term will be placed on probation and will receive from the Dean of Students an official notification of his status. He should then work closely with a counselor in planning his work. If a student receives less than a 2.00 for two consecutive terms, he must work with a counselor to develop a program in which he will be more apt to succeed.

Removal of Probationary Status: A student is removed from probation whenever his grades for the past term and his cumulative GPA are 2.00 or above.

Suspension: The college administration has the discretionary authority to suspend a student whenever it is apparent that such action is necessary and desirable.

Reinstatement After Disqualification: After a student has been disqualified from attendance at Lane Community College, he will be considered for reinstatement only after he has submitted a request for reinstatement to the Academic Council.

Academic Council: The Academic Council is a committee of staff members appointed by the President. They have the responsibility of interpreting or waiving academic regulations and of considering appeals of students. All requests and appeals to this committee must be addressed to them in writing.

DEGREES AND CERTIFICATES

The Board of Education of Lane Community College and the Oregon State Board of Education have approved the following:

A. ASSOCIATE OF ARTS DEGREE

The Associate of Arts Degree will be awarded to students who satisfy the following requirements:

- Complete a minimum of 93 term hours of credits with a cumulative grade point average of 2.00.
- Include in the program the following: English Composition, 9 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 Lane Community College.
- 5. The above program is subject to departmental requirements.

B. ASSOCIATE OF SCIENCE DEGREE (Associate programs not covered by the Associate of Arts Degree)

The Associate of Science Degree will be awarded to students who satisfy the following requirements:

- 1. The Associate of Science Degree will be awarded to those who complete the required courses and credit hours prescribed by 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 Lane Community College.

- 3. The GPA for the Associate of Science Degree must be at least 2.00 cumulative GPA
- Minor deviations from specific course requirements may be allowed for students who offer sufficient evidence of just cause and who have the approval of the Academic Council.
- 5. The structure of each occupational training program is to be published in the College catalog each year.

C. CERTIFICATES AND DIPLOMAS

The Certificate and Diploma will be awarded to students who satisfy the following requirements:

- 1. The diploma will be awarded to those students who do not meet the requirements of the A.A. or A.S. Degrees but have completed any 93 hours of credit courses with a cumulative GPA of 2.00 and who have attended at least two terms, including the last term, and who have earned at least 24 credit hours at Lane Community College.
- 2. The satisfactory completion of a course, courses, or prescribed program will be recognized by the Administration through the awarding of a transcript, letter of referral, competency certificate, completion or other evidence. Specific awards will be dependent upon the nature of the program and the decision of the Administration and faculty.
- 3. Additional information regarding specific programs will be listed under the various divisions of the catalog.

FACILITIES

Parking—Parking areas are provided at both major campuses; however, space is limited, and students are urged to share rides in order to conserve as much space as possible.

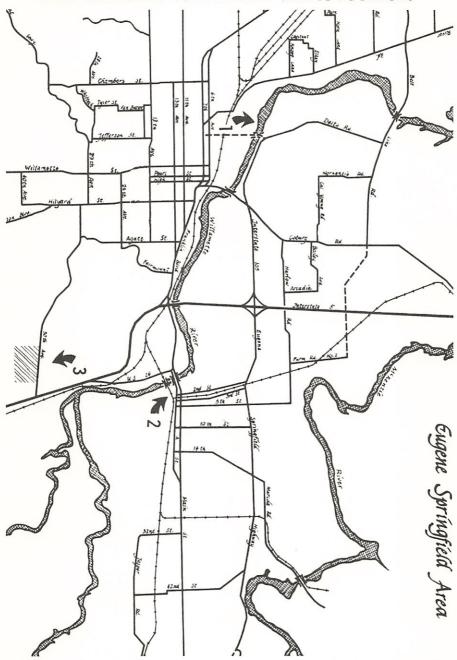
Book Store—A book store, which is open daily, is maintained at both the Eugene and Springfield campuses. Books for all classes as well as a variety of school supplies and some notions are regularly available there.

Food Service—Sandwiches, soups, beverages, and fruit are provided for students from coin-operated food dispensers which are serviced daily.

Health Services—During fall registration week, an insurance representative is present to explain a health and accident plan to students. In addition, arrangements have been made with local hospitals to serve emergncies which may arise.

Campus Radio—Lane Community College operates a radio station which daily provides students with information and notices that are pertinent to school life and activities.

LANE COMMUNITY COLLEGE MAIN CAMPUS LOCATIONS



1. EUGENE CAMPUS 200 North Monroe Street Eugene, Oregon

2. SPRINGFIELD CAMPUS 305 South 4th Street Springfield, Oregon

3. NEW CAMPUS SITE E. 30th Ave. and U.S. 5 Freeway



STUDENT ACTIVITIES

Student Council: A council of elected officers meets regularly to plan student activities and to coordinate programs between community colleges. The elected officers on the council are president, first vice-president who is responsible for all elections, second vice-president who is in charge of social activities, corresponding secretary, recording secretary and treasurer. In addition, each major division of the college is represented on the council by an elected representative.

Clubs: Several clubs in which students may participate have



been organized. Some of these are social and activity groups such as the Ski Club and the Student Christian Club while others are interest groups such as the Geography Club and the Flying Club. Affiliation with these groups broadens horizons for students and affords an opportunity for college life to be something more than classroom work.

Intramurals: Intramural activities are planned for all major sports and competitive groups participate throughout the year. All students are invited to take part on one of the teams.

Publications: Students publish "The Torch," the college newspaper, and "The Titan," the college yearbook. Those students interested in serving on either publication staff are invited to enroll in a journalism course.

Social Events: Social activity is an important part of school life and is encouraged at Lane Community College. Each term a major dance, to which all students are invited, is planned and sponsored by the student body.



LIBRARY AND LEARNING RESOURCE CENTER SERVICES

The Library and Learning Resource Center of Lane Community College is being developed to serve the educational needs and programs of the college students and faculty by providing them with a comprehensive quality collection of instructional materials, equipment, and publications and production facilities for the purpose of improving and broadening the scope of instruction. Its primary purpose and objective is, therefore, identical to the educational task and philosophy of the college itself. The Library and Learning Resource Center is temporarily located in quarters on the Springfield Campus. When the college moves to its permanent campus, this center will contain in addition to the traditional library resources, record and tape listening areas, facilities for previewing films and instructional materials, repair and maintenance of equipment, educational radio and television studios, production machinery and a study skills center. Many of the resources are presently provided while some are in the process of being established.

As a center for many types of instructional materials the Library and Learning Resources Center facilitates the use of effective aids to learning through its central grouping of such resources as the printed materials in books, magazines, newspapers and pamphlets; aural materials as found in motion pictures, phonograph records and tapes, and pictorial materials in filmstrips, illustrations, maps, charts, prints, and models.

The Center is planned to offer an inviting, convenient, quiet place for reading and study and to provide books and other instructional services to meet the needs of students and staff in both the day and adult courses. Opportunities are afforded students in developing skills in the use of important reference books and time-saving indexes such as those found in modern libraries. Assistance and encouragement are given to students and faculty in the investigation of problems and ideas.

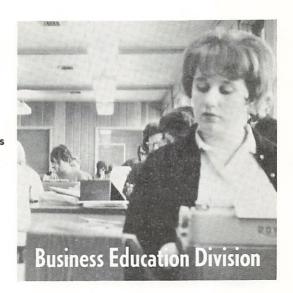
Assistance is also given to students in reaching their educational requirements and goals and in investigating vocational opportunities. Current files of vocational guidance materials are available to students to help them in selecting vocational objectives. A collection of catalogs from colleges and universities throughout the nation is provided for students who plan to transfer to other institutions of higher learning.

As part of the Library and Learning Resources Center facilities, a study skills center is provided, whose main purpose is to help students in improving their proficiency in learning techniques and the basic skills. Assistance will be given in the areas of reading, writing, oral communications, mathematics, and study habits, and specially trained personnel are available for this purpose.

The continued expansion and development of library and learning resource materials as an integral part of the instructional program of the College is assured through close cooperation between students, instructors and library personnel. Library and Learning Resources Center facilities are explained to students in orientation in such classes as communications, social sciences, science and mathematics. Students in beginning English classes receive information on the use of a card catalog, reference books and periodical indexes. In other classes they are given assistance in locating specific types of information. The reader and reference services in the library are designed to provide students with opportunities to explore in depth.

Other library facilities are available in the area, such as the University of Oregon Library, the Springfield Public Library and the Eugene Public Library. These services are subject to the regulations of the individual libraries.

Bookkeeping and Accounting
Business English
Business Environment
Business Law and Statistics
Data Processing
Introduction to Business
Office Machines and Procedures
Principles of Accounting
Salesmanship
Secretarial Sciences
Shorthand
Typing



This division offers the courses necessary to prepare for employment in secretarial, bookkeeping, and general office positions.

Each student is evaluated on the basis of his previous education and training. Credit may be allowed for previous courses or training. Training is directed toward developing competency and efficiency in performance for employment in business or industry.

Basic secretarial/clerical training program leading to a competency certificate and/or diploma is a 3 quarter (45 hr) sequence. Should individuals wish to enroll in only selected courses this is also possible.

		OGRAM

	FALL		WINTER		SPRING	
ŀ	hrs/wk	units	hrs/wk	units	hrs/wk	units
Shorthand & Transcription I, II, II	I 5	3	5	3	5	3
Typing I, II, III	5	3	5	3	5	3
Office Procedures I, II, III	3	2	3	2	3	2
Office Machines I, II, III	3	2	3	2	3	2
Business English I, II, III	3	3	3	3	3	3
*Elective	2	2	2	2	2	2
		-	_	_	_	_
	21	15	21	15	21	15

BOOKKEEPING/CLERICAL PROGRAM

	FALL		WINTER		SPRING	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Bookkeeping & Accounting I, II, I	III 5	3	5	3	5	3
Typing I, II, III	5	3	5	3	5	3
Office Machines I, II, III	3	2	3	2	3	2
Office Procedures I, II, III	3	2	3	2	3	2
Business English I, II, III	3	3	3	3	3	3
*Elective	2	2	2	2	2	2
		_	_	_	_	_
	21	15	21	15	21	15

^{*(}Suggest Health, Physical Education, Introduction to Business and Applied Economics.)

BUSINESS OCCUPATIONAL COURSES

2.110 BOOKKEEPING & ACCOUNTING I (2 class - 3 lab hrs/wk) 3 Term Units Introduction to basic principles of bookkeeping and accounting; the bookkeeping cycle; journals and ledgers, special journals and subsidiary ledgers and financial statements.

2.111 BOOKKEEPING & ACCOUNTING II

(2 class-3 lab hrs/wk) 3 Term Units 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.

2.112 BOOKKEEPING & ACCOUNTING III

(2 class - 3 lab hrs/wk) 3 Term Units Introduction to accounting principles as applied to departmental and partnership accounting; controls and records, corporation accounting, and manufacturing accounting.

- 1.120 BUSINESS ENGLISH I (3 class hrs/wk) 3 Term Units Business English I is aimed at building the student's vocabulary, spelling ability, usage of words, and provides a thorough review of the principles of grammar while applying them in sentences. Written and oral communications as required in business situations are emphasized. Prerequisites: High school grammar or equivalent.
- 1.122 BUSINESS ENGLISH II (3 class hrs/wk) 3 Term Units This course is intended to follow Business English I and will include continuation of the review of grammar, study of vocabulary building, spelling, punctuation, and penmanship. Writing of business letter will be introduced. Speech and the informal personal communications studied. Practical application in the writing of business letters will be stressed.

Prerequisites: Business English I or equivalent.

- 1.124 BUSINESS ENGLISH III (3 class hrs/wk) 3 Term Units In this term grammar, punctuation, spelling, penmanship, and personal communication will receive specialized coverage. Emphasis will be given to special types of business letters, forms, wire communications, and reports.
 Prerequisites: Business English II or equivalent.
- 2.519 OFFICE MACHINES I (1 class 2 lab hrs/wk) 2 Term Units This course combines basic mathematics with instruction in the applications of office machines to bookkeeping and other office problems. A review of mathematics with particular emphasis on shortcuts and basic functions in the use of decimals, fractions, percentage and interest is covered in the early part of the term. The general functions of office machines and understanding their application in business and the acquiring of reasonable skills in their use is a major goal.
- 2.521 OFFICE MACHINES II (1 class 2 lab hrs/wk) 2 Term Units
 This is a continuation of Office Machines I with attention given to basic
 mathematics and the use of machines in solving bookkeeping problems.
 Particular attention is given to stenographic dictating and transcribing

machines. Practice in planning layouts and 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: Office Machines I or equivalent.

- 2.523 OFFICE MACHINES III (1 class 2 lab hrs/wk) 2 Term Units This term emphasizes mathematical machines found in larger offices such as the full-key board adding-listing machine and the key-driven calculator. During the three terms of office machines, students will be rotated to receive practice on ten-key adding machines, full-key board adding-listing machines, key-driven calculator, and posting machines. Prerequisites: Office Machines II or equivalent.
- 2.512 OFFICE PROCEDURES I (1 class 2 lab hrs/wk) 2 Term Units This first course in Office Procedures is designed to introduce the student to general office duties and the simple tools he will use in an office. Detailed instruction in filing is given.
- 2.514 OFFICE PROCEDURES II (1 class 2 lab hrs/wk) 2 Term Units This course is a continuation of Office Procedures I and prepares the student to handle office mail, telephone and telegraph communications, sources of information, and prepare office records and reports, including graphic presentations of business trends. Records and reports are emphasized.

 Prerequisites: Office Procedures I or equivalent.
- 2.516 OFFICE PROCEDURES III (1 class 2 lab hrs/wk) 2 Term Units This is a continuation of Office Procedures II with emphasis on those office duties that require meeting the public as receptionist, cashiering, preparing credit instruments, and sales office operations. The student will be briefly introduced to economic factors that affect business in this course. Public relations and personality receive emphasis. Prerequisites: Office Procedures II or equivalent.

2.105 SHORTHAND & TRANSCRIPTION I

(2 class - 3 lab hrs/wk) 3 Term Units Introduction to theory of Gregg Shorthand Simplified, including the alphabet, brief forms, phrasing and abbreviating principles.

2.106 SHORTHAND & TRANSCRIPTION II

(2 class - 3 lab hrs/wk) 3 Term Units Completion of shorthand theory and review of all principles. Development of ability to construct new outlines rapidly from dictation and to lay solid foundation for further development of dictation and transcription skill. Ability to produce mailable letters is developed.

2.107 SHORTHAND & TRANSCRIPTION III

(2 class - 3 lab hrs/wk) 3 Term Units Advanced course; emphasis on further development of speed and accuracy in dictation and transcription. Intensive practice in refining shorthand skills and in producing mailable letters. Personal qualifications covered.

- 2.101 TYPING I (2 class 3 lab hrs/wk) 3 Term Units Introduction to different makes of typewriters and their 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 Term Units Development of speed and accuracy; introduction to various styles of business letters and the typing of envelopes and tabulated material. Miscellaneous office procedures. Dictaphone practice.

2.103 TYPING III

An advanced typing course introducing preparation of business reports, legal forms and duplicating materials. Intensive speed and review drills to increase speed and accuracy to employment level.

- 2.316 SALESMANSHIP (3 class hrs/wk) 3 Term Units Course includes 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 and present and analyze a sales presentation.
- 2.500 BUSINESS RECORDS AND REPORTS (3 class hrs/wk) 3 Term Units This course covers the information regarding business reports that are 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, licensing requirements. Information is also included on salary records, employee records, procedures for making out orders, charges, billings, inventory control, and other administrative details.

 Prerequisite: Second-year standing.

DATA PROCESSING PROGRAM

Planning is in progress to begin development of a limited series of courses in data processing for the school year 1966-67. The courses tentatively being considered are one-year sequences in Introduction to Business Data Processing, Data Processing Applications and Accounting. Related courses, such as Mathematics and Communication Skills, which are currently offered in the LCC curriculum, would be part of the total program. (Announcements in individual courses to be offered for 1966-67 will be made later.)

COLLEGE TRANSFER COURSES

MIT 125 BUSINESS ENVIRONMENT

3 hours each term

- 126 The role and responsibilities of business in society; influence of the historical, social, political, and economic environments within which business operates; adjustments to changes in these environments; interrelationships of major functional areas of business.

 Prerequisite: None
- BA 101 INTRODUCTION TO BUSINESS 4 term hours each term 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.

BA 226 INTRODUCTION TO BUSINESS LAW

3 hours

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.

Prerequisite: None

BA 232 INTRODUCTION TO BUSINESS STATISTICS

3 hours

Modern business decision theory, and statistics as a tool for business decision making. Primary emphasis on statistical description (tables, charts, and frequency distributions) and the elements of probability; consideration also of modern data processing, index numbers and time series analysis (trend, cyclical, and seasonal adjustments) of business data.

Prerequisite: None; although one term of college algebra or a good high school background in math is suggested.

BA 211, PRINCIPLES OF ACCOUNTING

3 term hours each term

212, 213 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.

SS 111, STENOGRAPHY

3 hours each term

112, 113 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. Five 1-hour periods.

SS 121, TYPING

2 hours each term

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 on both manual and electrical typewriters. Students who have had one year of typing may receive credit for SS 121 upon recommendation of the instructor.





Communication Skills

English and American Literature

English Composition and Writing

French

Spanish

Newswriting and Journalism

Speech



COLLEGE TRANSFER COURSES

ENGLISH COURSES

WR 111, ENGLISH COMPOSITION

3 hours each

112, 113 The fundamentals of English composition; frequent written themes. Special attention to correctness in fundamentals and to the organization of papers.

WR 226 EXPOSITORY WRITING

3 hours

Practice in various forms of expository writing.

Eng 101, SURVEY OF ENGLISH LITERATURE

3 hours each

102, 103 Study of the principle works of English literature based on reading selected to represent great writers, literary forms, and significant currents of thought. Provides both an introduction to literature and a background that will be useful in the study of other literature and other fields of cultural history.

Eng 201, SHAKESPEARE

3 hours each

202, 203 Study of important plays-comedies, histories, and tragedies.

Eng 253, SURVEY OF AMERICAN LITERATURE

3 hours each

254, 255 American literature from its beginning to present day.

SPEECH COURSES

Sp 111, FUNDAMENTALS OF SPEECH

3 hours each

112,113 Projects in extempore speaking. Primary emphasis on content and organization, with attention also to the student's adjustment to the speaking situation, effective delivery, audience motivation, and language of speech.

Sp 229 INTERPRETATION

2 hours

The application of the principles of oral reading to literature.

Sp 250 SPEECH AND THEATER WORKSHOP

1-3 hours each term maximum 3 hours Principles of acting and dramatic production; laboratory experience.

Consent of instructor required.

FOREIGN LANGUAGES

RL 50, FIRST-YEAR FRENCH

4 hours each

51, 52

RL 101, SECOND-YEAR FRENCH

4 hours each

102, 103

RL 60, FIRST-YEAR SPANISH

4 hours each

61,62

RL 107, SECOND-YEAR SPANISH

4 hours each

108, 109

JOURNALISM COURSES

J 215 JOURNALISM LABORATORY

1 hour each term

Work on student publications. Offered only in coordination with J. 216, 217, 218.

J 216 REPORTING I

2 hours

Basics of gathering and reporting news, with emphasis on accuracy and clarity of writing.

J 217 REPORTING II

2 hours

Continuation of J. 216. Accuracy and objectivity standards as well as reader appeal in writing. Methods of gathering and organizing material for multiple-source, multiple-fact stories.

J 218 COPY EDITING AND MAKEUP

2 hours

Basic instruction in copy reading, headline writing, proofreading and makeup.

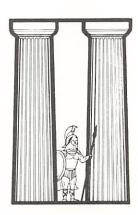
OCCUPATIONAL COURSES

1.100 COMMUNICATION SKILLS I (3 class hrs/wk) 3 Term Units
The course covers the four basic skills . . . reading, writing, speaking
and listening, with the emphasis being placed on reading and writing.
The practical phase of communication problems is kept in the foreground. Contemporary speeches, books, magazines, and newspapers
are the source materials for oral and written assignments. Problems
in outlining, note-taking, summarizing, report making, and conventional usages in mechanics and grammar are considered.
Prerequisite: High School English or equivalent.

1.102 COMMUNICATION SKILLS II (3 class hrs/wk) 3 Term Units Continued practice in the four skill areas is basic to this course, with more emphasis on speaking and listening. Included are developing reports, giving talks, taking part in conferences, reading, analyzing, and discussing both general and technical periodicals, and handling representative forms of business writing.

Prerequisite: Communication Skills 1.100 or equivalent.

- 1.610 PUBLIC SPEAKING 2 Term Units 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 discussions with careful attention being given to effective organization and delivery. In addition to the general principles of speech, stress is placed on poise and confidence and on understanding their psychological basis.
- 6.126 TECHNICAL REPORT WRITING (3 class hrs/wk) 3 Term Units
 Principles of composition, gathering data, and basic forms of writing
 reports are covered.
 Prerequisite: Communication Skills I or equivalent.



Building Construction
Carpentry and Millwork
Civil/Structural Engineering
Drafting
Engineering Orientation
Forest Technician



OCCUPATIONAL COURSES AND PROGRAMS

CABINETMAKING

(2 Year Program)

This training program is planned to provide broad basic instruction and practice in the fundamentals of cabinetmaking. Training is directed toward employment in entry occupations in cabinet shops and mill work manufacturing plants.

FIRST YEAR	FAL	_L	WINT	ER	SPRI	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Cabinet & Millwork I, II & III	5	5	5	5	5	5
Cabinet & Millwork I, II & III Lab	10	3	10	3	10	3
Drafting I & II	4	2	4	2		
Introduction to Construction Prac	tices		5	3		
Communications Skills I & II			3	3	3	3
Mathematics II	3	3				
Practical Physics I & II	5	4			5	4
Employer-Employee Relations					2	2
	_		_	_	_	_
	27	17	37	16	25	17
SECOND YEAR	FAI	_L	WINT	ER	SPR	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Cabinet & Millwork IV, V, & VI	3	3	3	3	3	3
Cabinet & Millwork IV, V, & VI L	ab 12	3	12	4	12	4
Welding IA	5	-				
	J	2				
Introduction to Specifications	J	2	3	3		
0	J	2	3	3	3	3
Introduction to Specifications	3	2	3	3	3	3
Introduction to Specifications Business Records & Reports	3	2	3	3		
Introduction to Specifications Business Records & Reports Industrial Safety	3	2	-110			
Introduction to Specifications Business Records & Reports Industrial Safety Health	10	4	2	2		
Introduction to Specifications Business Records & Reports Industrial Safety Health Applied Economics	W. pos	N TO	2	2		
Introduction to Specifications Business Records & Reports Industrial Safety Health Applied Economics Project Analysis	W. pos	N TO	2 3	2 3		
Introduction to Specifications Business Records & Reports Industrial Safety Health Applied Economics Project Analysis Machine Shop Orientation	W. pos	N TO	2 3	2 3	3	3

CABINETMAKING, MAJOR COURSE DESCRIPTIONS

- 3.192 CABINET & MILLWORK I (5 class hrs/wk) 5 Term Units
- 3.193 CABINET & MILLWORK LAB I (10 lab hrs/wk) 3 Term Units
 This course gives background information on the trade. Information
 on different types of wood and wood selection, wood joints and other
 materials of construction are studied. Instruction in estimating stock
 needs and billing procedures. Instruction in the use and maintenance
 of hand tools and portable power tools. Instruction is also given on
- 3.194 CABINET & MILLWORK II (5 class hrs/wk) 5 Term Units
 3.195 CABINET & MILLWORK LAB II (10 lab hrs/wk) 3 Term Units

This course introduces layout from blueprint or sketch of mill projects such as doors, windows, frames and louvers. Instruction also included in simple mill and cabinet jobs, and milling of moldings and trim work. Instruction is also given in jointing and assembly work of mill projects.

Prerequisite: Cabinet & Millwork I.

basic machine tools used in the trade.

- 3.196 CABINET & MILLWORK III (5 class hrs/wk) 5 Term Units
 3.197 CABINET & MILLWORK LAB III (10 lab hrs/wk) 3 Term Units
- 3.197 CABINET & MILLWORK LAB III (10 lab hrs/wk) 3 Term Units
 This course includes sketching and layout of cabinet work. Instruction
 in layout and billing of material, and selection of stock for cutting.
 Methods of layout, machining and bench assembly methods. Instruction given in finishing details.

Prerequisite: Cabinet & Millwork II.

3.198 CABINET & MILLWORK IV (3 class hrs/wk) 3 Term Units 3.199 CABINET & MILLWORK LAB IV (12 lab hrs/wk) 4 Term Units

Instruction and demonstration in design, layout and construction and installation of special-order cabinets. Instruction in planning layout from sketch or blueprint, billing material, cutting stock, detail making, layout, machine assembly and finishing. Laminating cabinet tops. Instruction on house framing.

Prerequisite: Cabinet & Millwork III.

- 3.212 CABINET & MILLWORK V (3 class hrs/wk) 3 Term Units
 3.213 CABINET & MILLWORK LAB V (12 lab hrs/wk) 4 Term Units
- 3.213 CABINET & MILLWORK LAB V (12 lab hrs/wk) 4 Term Units This course involves the layout of fixtures from blueprint or skecthes. Selection of wood and milling is included. Problems involving installation of fixtures in commercial buildings are presented. Stair layout and construction.

Prerequisite: Cabinet & Millwork IV.

- 3.214—CABINET & MILLWORK VI (3 class hrs/wk) 3 Term Units
- 3.215 CABINET & MILLWORK LAB VI (12 lab hrs/wk) 4 Term Units This course includes specialized cabinet jobs which involve selection and matching of woods and panels for high-quality production jobs. Instruction in use of plastic and wood substitutes in fixtures and home furnishing construction.

Prerequisite: Sixth-term standing.

CIVIL AND STRUCTURAL ENGINEERING TECHNICIAN MAJOR COURSE DESCRIPTIONS

- 6.109 APPLIED MECHANICS I (2 class 3 lab hrs/wk) 3 Term Units A study of energy in motion. The course covers the principles of friction, centroids, inertial characteristics, motion and velocity, force and acceleration, curvilinear motion and rotation and advanced concepts of work, power, and energy. Time is provided for demonstrations and experiments to help clarify the principles and procedures covered.
- 6.111 APPLIED MECHANICS II (2 class 3 lab hrs/wk) 3 Term Units
 This course deals with the motion of rigid bodies and with the forces
 that produce or change their motion. The principles of rectilinear
 motion, curvilinear motion, rotation, and plane motion are covered in
 the course. Laboratory time is provided for the conducting of experiments to clarify the principles and procedures covered in class.
 Prerequisites: Fourth-term standing or approval of department head.
- 6.123 CONCRETE CONST. & DESIGN (2 class 5 lab hrs/wk) 3 Term Units A study of concrete materials, shear and bending calculations, shear and bending stresses and design calculations. Coverage is given to rectangular, tee and reinforced beams, reinforced floor systems and columns, foundations, retaining walls and miscellaneous members. Lab work will consist of problem-solving.
 - Prerequisite: Sixth-term standing or approval of department head.

 CONSTRUCTION CODES (2 class hrs/wk) 2 Term Units

6.122 CONSTRUCTION CODES

(2 class hrs/wk) 2 Term Units This course is designed to familiarize the student with the various codes which specify the standards of construction and the installation of electrical and plumbing fixtures. Students study the Pacific Coast Uniform Building Code, The National Electrical Code, and the Oregon State Plumbing Laws, and the regulations Governing Plumbing and Water Supply. The function of Government units (state and local) charged with the administration and inspection of building construction will be covered.

Prerequisite: Second year standing or approval of department head.

- 6.110 CONSTRUCTION ESTIMATING (2 class hrs/wk) 2 Term Units Designed to develop skills in estimating the amount and cost of materials required and labor cost involved in various types of construction. Student makes estimates of material and labor quantities and costs for representative types of construction.
 - Prerequisite: Fifth-term standing or approval of department head.
- 6.118 CONTRACTS AND SPECIFICATIONS (3 class hrs/wk) 3 Term Units This is a course designed to acquaint the student with common usage and practice in the preparation of contracts and attendant specifications. Examination of existing contracts covering current jobs will be used whenever possible with practical problems designed to teach the application of theory learned.

Prerequisite: Second-year standing or approval of department head.

6.120 FOUNDATIONS OF STRUCTURES (3 class hrs/wk) 3 Term Units A study of various materials, devices and designs used in structural foundations such as footings, cofferdams, caissons, abutments, piers, and underpinnings.

Prerequisite: Applied Mechanics II and Technical Mathematics III.

CIVIL AND STRUCTURAL ENGINEERING TECHNICIAN

(2 Year Program)

The instruction and training in this program are aimed at giving broad technical theory and laboratory work in subject areas involved in civil and structural engineering.

The program of courses is aimed at providing the fundamental background and training to prepare the student for positions in entry classifications leading to civil engineering technician, highway engineering technician, surveyor, construction estimator, inspector, contractor assistant, cost estimator and related jobs.

Opportunities for employment in this field are available with construction contractors, engineering firms and consultants, and local, county, state and federal agencies.

Applicants must have completed high school or the equivalent and should have successfully passed a course in algebra. Applicants must pass an entrance examination to enter the program.

FIRST YEAR	FAL	.L	WINT	ER	SPRI	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Plane Surveying I, II	5	3	5	3		
Engineering Problems I & II	2	1	2	1		
Technical Mathematics I, II, III	4	4	4	4	4	4
Applied Physics I, II	5	4	5	4	100 P	_
Communication Skills I, II	3	3	3	3		
Drafting I, II	4	2	4	2		
Applied Mechanics I					5	3
Surveying Computations					5	3
Strength of Materials I					2	2
Strength of Materials I Lab					3	1
Descriptive Geometry					4	2
	_	_		_	_	_
	23	17	23	17	23	15
SECOND YEAR						
Mapping and Computing I, II	4	2	6	2		
Strength of Materials II	5	3		_		
Structural Analysis & Design I	4	2				
Materials of Construction	2	2				
Applied Mechanics II	5	3				
Applied Economics	3	3				
Hydraulics I, II			3	3	3	3
Soil Mechanics I			5	3		
Timber & Steel Construction			6	4		
Construction Codes			2	2		
Health			2	2		
Concrete Construction & Design					7	3
Foundations of Structures					3	3
Structural Drafting					5	2
Contracts & Specifications					3	3
Construction Estimating					2	2
	_	_	-	_	1 ES -	_
	23	15	24	16	23	16

CARPENTRY, MAJOR COURSE DESCRIPTIONS

- 3.216 BUILDING CONSTRUCTION I (5 class hrs/wk) 5 Term Units
 3.217 BUILDING CONSTRUCTION LAB I (10 lab hrs/wk) 3 Term Units This course gives background information on the trade. Information on different types wood and wood selection, wood joints and other materials of construction is studied. Instruction in estimating stock needs and billing procedures. Instruction is given in the use and maintenance of hand tools and portable tools and instruction is also given on basic machine tools used in the trade.
- 3.218 BUILDING CONSTRUCTION II (5 class hrs/wk) 5 Term Units
 3.219 BUILDING CONSTRUCTION LAB. II (10 lab hrs/wk) 3 Term Units
 This course involves instruction and information on contour map reading and layout of foundations and framing of buildings. Instruction in use of level. Planning and figuring lumber for the basic construction of a building from blueprints. Different types of wall construction, joist layout, framing for openings, floor construction and wall bracing. Prerequisite: Building Construction I.
- 3.232 BUILDING CONSTRUCTION III (5 class hrs/wk) 5 Term Units
 3.233 BUILDING CONSTRUCTION LAB. III (10 lab hrs/wk) 3 Term Units
 This course is a continuation of instruction and information begun in House Framing Methods I. Framing of openings, porches, and additions. Ceiling and roof framing, rafter cutting, bracing, insulation and roofing. Special emphasis on use of the steel square.
 Prerequisite: Building Construction II.
- 3.250 BUILDING CONSTRUCTION IV
 3.251 BUILDING CONSTRUCTION LAB IV
 Instruction and practice in the application of exterior wall coverings, door and window frames, interior wall finish, flooring and trim.
 Prerequisite: Building Construction III, 3.232E.
- 3.234 BUILDING CONSTRUCTION V
 3.235 BUILDING CONSTRUCTION LAB V
 This course includes instruction and practice in stair layout and construction. Instruction and practice in household cabinets, including layout, billing and cutting materials, assembly, and installation. Prerequisite: Building Construction IV, 3.250E.
- 3.236 BUILDING CONSTRUCTION VI (3 class hrs/wk) 3 Term Units
 3.237 BUILDING CONSTRUCTION LAB VI (12 lab hrs/wk) 4 Term Units Instruction in construction work such as is involved in commercial building, bridge work, dam and reservoirs. Problems involving reading of plans and specifications. Preparing bills of material and estimating costs of the carpentry work involved. Instruction in heavy girder and truss construction. Instruction in special construction problems and new and experimental methods.
 Prerequisite: Building Construction V.
- 4.112 INTRODUCTION TO CONSTRUCTION PRACTICES

(2 class-3 lab hrs/wk) 3 Term Units (See Cabinetmaking course descriptions.)

4.110 PROJECT ANALYSIS (1 class - 9 lab hrs/wk) 4 Term Units (See Cabinetmaking course descriptions.)

4.112—INTRODUCTION TO CONSTRUCTION PRACTICES

(2 class - 3 lab hrs/wk) 3 Term Units Exploring the areas of construction and the relationships between them constitute a major portion of work for this course. Introductory in nature, it will necessitate many visits to industry and construction jobs related to wood products. Covered in the study will be building codes and the many construction practices common to wood processing.

4.110 PROJECT ANALYSIS (1 class - 9 lab hrs/wk) 4 Term Units A course designed to acquaint the student with specific drafting procedures applied to the wood areas. Time will be allowed for preparation of drawings to be used in actual shop practices. Prerequisite: Drafting fundamentals.

CARPENTRY

(2 Year Program)

The Carpentry training program is planned to give instruction in the various phases of carpentry with shop practice in the basic fundamentals.

On satisfactory completion of this course a student is ready for employment in entry jobs in the construction field.

The area carpentry apprenticeship committee should be contacted upon completion. Those who complete the total broad basic training program and continue to study and gain more work experience will find many opportunities for advancement.

FIRST YEAR	FAL	.L	WINT	ER	SPRI	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Building Construction I, II, III	5	5	5	5	5	5
Building Construction I, II, III Lab	10	3	10	3	10	3
Drafting Fundamentals	5	2				
Architectural Drafting			5	2		
Intro. to Construction Practices			5	3		
Communication Skills I & II			3	3	3	3
Mathematics II	3	3				
Practical Physics I & II	5	4			5	4
Employer-Employee Relations					2	2
	_	_		_	-	_
	28	17	28	16	25	17
SECOND YEAR	FAL	L	WINT	ER	SPRI	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Building Construction IV, V, VI	3	3	3	3	3	3
Building Construction IV, V, VI La	b 12	4	12	4	12	4
Building Construction IV, V, VI Lal Welding IA	b 12 5	4 2	12	4	12 5	4 2
		_	12 3	3	Contract of the Contract of th	
Welding IA		_			Contract of the Contract of th	
Welding IA Introduction to Specifications		_			5	2
Welding IA Introduction to Specifications Business Records & Reports		_			5 3	2
Welding IA Introduction to Specifications Business Records & Reports Industrial Safety		_	3	3	5 3	2
Welding IA Introduction to Specifications Business Records & Reports Industrial Safety Health		_	3	3	5 3	2
Welding IA Introduction to Specifications Business Records & Reports Industrial Safety Health Applied Economics	5	2	3	3	5 3	2
Welding IA Introduction to Specifications Business Records & Reports Industrial Safety Health Applied Economics Project Analysis	5	2	3 2 3	3 2 3	5 3	2
Welding IA Introduction to Specifications Business Records & Reports Industrial Safety Health Applied Economics Project Analysis Machine Shop Orientation	5	2	3 2 3	3 2 3	5 3 3	3 3

- 6.112 HYDRAULICS I (3 class hrs/wk) 3 Term Units
 The first course in the study of hydraulics covers the fundamental
 properties of fluids, principles of hydrostatic pressure including Pascal's Law, the hydrostatic paradox, Archimede's Principle—measurement by manometer, the measurement of fluid properties. The relationship of hydrostatic pressure and center of gravity and the effect
 of hydrostatic pressure exerted against plane surfaces will also be
 discussed. Time is provided for demonstrations and experiments to
 help clarify the principles and procedures covered in class.

 Prerequisite: Fifth term standing or approval of department head.
- 6.114 HYDRAULICS II (3 class hrs/wk) 3 Term Units Consists of the fundamentals of fluid flow, Bernoulli's Theorum, flow profiles, stream restrictions (such as weirs, flumes, metering runs), distribution of energy in the stream flow through pipe, Reynolds Law, Newton's Law of Hydrodynamics, vector representation, hydraulic similitude, and dimensional analysis. Time is provided for demonstration and experiments to help clarify the principles and procedures covered in class.

Prerequisite: Hydraulics 6.112 or equivalent.

- 6.131 MAPPING AND COMPUTING I (4 lab hrs/wk) 2 Term Units Advanced map plotting, earthwork computation, field surveying from maps, legal description, subdivision planning and simulated problems of construction are used.
 Prerequisite: Fourth-term standing or approval of department head.
- 6.133 MAPPING AND COMPUTING II (6 lab hrs/wk) 2 Term Units A study of surveying laws, public land survey procedures, professional surveyor practices, earth work computations and map projections. The student will lay out a highway section, prepare a zone change map, retrace a government survey, compute earth quantities from a topographic map. Student will perform related operations such as verification of ownership, and conformance with zoning laws or similar projects.

Prerequisite: Mapping and Computing I or equivalent.

- 6.108 MATERIALS OF CONSTRUCTION (2 class hrs/wk) 2 Term Units Comparisons of various materials, their source, method of manufacture, physical and chemical properties; grading under a variety of conditions; soil and terrain as encountered in construction work. Prerequisite: Approval of department head.
- 6.101 PLANE SURVEYING I (1 class 4 lab hrs/wk) 3 Term Units
 A beginning course in surveying techniques designed to give the student understanding of the fundamentals of chaining and leveling, care and adjustment of surveying instruments, and office procedures. Provision is made by appropriate field work for practical application of the techniques learned.

 Prerequisite: Approval of department head.
- 6.103 PLANE SURVEYING II (1 class 4 lab hrs/wk) 3 Term Units A continuation of Plane Surveying I designed to familiarize the student completely with the engineer's transit. Uses of the transit and practical problems to put the theory into practice.

 Prerequisite: Second-term standing or approval of department head.

- 6.124 SOIL MECHANICS I (2 class 3 lab hrs/wk) 3 Term Units
 A study of index of properties of soil, hydraulic and mechanical properties, soil drainage and plastic equilibrium. Laboratory experiments and projects cover each phase of study.

 Prerequisite: Second-year standing or approval of department head.
- 6.107 STRENGTH OF MATERIALS I (2 class hrs/wk) 2 Term Units
 6.107 STRENGTH OF MATERIALS I LAB (3 lab hrs/wk) 1 Term Unit A study of the stresses and strains that occur in bodies when subjected to tensile, compressive and shearing forces, including the common theory of beams. The distribution and magnitude of stresses are examined in welded and riveted joints, thin-wall cylinders, torsional members and beams. Practice problems emphasize the materials studied. Prerequisite: Applied Mechanics I and Technical Mathematics I or equivalent.
 - 6.128 STRENGTH OF MATERIALS II (2 class 3 lab hrs/wk) 3 Term Units A study of the design and deflection of beams, and a study of the combination of forces and their effect upon various structural members. This course includes a study of failure of structural connection and laboratory tests of materials.

Prequisite: Strength of Materials I or equivalent.

6.130 STRUCTURAL ANALYSIS & DESIGN

(1 class - 3 lab hrs/wk) 2 Term Units The course deals with the determination of stresses induced by loads on structures of wood, steel, concrete; selections of appropriate structural members and suitable connections; loading and conditions causing compression, tension, shear, torsion and bending; practical design procedures relating to various structural members, beams, girders, columns, and footings.

Prerequisites: Applied Mechanics I; Strength of Materials I.

6.500 SURVEYING COMPUTATIONS (1 class - 4 lab hrs/wk) 3 Term Units A study of trigonometric and geometric formulas, logarithms, mechanical computers and integrating insrtuments, area computation, traverse calculations, leveling, plotting surveys. Field trips and problems will be used as needed.

Prerequisite: Third-term standing or approval of department head.

6.125 TIMBER & STEEL CONSTRUCTION

(3 class - 3 lab hrs/wk) 4 Term Units A study of steel and wood fasteners and connections, timber beams and columns. Structural members will be analyzed for design features. Field trips will be used to visualize application. Laboratory time will be used for testing.

Prerequisite: Structural Analysis and Design 6.130 or equivalent.

FOREST TECHNICIAN

(1 Year Program)

This curriculum provides education and training to qualify a person as a Forest Technician. A Forest Technician is competent to handle responsibilities intermediate 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 Forest Technician Program are placed as Forest Technicians with state and federal agencies, and private logging and lumber manufacturing operations.

A high school graduate who completes this curriculum would be qualified to work for the U.S. Forest Service as a G.S. 4 Forestry Aid. The graduate will be eligible for a G.S. 5 Technician rating after 15 months of experience. The salaries for other employers would be comparable.

To enter this curriculum the student should have completed a course in Algebra, and have the reading ability of a high school graduate. This person should have a demonstrated interest in outdoor camping or woods experience.

	FA hrs/wl	LL c units	WIN'	TER c units		RING C units
Communication Skills I, II	3	3	3	3		
Mathematics II, III	3	3	3	3		
Drafting I	4	2				
Power Tools	5	3				
Silvicultural Practices	4	2				
General Forestry	3	3				
Plane Surveying I, II	5	3	5	3		
Applied Economics			3	3		
Forest Mensuration I, II			6	3	6	3
Forest Products			3	2		
Recreational Structures			4	2		
Technical Report Writing					3	3
Elements of Supervision					3	3
Fire Control					2	2
Forest Surveying					6.	3
Logging Planning					6	3
Tree Identification					4	2
	_	_	_	_	_	_
	27	19	21	19	30	19

FOREST TECHNICIAN COURSE DESCRIPTIONS

- 9.500 ELEMENTS OF SUPERVISION (3 class hrs/wk) 3 Term Units To give the student a basic understanding of leadership from the crew boss level up. Prerequisite: Approval of department head.
- 6.640 FIRE CONTROL (2 class hrs/wk) 2 Term Units A course covering forest fire behavior, ignition, and spread of forest fires and factors by which they are influenced; methods of fire prevention and suppression: forest fire control organizations and equipment are studied. Transportation, communications, and the operation of forest fire equipment are covered.

 Prerequisite: General Forestry.
- 6.625 FOREST MENSURATION I (2 class 4 lab hrs/wk) 3 Term Units A general course in Forest Measurements starting with log scaling, going into log grading, and finally cruising methods. The necessary theory will be presented along with practical work in each field. Prerequisite: Math II and Math III, or Math III concurrently and General Forestry.

- **6.626 FOREST MENSURATION II** (2 class 4 lab hrs/wk) 3 Term Units A continuation of Forest Mensuration I. Prerequisite: Mensuration I.
- **6.605 FOREST PRODUCTS** (1 class 2 lab hrs/wk) 3 Term Units The study of Forest Products and how they are produced.
- 6.601 GENERAL FORESTRY (3 class hrs/wk) 3 Term Units
 This course introduces the student to the whole field of Forestry—a survey of the jobs involved and the resources worked with.
- 6.631 LOGGING PLANNING (2 class 4 lab hrs/wk) 3 Term Units This course will instruct the student in the field procedures necessary in Logging Planning. An undeveloped tract of land will be studied from acquisition to prepared road system and logging plan.

 Prerequisite: Forest Technician student, Surveying I, II, General Forestry, Forest Surveying and Mensuration II concurrently.
- 6.101 PLANE SURVEYING I (1 class 4 lab hrs/wk) 3 Term Units A beginning course in surveying techniques designed to give the student understanding of the fundamentals of chaining and leveling, care and adjustment of surveying instruments, and office procedures. Provision is made by appropriate field work for practical application of the techniques learned.

 Prerequisite: Approval of department head.
- 6.621 POWER TOOLS AND PUMPS (2 class 3 lab hrs/wk) 3 Term Units The study of First Aid and Safety and the study of the construction, use and maintenance of the common power tools used by the forester; including the power saw, brush saw, hand pump (Smith, Indian), engine powered pumps (Pacific Marine), as well as shallow well and deep well centrifugal and jet pumps. The use, care and maintenance of automobiles, trucks, tractors, and "tote-goats" is included.
- 6.655 RECREATIONAL STRUCTURES (1 class 3 lab hrs/wk) 2 Term Units A course in the locating, planning methods, maintenance, and construction practices used in public forest recreation.
- 6.615 SILVICULTURAL PRACTICES (1 class 3 lab hrs/wk) 2 Term Units A course designed to introduce students to the theory of Silviculture, giving them a general understanding of the growth principles and cutting methods for our commercial forest species. Prerequisite: General Forestry.
- 6.645 TREE IDENTIFICATION (1 class 3 lab hrs/wk) 2 Term Units
 A course in tree and shrub identification which will cover the western
 commercial timber species and many of the native non-commercial
 trees and shrubs.
 Prerequisite: None.

TECHNICAL DRAFTING

(2-Year Program)

The training program in Technical Drafting is planned to provide basic instruction and training in drafting techniques 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 technical drafting 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 with construction, industrial manufacturing plants, engineering firms, and city, county, state and federal agencies involved in planning construction projects.

*FIRST YEAR	FAI	L	WINT	ER	SPRI	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
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
Intro. Fabrication Practices I, II,	III 5	3	5	3	5	3
Communication Skills I, II	3	3	3	3		
Applied Economics	3	3				
Project Drafting I					10	4
Technical Report Writing					3	3
Employer-Employee Relations			2	2		
Advanced Drafting Problems					5	3
	_	_		_	_	
	23	18	22	17	28	17
SECOND YEAR	FAI	_L	WINT	ER	SPRI	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Advanced Machine Drafting I, II	III 5	2	5	2	5	2
Technical Mathematics I, II, III	4	4	4	4	4	4
Applied Physics I, II, III	5	4	5	4	5	4
Engineering Problems I, II	2	1	2	1		
Electrical Drafting	4	2				
Introduction to Specifications	3	3				
Industrial Safety	3	3				
Production Planning & Practices	e Miles		5	4		
Metals Application Treatment,						
Testing					5	3
Technical Illustration					4	2
Architectural Drafting I			5	2		
Structural Drafting					5	2
Health			2	2		
	 26	— 19		 19		 17
	20	10	20	10	20	TI

^{*}NOTE: Minor changes in courses will be noted in the first year courses. These changes were made to provide for second year options for the year 1967-68. Likely to be included will be options in Machine Design, Architectural Detailing, Civil-Structural, and Surveying. The second year Technical Drafting curriculum for 1966-67 is continued as previously planned.

4.125 ADVANCED MACHINE DRAFTING III (5 lab hrs/wk) 2 Term Units This course presents practical drafting problems requiring the application of previously learned principles of machine drafting. This will include advanced work on cams, gears, and the relationships of drafting to shop processes.

Prerequisite: Advanced Machine Drafting II.

- 4.123 ADVANCED MACHINE DRAFTING II (5 lab hrs/wk) 2 Term Units 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.
- ARCHITECTURAL DRAFTING (5 lab hrs/wk) 2 Term Units 4.107 An advanced course emphasizing architectural drawing techniques, methods and procedures in architectural drawings, lettering, layout and design of the standard drawings (construction and display), and rendering the display drawing. Carpentry and masonry principles and construction drawing are included. Design principles such as standard stock sizes, strength of joints, maximum loads and spans, and material weights will be discussed. Application consists of preparing sets of working drawings of residential and commercial buildings.

Prerequisite: Second-year standing or approval of department head.

3.339 BLUEPRINT READING AND SKETCHING (3 lab hrs/wk) 1 Term Unit Introductory course to Blueprint Reading and Sketching covering the alphabetic lines, three-view drawings, arrangement of views, two-view, one-view, and auxiliary views. Dimensions and notes, shop sketching, freehand lettering and orthographic sketching are included. Students develop the ability to read, interpret blueprints, and make simple shop sketches without the use of instruments.

DRAFTING COURSES

4.101 DRAFTING I

(4 lab hrs/wk) 2 Term Units A fundamental course in drafting designed to give the student a basic understanding of drawing techniques. Emphasis is placed on the application of drafting instruments, standard orthographic projection, layout procedures and ASA approved lettering techniques. Drawing techniques such as geometric construction, selection of views, sectional and auxiliary views, revolutions, threads, and standard dimensioning practices will be covered.

Prerequisite: High school algebra or approval of department head. Mathematics 4.202 may be taken concurrently.

4.105 DRAFTING II (4 lab hrs/wk) 2 Term Units This is an intermediate course designed to prepare students to enter mechanical, structural, civil, and architectural drafting. It includes isometric projection, perspective drawings. Emphasis is placed on the concept, technique of inking, and the development of working drawings as used in industry. Limitations of general shop equipment are discussed.

Prerequisite: Drafting 4.101 or equivalent.

DRAFTING FUNDAMENTALS (5 lab hrs/wk) 2 Term Units A course covering the recognition angle of drafting as well as the technique of accomplishing the completion of a drawing. Emphasis is placed on free hand work as well as instrument work. Information about blue-print reading and drawing types is covered. A general course to acquaint the student with basic concepts and to develop basic skills. Included in the course is a study of instruments used, layouts for drawings, lettering, free hand sketching, the alphabet of lines, geometric construction, three view drawings, isometric drawings, intersections and developments, and blue-print reading.

4.103 ELECTRICAL DRAFTING (4 lab hrs/wk) 2 Term Units Techniques required for the electrical and electronic fields. It includes charts, graphs, chassis layout, schematic and pictorial wiring diagrams, routing diagrams (power distribution, lighting, conduit and ducts, underground wiring and ducts) and 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 Term Units A survey of the 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 Term Units A study of practices in the fabrication of metals will be conducted. This study will be implemented by visits to various manufacturing companies which involve the use of metals. Areas studied will include 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 Term Units A study of practices in the fabrication of woods will be conducted. This study will be implemented by visits to various manufacturing companies and construction jobs which are using common practices. Studies will involve woodcutting, finishing, shaping, joining and fastening. A study of building codes will be included.

Prerequisite: Fabrication Practices I or consent of Instructor.

4.130 INTRODUCTION TO FABRICATION PRACTICES III

(2 class - 3 lab hrs/wk) 3 Term Units A study of fabrication practices in the general area of construction and related areas will constitute the requirements of this course. Areas of study will involve concrete structure, highway construction, bridge construction, electrical and electronic applications and plastics. Prerequisite: Introduction to Fabrication Practices I & II.

4.102 INTRODUCTION TO SPECIFICATIONS (3 class hrs/wk) 3 Term Units 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.

4.131 MAPPING AND PLATTING (1 class - 7 lab hrs/wk) 3 Term Units Principles of map platting, using field survey data. Office procedure; basic earthwork computation, legal description, and subdivision planning.

Prerequisite: Fourth-term standing or approval of department head.

4.109 MECHANICAL DRAFTING (5 lab hrs/wk) 2 Term Units An advanced course emphasizing mechanical design. It includes sketching, cam and gear layout, isometric drawings, welding drawings, tolerances and allowances, and tool jig drawings. Simplified drawing technique will be covered and general shop procedures will be discussed. Emphasis will be placed on the industrial requirements of drawing.

Prrequisite: Third-term standing or approval of department head.

4.106 METALS APPLICATION TREATMENT AND TESTING

(2 class - 3 lab hrs/wk) 3 Term Units A survey in metallurgy covering the common materials of fabrication, metals coding systems, characteristics, methods of refining and alloying and methods of treating. The goal of the course is to acquaint the student with the various types of and the working of metals used by industry.

Prerequisite: Second-year standing or approval by department head.

PRODUCTION PLANNING AND PRACTICES 4.104

(3 class - 2 lab hrs/wk) 4 Term Units 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.

STRUCTURAL DRAFTING 4.111

(5 lab hrs/wk) 2 Term Units An advanced course emphasizing civil and structural drafting procedures. Includes the function and design of: general plans, stress diagrams, shop drawings, foundation or masonry plans, erection diagrams, falsework plans, and sheet metal layout. Bills of materials, rivet lists, drawing indexes, design considerations, and strength of joints will be covered. The student will become acquainted with structural shapes such as: bridges, dams, and earthwork constructions. Prerequisite: Sixth-term standing or approval of department head.

TECHNICAL ILLUSTRATION 4.127

(4 lab hrs/wk) 2 Term Units Techniques required for modern technical illustrations and drawings such as those found in catalogs, published presentation or exploded drawings. Both freehand drawing and template implements, pencils, brush and technique of light and shadow are discussed.

Prerequisite: Second-year standing or approval of department head.

COLLEGE TRANSFER COURSES

GENERAL ENGINEERING

GE 101, ENGINEERING ORIENTATION

(2 hours each term)

102, 103 Departmental engineering orientation. Prerequisite: Math 101, 102 previously or concurrently.

GRAPHICS GE 115

(3 hours each term)

Fundamental principles of the language. Three 2 hour laboratory periods.

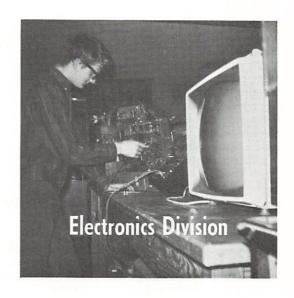
Electronics

Major/Minor Appliance Repair

Radio and TV Programming

Radio and TV Servicing

Radiotelephone Operator



OCCUPATIONAL COURSES AND PROGRAMS

APPLIANCE REPAIR, MAJOR APPLIANCES

(2 Year Program)

Education and training for employment in the field of Appliance Repair are provided in two separate training program options. Because of the ever-increasing number and types of automatic appliances being produced, specialization in repair is given either in major or small appliances. A complete program of class instruction in theory and fundamental principles, with shop practice and related class instruction, is provided in both options.

Training for Major Appliance Repair is provided in preparation for work on appliances such as automatic washers, dishwashers, dryers, hot water heaters, water pumps, electric stoves and small electric motors.

Opportunity for employment in the Appliance Repair field upon completion of training is available with appliance retail or wholesale service departments, or general appliance repair shops. Successful completion of school courses and work experience can lead to positions such as service manager or ownership or management of an appliance repair business.

FIRST YEAR	FA		WIN			RING
	hrs/w	units	hrs/wk	units	hrs/wl	units
Major Appl. Rep. I, II, III	5	5	3	3	3	3
Major Appl. Rep. I, II, III Lab	10	3	12	4	12	4
Mathematics II, III	3	3	3	3		
Machine Shop Orientation	5	3				
Machine Tool Operation			5	3		
Electrical Theory	5	4	5	4		
Applied Economics					3	3
Employer-Employee Relations					2	2
Health					2	2
	_	_			-	_
	28	18	28	17	22	14

SECOND YEAR	FAL	L	WINT	ER	SPRI	NG
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Major Appl. Rep. IV, V, VI	3	3	3	3	3	3
Major Appl. Rep. IV, V, VI Lab	12	4	12	4	12	4
Practical Physics I, II	5	4	5	4		
Welding IA	5	2				
Electrical Drafting	4	2				
Communication Skills I, II			3	3	3	3
Salesmanship			3	3		
Business Records & Reports					3	3
Psychology of Human Relations					3	3
	_	_				_
	29	15	26	17	24	16

MAJOR APPLIANCE REPAIR, COURSE DESCRIPTIONS

3.200	INTRO. TO MAJOR APPL. REP. I	(5 class hrs/wk) 5 Term Units
3.201	INTRO. TO MAJ. APP. REP. I LAB	(10 lab hrs/wk) 3 Term Units
	Instruction and use and care of shop a electrical components and electrical principles and motor repairs will be pranuals, order books, materials and r	l instruments. Motor operating presented. Introduction to repair

3.202	MAJOR APPL. REP. II	(3 class hrs/wk) 3 Term Units
3.203	MAJOR APPL. REP. II LAB	(12 lab hrs/wk) 4 Term Units
	Study and instruction on automati	c washers. This will include infor-
	mation on electrical components	and mechanical parts, testing and
	trouble-shooting. Study of automat	ic dryers with their electrical com-
	ponents and mechanical parts. In	struction in the repair of conven-
	tional washers, testing and trouble	-shooting of clothes dryers.
	Prerequisite: Introduction to Major	

3.204	MAJOR APPL. REP. III	(3 class hrs/wk) 3 Term Units
3.205	MAJOR APPL. REP. III LAB	(12 lab hrs/wk) 4 Term Units
	Study and instruction on automatic ho struction on elements, thermostats, wir component parts, including testing, tre Prerequisite: Major Appliance Repair	ing, timing devices, circuits and puble-shooting and repair.

3.206	MAJOR APPL. REPAIR IV	(3 class hrs/wk) 3 Term Units
3.207	MAJOR APPL. REP. IV LAB	(12 lab hrs/wk) 4 Term Units
	Instruction on shop repairs, auton	natic washers, dryers and electric
	stoves. Instruction on the operating	ng principles and major causes of
	trouble and repairs for disposals ar	nd their component parts.
	Prerequisite: Major Appliance Rep	air III.

3.208	MAJOR APPL. REPAIR V	(3 class hrs/wk) 3 Term Units
3.209	MAJOR APPL. REP. V LAB	(12 lab hrs/wk) 4 Term Units
	Instruction in trouble-shooting a testing washers, disposals, auton Prerequisite: Advanced Major A	

3.210 MAJOR APPL. REPAIR VI (3 class hrs/wk) 3 Term Units
3.211 MAJOR APPL. REP. VI LAB (12 lab hrs/wk) 4 Term Units
Further instruction in trouble-shooting and repair of electric motors, pumps, testing washers, disposals, automatic washers, and dryers. Customer service.

Prerequisite: Advanced Major Appliance Repair II.

APPLIANCE REPAIR, SMALL APPLIANCES

(2 Year Program)

Education and training for employment in the field of Appliance Repair are provided in two separate training program options. Because of the ever-increasing number and types of automatic appliances being produced, specialization in repair is given either in major or small appliances. A complete training program of class instruction in theory and fundamental principles, with shop practice and related class instruction is provided in both options.

The option for training in small appliance repair covers instruction in basic principles of small appliances, such as toasters, percolators, automatic fry pans and small electric motors.

Opportunity for employment in the appliance repair field upon completion of training is available with appliance retail or wholesale service departments or general appliance repair shops. Successful completion of school courses and work experience can lead to such positions as service manager or ownership or management of an appliance repair business.

FIRST YEAR	FALL		WINTER		SPRING		
	hrs/wl	k units	hrs/wk	units	hrs/wk	units	
Small Appl. Rep. I, II, III	5	5	3	3	3	3	
Small Appl. Rep. I, II, III Lab	10	3	12	4	12	4	
Electrical Theory	5	4	5	4			
Mathematics II, III	3	3	3	3			
Machine Shop Orientation	5	3					
Machine Tool Operation			5	3			
Applied Economics					3	3	
Employer-Employee Relations					2	2	
Health					2	2	
		-	_	_	-	_	
	28	18	28	17	22	14	
SECOND YEAR							
Small Appl. Rep. IV, V, VI	3	3	3	3	3	3	
Small Appl. Rep. IV, V, VI Lab	12	4	12	4	12	4	
Electrical Drafting	4	2					
Practical Physics I, II	5	4	5	4			
Welding IA	5	2					
Communication Skills I, II			3	3	3	3	
Salesmanship			3	3			
Business Records and Reports					3	3	
Psychology of Human Relations					3	3	
	_	_	_			_	
	29	15	26	17	24	16	

SMALL APPLIANCE REPAIR, COURSE DESCRIPTIONS

3.180 INTRO. TO SMALL APPL. REP. I (5 class hrs/wk) 5 Term Units
 3.181 INTRO. TO SMALL APPL. REP. I LAB (10 lab hrs/wk) 3 Term Units Introduction and use and care of shop and machine tools. Instruction in electrical components and electrical instruments. Motor operating principles and motor repairs will be presented. Introduction to repair manuals, order books, materials and repair supplies.

3.182 SMALL APPL, REP. II

(3 class hrs/wk) 3 Term Units

3.183 SMALL APPL. REP. II LAB

(12 lab hrs/wk) 4 Term Units

Study of bi-metal thermostats and heat to mechanical motion, instruction and demonstration on trouble-shooting and repair of thermostats on toasters, percolators, fry pans and heating devices of various kinds. Study and instruction in operating principles of percolator and how to trouble-shoot and repair heating units and thermostats. Instruction and study of heating principles of electric fry pans and how to trouble-shoot and repair.

Prerequisite: Small Appliance Repair I.

3.184 SMALL APPL. REP. III

(3 class hrs/wk) 3 Term Units

3.185 SMALL APPL. REP. III LAB (12 lab hrs/wk) 4 Term Units Instruction on food mixers, hair dryers, lamps, and other small heaters and small appliances. Instruction in trouble-shooting and repair of these small appliances. Instruction in the principles of operation of shading pole motors, series motors and electrical circuits involved in these motors. Instruction on motors including multi-speed motors, testing of armature and fields, turning and facing commutators, and repairing malfunction of small motors.

Prerequisite: Small Appliance Repair II.

3.186 SMALL APPL. REP. IV

(3 class hrs/wk) 3 Term Units

3.187 SMALL APPL. REP. IV LAB

(12 lab hrs/wk) 4 Term Units

Instruction in the principles of operating of electric saws and drills, trouble-shooting and repairs, rewinding series motors such as are used in hand tools, vacuum cleaners and food mixers.

Prerequisite: Small Appliance Repair III.

3.188 SMALL APPL, REP. V

(3 class hrs/wk) 3 Term Units

3.189 SMALL APPL. REP. V LAB

(12 lab hrs/wk) 4 Term Units

Instruction in the repair of electric hand tools and rewinding of electric motors.

Prerequisite: Small Appliance Repair I.

SMALL APPL. REP. VI SMALL APPL. REP. VI LAB (3 class hrs/wk) 3 Term Units (12 lab hrs/wk) 4 Term Units

Instruction in small appliances, customer service and discussion of problems involving customer service and small appliance repair.

Prerequisite: Advanced Small Appliance Repair II.

ELECTRONIC ENGINEERING TECHNICIAN

(2 Year Program)

This program of courses is planned to provide the basic principles, theory and lab work in the practical phases of electronics that a technician needs to know. 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 this technical competence is needed.

Satisfactory completion of the two-year program qualifies the person for em-

ployment 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 to be admitted.

FIRST YEAR	FALL		WINTER		SPRING		
	hrs/wk	units	hrs/wk	units	hrs/wk	units	
Electrical Theory (DC) (6.200)	5	4					
Electrical Theory (AC) (6.202)			5	4			
Engineering Problems I, II	2	1	2	1			
Technical Mathematics I, II, III	4	4	4	4	4	4	
Applied Physics	5	4	5	4			
Communication 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 & Trans. Anal.					3	3	
Vacuum Tube & Trans. Lab					3	1	
	_	_		-	_	_	
	23	18	23	18	23	15	

SECOND YEAR	FALL		WINTER		SPRING	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Oscillator Circuits & Design			2	2		
Oscillator Circ. & Design Lab			6	2		
Servo Systems	4	2				
Wave Generation and Shaping	5	3				
Electrical Mathematics I	4	4				
Applied Economics	3	3				
Industrial Electronics I, II			5	3	6	4
Industrial Television I, II			5	3	3	1
Amplifier Circuits & Design	3	3				_
Amplifier Cir. & Design Lab	6	2				
Electronic Data Processing			3	3		
Health			2	2		
Advanced Electronic Circuits					5	3
Automation Systems					3	3
Microwaves					5	3
			_	_	_	_
	25	17	23	15	22	14
		100000				

ELECTRONIC ENGINEERING TECHNICIAN, COURSE DESCRIPTIONS

6.216R ADVANCED ELECTRONIC CIRCUITS

(2 class - 3 lab hrs/wk) 3 Term Units Simulated problems of industry. Covers six electronic areas including computers, communications, industrial controls, electronics, microwaves, and radar. Overview of each area and study of current problems and opportunities. Lab involves construction, testing and reporting performance of assigned circuits.

Prerequisite: Sixth-term standing or approval of department head.

- 6.214R AMPLIFIER CIRCUITS AND DESIGN (3 class hrs/wk) 3 Term Units AMPLIFIER CIRCUITS AND DESIGN LAB (6 lab hrs/wk) 2 Term Units Application of vacuum tubes and transistors in amplifier circuits. Analyzes the vacuum-tube amplifier into its basic and equivalent circuit. Includes loadlines, distortion, and pentode and beam-power tube considerations. Analyzes transistor amplifiers in various circuit configurations and covers biasing methods. Also includes transformer analysis, transformer-coupled amplifiers, and R-C coupled amplifiers. Prerequisite: Fourth-term standing or approval of department head.
- 6.244 AUTOMATION SYSTEMS (3 class hrs/wk) 3 Term Units Study of the techniques of automation. Introduces the basic concepts of automation and covers automatic controls, pneumatic control devices, hydraulic control devices, and electronic and electric control devices. The application of automation is studied from examples in the areas of materials handling and assembling, production of metals, metal casting processes, mechanical working of metals, press-working of metals, metal cutting operations, heat treating of metals, metal joining operations, and inspection and quality control.

 Prerequisite: Sixth-term standing or approval or department head.
- 6.205R ELECTRICAL CIRCUITS

 A continuation of electrical theory with an emphasis on the analysis of the characteristics of complex waveform circuits. Covers passive filter networks, bi-directional waveforms, complex waveform, analysis of simple circuits, waveform analysis of series R-C circuits, waveform analysis of series R-L circuits, and waveform analysis of combined networks.

Prerequisite: Third-term standing or approval of department head.

- 6.20R ELECTRICAL CIRCUITS LAB (6 lab hrs/wk) 2 Term Units Electrical theory with an emphasis on the analysis of the characteristics of complex waveform circuits. Covers passive filter networks, bidirectional waveforms, complex waveform, analysis of simple circuits, waveform analysis of series R-L circuits, and waveform analysis of combined networks. Prerequisite: Third-term standing or approval of department head.
- 6.240 ELECTRONIC DATA PROCESSING (3 class hrs/wk) 3 Term Units
 An introduction to the principles of electronic digital computors. Application and programming of computers in business, industrial and scientific organizations. Reviews the decimal and binary numbering systems as they relate to computers; analyzes computer circuitry with

emphasis on transistor and diode switching circuits; presents the fundamentals of logical design with an introduction to Boolean Algebra and the use of block diagrams, arithmetic element, the memory element, input and output devices, and the control element.

Prerequisite: Fifth-term standing or approval of department head.

6.200 ELECTRICAL THEORY (DC) I (3 class - 2 lab hrs/wk) 4 Term Units Presents an introduction to electronics on the basis of direct currents with an emphasis on contemporary techniques as a supplement to basic concepts. Covers the principles of electron physics, unidirectional current and factors affecting its magnitude, series-circuit analysis, parallel circuit analysis, series-parallel circuit analysis, complex unidirectional-current circuits, the phenomena of magnetism and electromagnetism, inductance and its characteristics, characteristics of capacitance, and electrical measurement instruments.

Prerequisite: High school algebra or equivalent.

6.202 ELECTRICAL THEORY (AC) II (3 class - 2 lab hrs/wk) 4 Term Units A continuation of electrical theory on the basis of alternating currents with an emphasis on contemporary techniques as a supplement to basic concepts. Covers the analysis of the sine wave, series circuits with a sine wave input, series resonance, parallel circuits with a sine wave input, parallel resonance, the non-resonant and the resonant transformer and attenuators and pads.

Prerequisite: Second-term standing or approval of department head.

6.218 INDUSTRIAL ELECTRONICS I (2 class - 3 lab hrs/wk) 3 Term Units An introductory class and laboratory course covering the principles and applications of motors in industry. Involves a 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.

- 6.220E INDUSTRIAL ELECTRONICS II (3 class 3 lab hrs/wk) 4 Term Units An introductory class and laboratory course covering the principles and applications of electronics in industry. A continuation of Industrial Electronics I with emphasis on the control of motors and power with electronic circuits and devices. Covers relays, timing circuits, photoelectric circuits and components, saturable reactors, and the amplidyne. Also covers welding, x-ray, and ultrasonic equipment. Prerequisite: Sixth-term standing or approval of department head.
 - 6.228 INDUSTRIAL TELEVISION I (2 class 3 lab hrs/wk) 3 Term Units A theory and lab course designed to cover television systems, scanning and synchronization, composite video signal, frequency-modulation, television receivers and monitors, picture tubes, power supplies, video amplification, practical design or video amplifiers, brightness-control and DC reinsertion, video detection, automatic gain-control and syncseparation, and deflection oscillator and amplifier circuits.

 Prerequisite: Fifth-term standing or approval of department head.
 - 6.235 INDUSTRIAL TELEVISION II (1 class 2 lab hrs/wk) 1 Term Unit A theory and lab course covering 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.

6.242 MICROWAVES

(2 class - 3 lab hrs/wk) 3 Term Units An introduction to microwaves. Study of ultra-high frequencies to develop a good foundation for the development of waveguides and microwave circuitry. Covers UHF transmission lines, the application of quarter wave lines, matching stubs, and standing-wave measurements. Transmission of microwave energy through waveguides is analyzed and the TE and TM modes of transmission are studied. Various types of waveguide plumbing including choke joints, directional couplers, flap-attenuators, horns, guide partitions, and flexible waveguides are studied. Includes also cavity resonators, high frequency oscillators, magnetron, and klystron oscillators, the resnatron traveling wave tubes and other high-frequency tubes and devices.

Prerequisite: Sixth-term standing or approval of department head.

- 6.212R OSCILLATOR CIRC. AND DES. (2 class hrs/wk) 2 Term Units 6.213R OSCILLATOR CIRC. AND DES. LAB (6 lab hrs/wk) 2 Term Units Study of single-phase rectifier circuits and filters with calculation of the ripple-factor. Introduces the fundamental feedback equation and covers positive and negative feedback. Various types of feedback oscillators including the Hartley and Colpitts are analyzed. Covers negative-resistance oscillators, miscellaneous
- 6.210R VAC. TUBE & TRANS. ANAL. (3 class hrs/wk) 3 Term Units 6.211R VAC. TUBE & TRANS. ANAL. LAB (3 lab hrs/wk) 1 Term Unit An introductory course to the analysis of the electrical characteristics of vacuum tubes and transistors. Includes a review of electron physics with emphasis on electron emission and fundamental transistor theory. Covers two element electron devices including hot and cold-cathode vacuum and gas diodes and semiconductor diodes; three element vacuum tubes and transistors; multi-grid tubes and including tetrodes, pentodes and beam-power tubes; special transistors and diodes. Prerequisite: Third-term standing or approval of department head.

WAVE GENERATION AND SHAPING 6.234R

(2 class - 3 lab hrs/wk) 3 Term Units An introduction to pulse techniques. Gives their historical development, typical applications, nomenclature, importance of pulse shapes, and responses of frequency-selective circuits to pulses. Includes the theory and operation of limiter and clipper circuits, differentiating, and integrating circuits, and D-C restoration. Various multivibrator circuits, synchronization circuits, and applications of multivibrators are studied.

Prerequisite: Fourth-term standing or approval of department head.

RADIO COMMUNICATIONS (BROADCASTING)

(2 Year Program)

The radio communications training program has been planned to give the student the basic instruction and training necessary for entry into the radio broadcasting field.

Class instruction is given in the fundamentals of radio station operation, program planning, studio operation and control room operation, and techniques of announcing, and radio advertising. Instruction is given to prepare a student for the F.C.C. operator's license examination.

Actual practice in radio station broadcasting is provided at the Eugene Public

School Radio Station KRVM. Instruction and training in this program are aimed at preparing a person for employment as a combination man, announcer technician, or announcer. Usually employment is obtained in the smaller radio stations upon completion of this training with promotion to larger stations and specialized jobs likely, after gaining some experience.

FIRST YEAR	FALL		WINT	ER	SPRING		
	hrs/w	units	hrs/wk	units	hrs/wk	units	
Fund. of Radio Broadcasting Fund. of Radio Broadcasting Lab	3 12	3 4					
Electrical Theory (4.920E), (4.92	2E) 5	4	5	4			
Mathematics II, III	3	3	3	3			
Electrical Drafting	4	2					
Announcing			3	3			
Announcing Techniques Lab			12	4			
Communication Skills I, II			3	3	3	3	
Control Room and Studio Oper.					3	3	
Control Rm. & Studio Oper. Lab					12	4	
Electronic Circuits					5	3	
Rad. Oper. Prep. I, II			3	3	3	3	
The state of the s	_	_	_		_	_	
	27	16	29	20	26	16	
SECOND YEAR							
Fund. of Radio Programming	3	3					
Fund. of Radio Prog. Lab	12	4					
Practical Physics I, II	5	4	5	4			
Applied Econ.	3	3					
Radio Advertising			3	3			
Radio Advertising Lab			12	4			
Salesmanship			3	3			
Audio Systems			5	4			
Adv. Radio Station Operation					3	3	
Adv. Radio Station Oper. Lab					12	4	
Psychology of Human Relations					3	3	
Employer-Employee Relations	2	2					
Business Records & Reports					3	3	
Health					2	2	
220020		_	_	_			
	25	26	28	18	23	15	

A second year option in Telecasting is being planned and will be offered as soon as the necessary studio and control room equipment is purchased and installed.

RADIO COMMUNICATIONS, COURSE DESCRIPTIONS

3.366E FUNDAMENTALS OF RADIO BROAD. (3 class hrs/wk) 3 Term Units
3.367E FUND. OF RADIO BROAD. LAB (12 lab hrs/wk) 3 Term Units
History of radio broadcasting. Technical developments. Growth of radio networks. Government's control of broadcasting. Classes of radio stations. Applying for a station license. Radio systems of other countries. F.C.C. Rules and Regulations. Basic station organization. Instruction on control room equipment, and preparation of taped programs.

3.373E ANNOUNCING

3.374E ANNOUNCING LAB

(3 class hrs/wk) 3 Term Units (12 lab hrs/wk) 4 Term Units

Microphone response patterns, response at various distances. Development of speed and accuracy in reading warmth and friendliness in communication. Meaning of "pattern," "vocalized pause," "articulation," "enunciation," and "diction." Vocabulary building. Words often mispronounced. Rules of pronunciation for modern foreign languages. Newscasts, interviews, panel discussions, and record shows. Prerequisite: Fundamentals of Radio Broadcasting.

3.370E CONTROL ROOM AND STUDIO OPERATION

3.371E CONTR. RM. & STUDIO OPER. LAB (12 lab hrs/wk) 4 Term Units Theory of operation of audio console, turntables, transcription arms, tape recorders, microphones, volume level meters. Meaning of such terms as "segue," "board fade," "cross-fade," and "back-cue." Routine non-technical maintenance. Setting up studio for live programs. Handling of large and small groups in studio. Safety precautions. Daybook and program log. Running inventory of taped programs. Prerequisite: Announcing.

3.368E FUNDAMENTALS OF RADIO PROGRAMMING

3.369E FUND. OF RADIO PROG. LAB (12 lab hrs/wk) 4 Term Units Historical development. Role of networks in programming. Programming the independent station. The "magazine" concept of network programming. The music and news format. Responsibilities and duties of program director. F.C.C. criteria for acceptable programming. Radio continuities. Use of card file for record library. Prerequisite: Control Room and Studio Operation.

3.372E RADIO ADVERTISING (3 class hrs/wk) 3 Term Units
3.375E RADIO ADVERTISING LAB (12 lab hrs/wk) 4 Term Units
Historical development. Sponsored programs. Role of advertising
agencies and networks. Net work affiliations. Network option time.
National accounts. The transition from sponsored programs to spot
advertising. Writing radio copy. Developing local spot sales. Servicing accounts. The sales approach.

3.376E ADVANCED RADIO STATION OPER. (3 class hrs/wk) 3 Term Units
3.377E ADV. RADIO STATION OPER. LAB (12 lab hrs/wk) 4 Term Units
Fundamental knowledge required to pass F.C.C. operator's license exam. Testing and trouble-shooting malfunctioning transmitter equipment. Problems of station operation. Public relations and public service responsibility of radio station. Plan full-day programs. Staff responsibilities.

Prerequisite: To be taken in the sixth term.

4.915R RADIOTELEPHONE OPERATOR'S PREPARATION I

(3 class hrs/wk) 3 Term Units Rules and regulations of the Federal Communications Commission governing radio operators and the licensees of radio stations. Review of fundamentals of electricity and electronics relating to the generation, transmission, and reception of radio signals. Study of typical questions and answers used in FCC examinations.

Prerequisite: Electrical Theory I or consent of instructor.

4.917 RADIOTELEPHONE OPERATOR'S PREPARATION II

(3 class hrs/wk) 3 Term Units

Advanced electronic theory relating to the generation, transmission, and reception of radio and television signals. Study of advanced questions and answers used in FCC examinations for the Radiotelephone First Class Commercial license.

Prerequisite: Radiotelephone Operator's Preparation I. Also open to present holders of FCC Radiotelephone Second Class commercial license.

RADIO AND TELEVISION REPAIR

(2 Year Program)

Instruction and training are given in the basic fundamentals of trouble-shooting and repair of radio and television sets.

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.

FIRST YEAR	FALL		WINTER		SPRING		
	hrs/wk	units	hrs/wk	units	hrs/wk	units	
Fundamentals of Radio Serv.	3	3					
Fund, of Radio Serv. I Lab	12	4					
Electrical Theory (4.920E), (4.922	E) 5	4	5	4			
Electrical Drafting	4	2					
Mathematics II, III	3	3	3	3			
Radio Service II, III			3	3	3	3	
Radio Service II, III Lab			12	4	12	4	
Communication Skills I, II			3	3	3		
Electronic Circuits					5	3	
Applied Economics					3	3	
	_	_	-		_		
	27	16	26	17	26	16	
SECOND YEAR							
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					2	2	
Color Television Service					5	5	
Color Television Serv. Lab.					10	3	
Employer-Employee Relations	2	2					
Psychology of Human Relations					3	3	
Business Records and Reports					3	3	
	_	_	_				
	24	14	28	17	23	16	

RADIO AND TELEVISION SERVICE, COURSE DESCRIPTIONS

6.914 COLOR TELEVISION SERVICE

(5 class hrs/wk) 5 Term Units

6.915 COLOR TELEVISON SERVCE LAB

(10 lab hrs/wk) 3 Term Units

A course based on the modern television systems with emphasis placed on color fundamentals, the color picture tube, the deflection and convergence circuits. The complete receiver is analyzed step by step. The analysis of troubles, alignment, and servicing of the color receiver is extensively covered. Each student is given time for use of color test equipment and for the setup and convergence of the set.

Prerequisite: Television Service II.

FUNDAMENTALS OF RADIO SERV. I (3 class hrs/wk) 3 Term Units 3.378E

3.379E FUND. OF RADIO SERV. I LAB (12 lab hrs/wk) 4 Term Units Introductory instruction on 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.

> Prerequisites: Mathematics II, Electrical Theory I, and Electrical Drafting to be taken concurrently.

3,490E RADIO SERVICE II (3 class hrs/wk) 3 Term Units

3.491E RADIO SERVICE LAB II

(12 lab hrs/wk) 4 Term Units

Theory to give students an understanding of 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. Lab time is provided for demonstrations and experiments to help clarify the principles and procedures covered in class.

Prerequisite: Fundamentals of Radio Service I; Electrical Theory II, and Math III to be taken concurrently.

3.492E RADIO SERVICE III

(3 class hrs/wk) 3 Term Units (12 lab hrs/wk) 4 Term Units

3.493E RADIO SERVICE LAB III

Practical radio servicing in which various types of receivers are studied. Service procedures and problems are covered with an introduction to the field of transistors and other semiconductor devices.

Prerequisite: Radio Service II, Electronic Circuits taken concurrently.

3.494E TELEVISION SERVICE I 3.495E TELEVISION SERVICE I LAB

(3 class hrs/wk) 3 Term Units (12 lab hrs/wk) 4 Term Units

This is a course designed for the servicemen with emphasis placed on actual servicing of television receivers. Substitution of parts is covered. In the first part of the course the following parts of television servicing are covered: Field servicing, which includes the checking of tubes, the location and use of the tube location diagrams, the functional sections, and the adjusting of the controls; low voltage, power supplies, transformer type, and the selenium type; vertical sweep circuits, horizontal output, damper and high voltage stages, horizontal oscillator, AFC stage and the sync-separator section.

Prerequisite: Fourth-term standing or equivalent.

3.496E TELEVISION SERVICE II 3.497E TELEVISION SERVICE II LAB

(3 class hrs/wk) 3 Term Units (12 lab hrs/wk) 4 Term Units

A continuation of Television Service covering the following subjects: Video-amplifiers, picture tube circuits, the picture tube construction and replacement, detector stage, I-F section AGC systems, tuners, sound section and antenna, types, installation and service notes. Prerequisite: Television Service I.

OCCUPATIONAL RELATED COURSES

- 4.912 AUDIO SYSTEMS (2 class 3 lab hrs/wk) 3 Term Units Theory and principles of high fidelity systems, components, amplifiers, pickups and loudspeakers, AM and FM tuners, record players, tape recorders, intercommunication systems. Servicing audio systems. Demonstrations and lab practice.

 Prerequisite: Electronic Circuits.
- 4.900 ELECTRONIC CIRCUITS (2 class 3 lab hrs/wk) 3 Term Units Instruction in vacuum tubes, electron and electron emission, diodes, triodes, and multi-electric tubes. Theory of operation with demonstrations and lab experiments in practical application of principles covered. Includes preparation for F.C.C. Radiotelephone operator's license examination.

 Prerequisite: Electrical Theory II.
- 4.920E ELECTRICAL THEORY (DC) I (3 class 2 lab hrs/wk) 4 Term Units Basic theory of electricity. Kinds of current, Ohm's law and electrical units. Batteries and how they function. Electrical circuit function of conductors, insulators, resistors, rheostats, etc. Magnetism theory and functions of magnetism. Course covers fundamentals of direct current. Prerequisite: High school algebra or Math II.
- 4.922E ELECTRICAL THEORY (AC) II (3 class 2 lab hrs/wk) 4 Term Units Electrical measurement including use of ammeters, voltmeter, dynamometer, etc. Introduction to A.C., Faraday's discovery, generator function, sine wave and transformers. Inductance principles including Lenz's law, self inductance, inductive reactance, high frequency coils and use of inductors. Capacitance action, types of capacitors and how to measure.

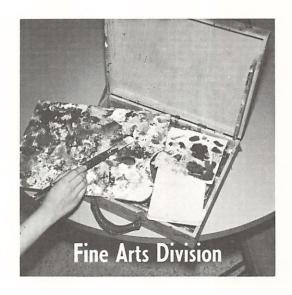
Prerequisite: Electrical Theory I 4.920E or comparable preparation.





Basic Design
Chorus
Drawing and Painting
Intro. to Music and Its Lit.

Survey of Visual Arts



FINE ARTS

(All courses listed here are college transfer.)

ART

- AA 195, BASIC DESIGN 2 hours each
- 196, 197 A three-term introductory sequence; a series of studio participation exercises involving the basic principles of design.
- AA 290 PAINTING

 Instruction in the use of oil color, water color, or other media. Registration permitted any term but it is desirable that the work be started in the fall. Maximum credit: 6 hours.
- AA 291 DRAWING

 1-2 hours any term
 Training in observation and selection of significent elements. Registration permitted any term but is desirable that the work be started in the fall. Maximum credit: 6 hours.
- AA 201, SURVEY OF THE VISUAL ARTS

 3 hours each

 202, 203 Cultivation of understanding and intelligent enjoyment of the visual
 arts through a study of historical and contemporary works; consideration of motives, media, and forms.

MUSIC

- Mus 197 CHORUS

 1 hour each
 (No more than 6 hours total credit may be earned in Mus 195, 196, 197)
- Mus 201 INTRODUCTION TO MUSIC AND ITS LITERATURE 3 hours each 202, 203 Cultivation of understanding and intelligent enjoyment of music through a study of its elements, forms and historical styles.

NOTE: It is also being planned that men's and women's glee clubs and small ensemble groups will be offered on a non-credit basis.

First Aid

Health

Men's and Women's P.E.



HEALTH OCCUPATIONAL COURSES

- 1.605 HEALTH EDUCATION (2 class hrs/wk) 2 Term Units
 This course is designed to provide individuals with selected health
 activities through participation. Study for the purpose of adding to
 their knowledge and appreciation of desirable mental and physical
 health practices as they relate to the individual and the community.
- 5.212 FIRST AID (2 lab hrs/wk) 1 Term Unit A class in standard First Aid procedures and techniques designed to meet graduation requirements of all students as well as adults who wish to secure first aid training. Upon a successful completion of the course, a standard first aid card may be secured.
- 5.213 FIRST AID (2 lab hrs/wk) 1 Term Unit A class in advanced first aid procedures and techniques to meet the needs of special interest groups who have opportunity to give first aid care frequently in the course of their daily routine. Upon successful completion of the course an American Red Cross Advanced First Aid card may be secured.
- 5.214 FIRST AID

 (2 lab hrs/wk) 1 Term Unit
 A course in Medical Self Help Training to help prepare people for
 survival in a 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.

COLLEGE TRANSFER COURSES

- HE 250 PERSONAL HEALTH

 Study of the personal health problems of men and women with emphasis on implications of family life. Mental health, communicable diseases, degenerative diseases, nutrition.
- HE 252 FIRST AID

 Study of first aid and safety procedures—for the individual, schools, athletics, and civilian defense; meets certification standards of the American Red Cross for the standard and advanced first aid card.

PHYSICAL EDUCATION

(All Physical Education courses are college transfer)

PE 180 PHYSICAL EDUCATION

(3 hrs/wk) 1 Term hour each

(women) A variety of activities taught for physiological and recreational values

or are offered for all students. Activities include individual, dual and

PE 190 team sports. To meet the requirements for an associate degree, five (men)

terms of physical education are required. Only one hour may be earned each term. Only one activity may be repeated for credit.

Adaptive Activity (men only)

Students with physical limitation or deviations are assigned to a program of adapted physical activity by a physician or departmental staff

Badminton (men and women)

Instruction in the fundamental skills of servings, strategy, play, and rules of the game. Tournament play.

Basketball (men and women)

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

Body Building (men only)

Instruction in the use of weights and weight lifting equipment. A chart of progress and development is kept by each individual.

Body Mechanics (women only)

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

Bowling (men and women)

Basic fundamentals, techniques, rules and social etiquette of bowling.

Field Sports (women only)

Emphasis on fundamental skills and techniques as well as rules and team play.

Flag Football (men only)

Instruction and practice in fundamental skills with development of team play and competition.

Golf (men and women)

Basic fundamentals, techniques, rules and social etiquette of golf.

Gymnastics (men and women)

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

Softball (men and women)

Fundamentals of the game, rules and team play.

Swimming (men and women)

Development of crawl stroke, back stroke, breast stroke, side stroke and elementary diving.

Swimming, Advanced (men and women)

Perfection of all strokes, water games, diving, life saving techniques.

Tennis (men and women)

Theory and practice in tennis skills, strategy, and application of rules.

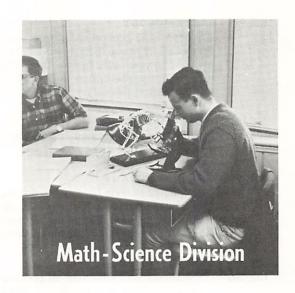
Track (men and women)

Fundamentals, rules, theories and training in track and field events.

Volleyball (men and women)

Instruction in individual and team play, rules and strategy.

Algebra
Anatomy
Bacteriology
Biology
Botany
Chemistry
General Physics
Mathematics
Physical Science
Physiology
Practical Physics
Trigonometry
Zoology



COLLEGE TRANSFER COURSES

MATHEMATICS COURSES

Mth 200, CALCULUS WITH ANALYTIC GEOMETRY 4 hours each 201, 202, Standard sequence for students in science and engineering.

Mth 101 COLLEGE ALGEBRA 4 hours
Prerequisite: One and one-half years of high school algebra or Mth 100.

Mth 100 INTERMEDIATE ALGEBRA 4 hours
Prerequisite: One year of high school algebra or Mth 60. No credit
allowed if taken after Mth 101 or any more advanced mathematics
course. Not acceptable toward meeting science group requirement at
the University of Oregon.

Mth 191, MATHEMATICS FOR ELEMENTARY TEACHERS 3 hours each 192, 193 Basic concepts of mathematics; for prospective elementary teachers.

Mth 102 TRIGONOMETRY 4 hours
Prerequisite: Mth 101.

SCIENCE COURSES

*An 211 ANATOMY

A course in human anatomy, including the study of gross and miscroscopic structure of the body. Planned to provide the nurse with a basis for understanding of human structure and function. Laboratory work includes the demonstration of normal histological structure and the dissection of the human body. Offered concurrently with Phy 211. Lectures, 2 hours; demonstration and quiz, 1 hour.

*This course applicable to nursing programs only.

*Bac 211 BACTERIOLOGY

3 hours

A study of the general characteristics of bacteria and other organisms that cause disease, their behavior as disease agents, and the factors involved in resistance to infection. The application of these studies to the diagnosis, prevention and treatment of infectious diseases. Lectures, 2 hours; laboratory, 3 hours.

GS 101, GENERAL BIOLOGY

4 hours each

102, 103 Biological principles applied to both plants and animals. 3 lectures; 1 three-hour laboratory period.

Bot 201, GENERAL BOTANY

3 hours each

202, 203 How plants get their food, grow, differentiate, and reproduce. Bot 201: seed plants; Bot 202: lower plants; Bot 203: identification of native plants, use of keys, floral morphology. 2 lectures and 1 three-hour laboratory period or 3 two-hour combined lecture-laboratory periods.

Ch 101, GENERAL CHEMISTRY

3 hours each

102, 103 For students who have had no previous training in chemistry and for those whose college aptitude test scores indicate need for a more elementary approach. 2 lectures; 1 three-hour laboratory period.

Ch 201, GENERAL CHEMISTRY

3 hours each

202, 203 Service course covering basic principles of general chemistry. Prerequisite: One year of high school chemistry and acceptable college aptitude scores. 2 lectures; 1 three-hour laboratory period.

Ph 201, GENERAL PHYSICS

5 hours each

202, 203 A year sequence in the study of energy and physical phenomena; including the fundamental principles of mechanics, heat, sound, light, electricity, magnetism, and a brief introduction to modern physics. Three lectures, one discussion period and one three-hour lab.

Prerequisite: Math 102 or equivalent high school trigonometry.

Z 201, GENERAL ZOOLOGY

202, 203 For zoology majors and premedical, predental, prenursing, prepharmacy students and others. 3 lectures; 1 three-hour laboratory period.

GS 104. PHYSICAL SCIENCE

4 hours each

105, 106 Fundamental principles of physics, chemistry, astronomy, and geology; development and application of the scientific method. 3 lectures; 1 two-hour laboratory period. Students are advised to complete one year of high school algebra, or equivalent, as prerequisite to the course.

*Phy 211 PHYSIOLOGY

3 hours

Study of the behavior of living cells, organisms, and organ systems reacting to environmental change and to integrative control mechanisms. Each major system given separate consideration, with special attention to the disturbances of behavior which underlie common diseases. Offered concurrently with An 211. Lectures, 2 hours; demonstration and quiz, 3 hours.

^{*}These courses are applicable to nursing programs only.

MATHEMATICS AND SCIENCES DIVISION OCCUPATIONAL COURSES

MATHEMATICS COURSES

6.115 ELECTRICAL MATHEMATICS (4

(4 class hrs/wk) 4 Term Units

An applied course in mathematics for electronic engineering technicians. Includes an introduction to calculus covering graphical methods, differentiation, and integration with direct application to electronic and electrical circuitry.

Prerequisite: Technical Mathematics 6.266 or equivalent.

6.135 ENGINEERING PROBLEMS I

(2 lab hrs/wk) 1 Term Unit

A study in engineering problems is one in which the student is instructed in the development of accurate, effective, and efficient work and study habits. The course is intended to train the student to organize his analyses and record them in clear, concise forms so that they can be interpreted.

Prerequisite: One year of high school algebra or equivalent.

6.136 ENGINEERING PROBLEMS II

(2 lab hrs/wk) 1 Term Unit

This course aims to develop the skill of gathering together and sorting research results and problem-solving records into logical summation. Mathematical and graphical analysis of data will be emphasized in the presentation of information in the report.

Prerequisite: Engineering Problems 6.135.

6.127 PRACTICAL DESCRIPTIVE GEOMETRY (4 lab hrs/wk) 2 Term Units This course gives a brief review of advanced drafting problems and

takes the student further into the field of descriptive geometric principls.

Prerequisite: Third-term standing or approval of department head.

4.200 MATHEMATICS I

(3 class hrs/wk) No Credit

This is a course in practical mathematics and includes problems composed of whole numbers, fractions, measurements, formulas, graphs, and roots. Review of general mathematics.

Prerequisite: Ability to profit from instruction.

4.202 MATHEMATICS II

(3 class hrs/wk) 3 Term Units

Mathematics II includes the fundamentals of applied algebra and applied geometry, including symbols, equations, ratio and proportion, exponents, radicals, formulas, geometric lines and shapes, common geometric constructions, and introductory applied trigonometry.

Prerequisite: Mathematics 4.200 or equivalent.

4.204 MATHEMATICS III

(3 class hrs/wk) 3 Term Units

The third term concentrates on problems encountered by workers in industrial occupations. It applies arithmetic, algebra, geometry, trigonometry, and their various phases to jobs encountered. Emphasis is on actual problem-solving aspects.

Prerequisite: Mathematics 4.202 or equivalent.

4.208 SLIDE RULE

(2 lab hrs/wk) 1 Term Unit

Basic course in the theory and operation of slide rule, including multiplication, division, powers and roots, trigonometric functions and logarithms.

Prerequisite: Mathematics II (4.202) and II (4.204) or the equivalent.

6.261 TECHNICAL MATHEMATICS I

(4 class hrs/wk) 4 Term Units

This is an applied course in mathematics on the technician level covering the slide rule, tables and interpolation, additional applications in geometry, a review of algebraic operations, systems of linear equations, functions and graphs, advanced applications of exponents and radicals, quadratic equations in one unknown, and introductory trigonometry.

Prerequisite: High school algebra or equivalent.

6.262 TECHNICAL MATHEMATICS II

(4 class hrs/wk) 4 Term Units

Mathematics on the technician level including logarithms, right and oblique triangle problem-solving, trigonometric applications, vectors, trigonometric formulas, identities, and equations, and graphs of trigonometric functions.

Prerequisite: Technical Mathematics 6.260 or equivalent.

6.266 TECHNICAL MATHEMATICS III

(4 class hrs/wk) 4 Term Units

Mathematics on the technician level covering simultaneous quadratic equations, ratio and proportion, binominal theorem, arithmetic and geometric progressions, exponential functions, complex notation, and vector algebra.

Prerequisite: Technical Mathematics 6.262 or equivalent.

SCIENCE COURSES

6.370 APPLIED PHYSICS I

(3 class - 2 lab hrs/wk) 4 Term Units

A course in applied physics on the post high school level. Covers mechanics of measurement, structure of matter, heat energy, heat engines, sound, and light. Lab time is provided for demonstrations and experiments covering the principles and procedures covered in class. Prerequisite: Technical Mathematics 6.260 or approval of department head.

6.371 APPLIED PHYSICS II

(3 class - 2 lab hrs/wk) 4 Term Units

Covers the principles of vectors, kinematics, work-power-energy machines and angular vectors. Lab time is provided for demonstrations and experiments covering principles and procedures covered in class. Prerequisite: Applied Physics 6.362R or approval of department head.

6.366 APPLIED PHYSICS III

(3 class - 2 lab hrs/wk) 4 Term Units

Magnetism and electricity, including basic electric currents, sources, electro-magnetism, alternating current, generators, and motors. Lab time is provided for demonstrations and experiments to clarify principles and procedures covered in class.

Prerequisite: Technical Mathematics 6.262 or equivalent.

4.300 PRACTICAL PHYSICS I (3 class - 2 lab hrs/wk) 4 Term Units An introductory course in practical physics covering matter, measurements, mechanics and machines. Lab time is provided for demonstrations and experiments to further clarify the principles and procedures covered in class.

Prerequisite: Mathematics 4.200 or equivalent.

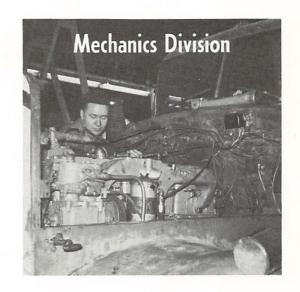
- 4.302 PRACTICAL PHYSICS II (3 class 2 lab hrs/wk) 4 Term Units
 An introductory course in practical physics covering heat, light and sound. Lab time is provided for demonstrations and experiments to clarify the principles and procedures covered in class.

 Prerequisite: Mathematics 4.202 or equivalent.
- 4.304 PRACTICAL PHYSICS III (3 class 2 lab hrs/wk) 4 Term Units
 This is an introductory course in practical physics covering magnetism
 and electricity. Lab time is provided for demonstrations and experiments to clarify the principles and procedures covered in class.

 Prerequisite: Mathematics 4.202 or equivalent.



Airframe and Powerplant
Auto Body and Fender
Auto Mechanics
Diesel Mechanics
Farm Equipment
Machine Shop



OCCUPATIONAL COURSES AND PROGRAMS

AIRFRAME AND POWERPLANT MECHANICS

Training given through this program prepares a person for employment as a line mechanic or service mechanic. Opportunities for employment in this field are expanding for the person who can qualify for the Federal Aviation Agency certificate.

The exacting nature of the courses is such that only applicants who have mechanical aptitude and who have completed high school, or the equivalent may be admitted to this curriculum.

AIRFRAME MECHANICS

(Offered 1966-1967)

The F.A.A. approved Airframe curriculum provides the practical training, theory and technical information required to take the F.A.A. examination for "Airframe" mechanic.

	FALL		WINT	SPRING			
	hrs/wk	units	hrs/wk	units	h	rs/wk	units
Airframe I, II, III	5	5	5	5		5	5
Airframe Lab I, II, III	15	5	19	6		10	3
Mathematics II, III	3	3	3	3			
Drafting I or II	4	2					
Communications Skills I or II			3	3			
Welding IA						5	2
Electrical Drafting						4	2
Practical Physics III						5	4
	-	_	-	_		_	-
	27	15	30	17		29	16

(Schedule Applied Economics in place of Math II, if Math II is completed.)

POWERPLANT MECHANICS

(Offered 1967-1968)

The F.A.A. approved Powerplant curriculum provides the practical training, theory and technical information required to take the F.A.A. examination for "Powerplant" mechanic.

	FAI hrs/wk		WINT hrs/wk		SPRI hrs/wk	
Aircraft Powerplant I, II, III	10	10	5	5	5	5
Air. Powerplant Lab I, II, III	10	3	20	7	19	6
Practical Physics I	5	4				
Communication Skills I or II					3	3
Drafting I or II			4	2		
Applied Economics	3	3				
Health					2	2
	_	_	_	_	_	—
	28	20	29	14	29	16

(Schedule Math II (4.202) in place of Applied Economics if not previously completed.)

AIRFRAME MECHANICS, MAJOR COURSE DESCRIPTIONS

3.220	AIRFRAME I	(5 class hrs/wk) 5 Term Units
3.221	AIRFRAME I LAB	(15 lab hrs/wk) 5 Term Units

Woodwork

F.A.A. requirements for wood repairs, spar splices, rib repairs, plywood skin splices, jig building, tramming, wood types and properties, glues and gluing, woodworking tools, woodworking machines, safety in using tools and machines, repairing certificated aircraft assemblies.

Fabric and Dope

Aircraft fabric grades and specifications, aircraft linen, fiber glass cloth, synthetic fibers, F.A.A. repair procedures and limitations, machine-sewed seams, hand sewing, rib stitching, aircraft dopes, brush application, spray-gun operation, covers, refinishing completed aircraft, airfoil layout.

Hydraulics

Hydraulics tubing and fittings, flaring tubing, disassembly and inspection of pumps, regulators, actuators, valves, accumulators, brake servicing and adjusting, shock strut disassembly and inspection, retracting gear mechanisms, complete system study, auto pilot systems, deicing systems, pneumatic systems, fuel systems.

	icing systems, pneumatic syst	ems, fuel systems.
3.222	AIRFRAME II	(5 class hrs/wk) 5 Term Units
3.223	AIRFRAME II LAB	(19 lab hrs/wk) 6 Term Units

Aircraft Sheet Metal

Hand forming, bending, brake, hand riveting, gun riveting, squeeze riveting, repair of stressed skins, soldering stainless steel, sheet metal working tools, templates, layout work, bend allowance, set back, heat treating, annealing, properties of metals, F.A.A. approved procedures.

Theory of Flight

History of aviation, nomenclature, fundamentals of aerodynamics, aircraft designs, aircraft components, airfoils, airfoil numbers, airfoil development charts, weight and balance, F.A.A. requirements for weight

control, weight and balance graphs, weighing live aircraft for airworthiness certification.

Prerequisite: Airframe I and Lab I.

3.224 AIRFRAME III 3.225 AIRFRAME III LAB

(5 class hrs/wk) 5 Term Units (10 lab hrs wk) 3 Term Units

Aircraft Electrical

Direct current, circuits, series circuits, parallel circuits, relays, solenoid switches, batteries, battery chargers, landing lights, landing gear indicator systems, navigation lights, electrical motors and generators, alternating current, voltmeters, ohm-meters, ammeters, condensers, capacitance, wiring terminals, wiring harness, F.A.A. requirements for aircraft electrical systems, aircraft instruments.

Assembly and Rigging

Alignment, setting dihedral, incidence, stagger, wash in, wash out, landing gear alignment, rigging monoplane, rigging biplane, incidence board, protractors, aircraft identification, certification requirements, categories.

Weight and Balance

Continuation of study started during theory of flight. Advanced weight control problems. Weighing live aircraft for airworthiness certifica-

Prerequisite: Airframe II and Lab II.

POWERPLANT MECHANICS, MAJOR COURSE DESCRIPTIONS

3.226 AIRCRAFT POWERPLANT I

(10 class hrs/wk) 10 Term Units AIRCRAFT POWERPLANT I LAB (10 lab hrs/wk) 3 Term Units

Powerplant Electrical

3.227

This course provides practical application to electrical theory. Work is performed with parallel and series direct current circuits, relays, solenoids, circuit breakers, motors, inverters, dynamotors, aircraft wiring circuits, making harnesses, checking landing gear retraction, flap operation, landing lights, electrical recording gauges and instruments and use of test equipment. F.A.A. requirements and regulations covering aircraft electrical systems.

Magnetos and Ignition

This course covers disassembly, inspection, re-assembly and installation of different makes and models of magnetos currently in use. Battery ignition, ignition switches, shielding, spark plugs, internal timing, timing to engine, synchronizing, test bench inspection, wiring harness inspection and leakage testing. Related theory of magnetic design and theory covered.

Starters and Generators

Disassembly inspection and installation of aircraft starters. Hand inertia, electric inertia, direct electric and direct hand cranking, solenoid controls. Instruction in design, gear ratios, epicyclic gear trains, safety precautions, electrical circuits, and starter switches.

Machine Operation

Demonstration and application of machine tool operations including thread cutting lathe, milling machine, surface grinder, band saws, shaper, drill presses, hones, making bushings, repair operation.

Lubrication Powerplant

Theory of lubrication, history of lubricants, requirements, tests, types of engine lubrication systems, pumps relief valves, oil coolers, oil dilution, hopper tanks, F.A.A. oil system requirements.

Powerplant Basic

Elementary shop math, theory of flight, nomenclature of aircraft, its components and appliances, weight and balance including its effect on stability and performance.

3.228 AIRCRAFT POWERPLANT II

(5 class hrs/wk) 5 Term Units (20 lab hrs/wk) 7 Term Units

AIRCRAFT POWERPLANT II LAB

This course provides instruction and practice in disassembly, inspection reassembly and installation of different makes of propellers currently in use. Understanding of hydraulic, electric and mechanical controllable propellers along with fixed pitch metal and wood propellers. Balancing and refinishing. Instruction in theory of propellers, effective pitch, geometric pitch, slippage, blade element theory, de-icing and anti-icing.

Carburetion

Propellers

3.229

Lab work in disassembly, inspection and assembly of carburetors in use today, float type, pressure injection types and direct injection systems. Float level checks, back suction systems, economizers. Instruction in principles of carburetion, fuel mixture ratios, lean best power, rich best power, induction systems, superchargers, internal blowers, turbo chargers, controls for superchargers.

Engine Overhaul I

Class hours cover engine principles, heat engines, two stroke and four stroke cycle, thermal efficiency in converting heat energy to mechanical energy, piston displacement compression ratio, horsepower formula, indicated horsepower, brake horsepower, friction horsepower, types of engines, cooling and lubrication. Propeller shafts, gear reduction systems, nose case and lower section, cam operation systems, pushrods, valves, rockers, valve springs, cylinders, pistons, rings, connecting rods, bearings, accessory gear trains, blowers, induction system piping, exhaust systems, inter-coolers, after-coolers, F.A.A. regulations for powerplant certification. Instruction and practice in engine disassembly, measuring equipment, micrometers, dial indicators, manufacturing manuals, torque tables, tables of fits, cleaning and inspections, magna-flux, magnaglo, syglo, dy-check, valve systems, cam rings, cam shafts, hydraulic lifters, internal timing, external timing, ignition timing, vernier couplings, assembly procedures, crankshaft runout checks, accessory installations, refacing valves, reseating valves, fitting piston rings, torque wrench use, spark plug installation, wiring harness installation, safetying bolts, studs, etc., installing engine on mount, electrical system installation, propeller installation, propeller governor installation, oiling systems, fuel systems, engine starting and stopping procedure, practice in hand propping, engine check out, trouble shooting, periodic inspection, F.A.A. forms.

Prerequisite: Aircraft Powerplant I and Lab.

3.230 AIRCRAFT POWERPLANT III

3.231 AIRCRAFT POWERPLANT III LAB

(5 class hrs/wk) 5 Term Units (15 lab hrs/wk) 6 Term Units

Engine Overhaul II

This course is continuation of Engine Overhaul I.

Jet Operation

Principles of jet thrust, Brayton cycle, centrifugal blowers, axial blowers, turbo jets, turbo props, turbo shaft, bypass jet, aft fan jet, thrust injectors, sound suppressors, thrust reversers, afterburners, fuel control, oiling systems, accessory systems, air starters, cartridge starters, electric starters, constant speed drives, safety in jet handling, engine trimming, power settings, partial engine disassembly, run tests.

Fuel Systems

Fuel flow requirements, vane pumps, wobble pumps, booster pumps, strainers, bypass systems, selector valves, tank arrangements, tank tests, fuels, manufacture tests, octane ratings, performance numbers. Prerequisite: Aircraft Powerplant II and Lab.

AUTO BODY AND FENDER

(2 Year Program)

Training in this program is given in all basic phases of auto body and fender and painting. The varied training is such as to give the student a broad understanding and background of the various phases of auto body and fender and painting through class instruction and shop practice.

Entry jobs for employment in this field are available 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.

FIRST YEAR	FALL		WINT	ER	SPRING		
	hrs/wk	units	hrs/wk	units	hrs/wk	units	
Automotive Metal Work I, II, III	5	5	3	3	2	2	
Auto. Metal Work Lab I, II, III	10	3	6	2	4	2	
Automotive Painting I, II			2	2	3	3	
Auto. Painting Lab I, II			4	2	6	2	
Welding IA, IB	5	2	5	2			
Practical Physics I, II, III	5	4	5	4	5	4	
Mathematics II	3	3					
Automotive Materials			2	2			
Blueprint Reading, Sketching					3	1	
Applied Economics					3	3	
	_	_	_	_	_		
	28	17	27	17	26	17	

SECOND YEAR	FALL		WINTER		SPRI	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Automotive Painting III	8	4				
Gen. Body Repair I, II & Painting	g 7	3	15	7		
Major Body Repair & Fabrication					15	7
Applied Fluid Mechanics	2	2				
Welding IIA, IIB	5	2	5	2		
Collision Estimating					5	3
Automotive Service Management					2	2
Communication Skills I, II	3	3	3	3		
Machine Shop Orientation	5	3				
Health			2	2		
Employer-Employee Relations					2	2
			_	_		_
	30	17	25	14	24	14

AUTO BODY AND FENDER, MAJOR COURSE DESCRIPTIONS

- 3.320 APPLIED FLUID MECHANICS (2 class hrs/wk) 3 Term Units (See Automotive Mechanics course descriptions.)
- 3.336 AUTOMOTIVE MATERIALS (2 class hrs/wk) 2 Term Units (See Automotive Mechanics course descriptions.)
- 3.397 AUTOMOTIVE METAL WORK I (5 class hrs/wk) 5 Term Units
 3.398 AUTOMOTIVE METAL WORK I LAB (10 lab hrs/wk) 3 Term Units History and developments in auto body and frame construction and types of auto bodies and frames. Basic principles of auto body construction used in auto body building. Fundamentals of metal work.
- 3.321 AUTOMOTIVE METAL WORK II (3 class hrs/wk) 3 Term Units
 3.328 AUTOMOTIVE METAL WORK II LAB (6 lab hrs/wk) 2 Term Units
 Instruction on doors and deck lids and methods of repair. Instruction on glass removal and replacement. Information on hardware and trim replacement and repair. Instruction on sealing for water and dust leaks. Preparing and painting panels.
 Prerequisite: Auto Metal Work I
- 3.337 AUTOMOTIVE METAL WORK III (2 class hrs/wk) 2 Term Units
 3.315 AUTOMOTIVE METAL WORK III LAB (4 lab hrs/wk) 2 Term Units Instruction on repair and replacement of fender shields and hoods. Principles of measuring for replacement or repair of parts. Instruction in panel fitting and alignment of hoods, doors, trunk lids and other sectional parts of the body. Instruction in metal bumping and dinging of panel sections, metal finishing. Prerequisite: Auto Metal Work II
- 3.238 AUTOMOTIVE PAINTING I (2 class hrs/wk) 2 Term Units
 3.239 AUTOMOTIVE PAINTING I LAB (4 lab hrs/wk) 2 Term Units
 Instruction on materials and equipment used in preparation of auto
 body for refinishing. Instruction in surface building up, priming, spotting, and basic functions in preparing the body surface for painting.
 Instruction on paint construction and its use.
 Prerequisite: To be taken concurrently with Auto Metal Work II.

- 3.240 AUTOMOTIVE PAINTING II (3 class hrs/wk) 3 Term Units
- 3.241 AUTOMOTIVE PAINTING II LAB (6 lab hrs/wk) 2 Term Units
 This course includes instruction on matching colors and the use of
 color charts. Complete refinishing instructions. Preparation, cleaning,
 sanding, masking, and spraying. Further instruction on use of spray
 painting equipment. Inspection of completed paint jobs.
 Prerequisite: Auto Painting I
- 3.244 AUTOMOTIVE PAINTING III (2 class 6 lab hrs/wk) 4 Term Units Instruction and practice in use of paint removal by sand blasting, burning and grinding. Instruction and practice on methods and procedures for re-finishing over bare metal. Instruction and practice in interior refinishing. Auto clean-up after painting and preparing car for delivery to customer.
 Prerequisite: Auto Painting II

3.332 AUTOMOTIVE SERVICE MANAGEMENT

(2 class hrs/wk) 2 Term Units (See Automotive Mechanics course descriptions.)

3.246 COLLISION ESTIMATING (2 class - 3 lab hrs/wk) 3 Term Units Instruction and practice in estimating over-all cost for parts, labor, fixing shop costs and profit on repair jobs. Instruction given on preparing insurance claim estimates and making out insurance claim forms.

Prerequisite: Sixth-term standing.

3.242 GENERAL BODY REPAIR I (1 class - 6 lab hrs/wk) 3 Term Units Instruction in repair of body structure members, including practice in shop.

Prerequisite: Auto Metal Work III.

3.243 GENERAL BODY REPAIR II & PAINTING

(3 class-12 lab hrs/wk) 7 Term Units This course includes instruction and practice in panel replacement and alignment. Instruction in and practice given in internal panel repair, replacement, and alignment. Instruction in portable frame and body push-pull method of repair. Instruction and practice in welding panels, leading, glassing and smoothing surfaces. Prepare surface and finish spray paint.

Prerequisite: General Body Repair I

3.245 MAJOR BODY REPAIR & FABRICATION

(3 class - 12 lab hrs/wk) 7 Term Units Instruction on methods and procedures for repair of extensive damage to cars involving body structural members, frame measuring, and alignment fitting and placing of panels. Measuring and aligning of body for superstructure alignment, push-pull application to body members and metal pumping and refinishing. Instruction on fabrication of major body replacements or alterations.

Prerequisite: General Body Repair II

AUTOMOTIVE MECHANICS

(2-Year Program)

FIRST YEAR

The Automotive Mechanics curriculum offers broad basic instruction and shop practice in fundamentals, principles of automotive service and repair. This training can lead to employment in entrance occupations of the automotive service and repair field.

With the 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. Opportunities await the person who has prepared himself by study and training in the courses offered in this training program.

FALL

WINTER

SPRING

		LL	WIN			RING
		cunits	hrs/wl	c units	hrs/wl	c units
Auto Chassis	3	3				
Auto Chassis Lab	6	2				
Internal Combustion Engine I, II	2	2	2	2		
Internal Combustion Eng. I, II La	b 3	1	6	2		
Power Trains			2	2		
Power Trains Lab			5	2		
Fuel System & Carburetion I, II			2	2	2	2
Fuel System & Carburetion Lab I	, II		3	1	3	1
Automotive Repair I					9	3
Automotive Electricity I					3	3
Automotive Electricity I Lab					3	1
Welding IA, IB	5	2	5	2	U	1
Practical Physics I, II, III,	5	4	5	4	5	4
Mathematics II	3	3	J	7	J	4
Blueprint Reading	J	J			2	1
Employer-Employee Relations					3	1000
Employer-Employee Relations					2	2
	07		-	-	_	
	27	17	30	17	30	17
			14/15/	TED	CDD	LINIC
SECOND YEAR	FA	LL	MIN.	IEK	SPR	UNG
SECOND YEAR		LL c units		units		
		units				units
Automotive Repair II, III	hrs/wl	c units 3	hrs/wl	units		
Automotive Repair II, III Automotive Electricity II	hrs/wl 9 3	units 3 3	hrs/wl	units		
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab	hrs/wl	c units 3	hrs/wl 9	c units 3		
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis	hrs/wl 9 3	units 3 3	hrs/wl 9 2	units 3		
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab	hrs/wl 9 3	units 3 3	hrs/wl 9	c units 3	hrs/wl	c units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul	hrs/wl 9 3	units 3 3	hrs/wl 9 2	units 3	hrs/wk	c units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions	hrs/wl 9 3	units 3 3	hrs/wl 9 2	units 3	hrs/wl	units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab	9 3 3	c units 3 3 1	hrs/wl 9 2	units 3	hrs/wk	c units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics	hrs/wl 9 3 3	c units 3 3 1	hrs/wl 9 2 5	2 2	hrs/wl	units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II	9 3 3 3	2 3 3 3 1	hrs/wl 9 2	units 3	hrs/wl	units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation	hrs/wl 9 3 3	c units 3 3 1	hrs/wl 9 2 5	2 2	hrs/wl	units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation	9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5	c units 3 2 2 2	hrs/wl	units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation Power Steering	9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5 3 5 4	2 2 2 3 3 2 2	hrs/wl	units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation Power Steering Automotive Materials	hrs/wl 9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5	c units 3 2 2 2	9 3 3	units
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation Power Steering Automotive Materials Automotive Fuels and Lubricants	hrs/wl 9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5 3 5 4	2 2 2 3 3 2 2	9 3 3	3 3 1
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation Power Steering Automotive Materials Automotive Fuels and Lubricants Automotive Repair Estimating	hrs/wl 9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5 3 5 4	2 2 2 3 3 2 2	9 3 3 3	3 3 1 2 2 2 2
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation Power Steering Automotive Materials Automotive Fuels and Lubricants Automotive Repair Estimating Automotive Service Management	hrs/wl 9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5 3 5 4	2 2 2 3 3 2 2	9 3 3	3 3 1
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation Power Steering Automotive Materials Automotive Fuels and Lubricants Automotive Repair Estimating	hrs/wl 9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5 3 5 4	2 2 2 3 3 2 2	9 3 3 3	3 3 1 2 2 2 2
Automotive Repair II, III Automotive Electricity II Automotive Electricity II Lab Tune-Up and Diagnosis Tune-Up and Diagnosis Lab Automotive Overhaul Automatic Transmissions Automatic Transmissions Lab Applied Fluid Mechanics Communications Skills I, II Machine Shop Orientation Machine Tool Operation Power Steering Automotive Materials Automotive Fuels and Lubricants Automotive Repair Estimating Automotive Service Management	hrs/wl 9 3 3 3	2 3 3 3 1	hrs/wl 9 2 5 3 5 4	2 2 2 3 3 2 2	9 3 3 3	3 3 1 2 2 2 2 2 2

AUTOMOTIVE MECHANICS, MAJOR COURSE DESCRIPTIONS

3.320 APPLIED FLUID MECHANICS (2 class hrs/wk) 2 Term Units
The practical uses of hydraulic power transmission and application.
The 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 and II.

- 3.300 AUTOMOTIVE CHASSIS I (3 class hrs/wk) 3 Term Units
 3.301 AUTOMOTIVE CHASSIS LAB I (6 lab hrs/wk) 2 Term Units
 The course is designed to give students an understanding of the principles of operation of automotive chassis components. Fundamentals of front suspension and steering geometry, diagnosis of steering and suspension troubles, and overhaul techniques of steering and suspension system are studied. Instruction in basic hand tools and shop equipment. Instructions in brake systems, trouble shooting and overhaul. Prerequisite: Practical Physics I should be taken concurrently.
- 3.308 AUTOMOTIVE ELECTRICITY I (3 class hrs/wk) 3 Term Units
 3.309 AUTOMOTIVE ELECTRICITY LAB I (3 lab hrs/wk) 1 Term Unit
 Fundamental principles of electricity as used by the auto mechanic.
 Construction and function of automotive electrical components, including storage batteries, switches, ignition, and cranking systems, are studied in detail with the aid of demonstrations, cutaway, and mock-up equipment.

Prerequisite: Practical Physics III taken concurrently.

3.322 AUTOMOTIVE ELECTRICITY II (3 class hrs/wk) 3 Term Units
 3.323 AUTOMOTIVE ELECTRICITY LAB II (3 lab hrs/wk) 1 Term Unit Students will acquire the ability to diagnose minor lighting, charging and indicating system troubles as well as to interpret and trace automotive wiring diagrams. Common types of minor electrical accessories are studied.

Prerequisite: Automotive Electricity I or equivalent.

- 3.334 AUTOMOTIVE FUELS & LUBRICANTS (2 class hrs/wk) 2 Term Units Theory course covering the nature and origin of petroleum products and of manufacturing processes involved. Study of use and function of these products.

 Prerequisite: Second-year standing or equivalent.
- 3.336 AUTOMOTIVE MATERIALS (2 class hrs/wk) 2 Term Units Instruction in the use of iron, steel, aluminum and light alloys, copper and its alloys, as well as plastics, fibers, rubber, and synthetics. Information concerning various body finishes.
- 3.335 AUTOMOTIVE OVERHAUL (9 lab hrs/wk) 3 Term Units
 Complete inspection and analysis to determine repairs needed to recondition an automobile. Motor analysis and overhaul. Inspection and
 repair of chassis, steering, brakes, electrical system, fuel system, carburetion, power trains, cooling system, power systems, automatic transmission, and auxiliary equipment.
 Prerequisite: Automotive Repair III.

3.329 AUTOMOTIVE REPAIR I (9 lab hrs/wk) 3 Term Units
A shop course in which the students can develop additional abilities

A shop course in which the students can develop additional abilities and understanding through diagnosis and repair of automotive equipment. It will include overhaul and maintenance procedures and practices on suspension systems, brakes, power trains and engines. Students will develop skills in analyzing problems, outlining job procedures, conservation of working time, and overhaul of the defective units.

Prerequisite: Second-year standing or instructor's approval.

3.331 AUTOMOTIVE REPAIR II (9 lab hrs/wk) 3 Term Units A continuation of Automotive Repair I in further developing the student's abilities and knowledge. Skills developed in previous courses will be improved with emphasis on automotive electricity and automatic transmission units.

Prerequisite: Automotive Repair I or equivalent.

3.333 AUTOMOTIVE REPAIR III (9 lab hrs/wk) 3 Term Units A continuation of Automotive Repair II to develop further the student's abilities in diagnosis and repair of automotive units, with emphasis on power steering and tune-up procedures. Power accessories are serviced.

Prerequisite: Automotive Repair II or equivalent.

3.338 AUTOMOTIVE REPAIR ESTIMATING (2 class hrs/wk) 2 Term Units Instruction in the proper diagnosing and estimating of labor and material costs involved in the repair and service of automotive equipment. Emphasis will be on the use of typical manuals and price lists used in industry.

Prerequisite: Second-year standing or equivalent.

3.332 AUTOMOTIVE SERVICE MANAGEMENT

(2 class hrs/wk) 2 Term Units This outlines the duties and responsibilities of the service manager. The students study methods of organizing service personnel, shop facilities, and an introduction to shop layout and buildings. Appreciation of good relationship with customers, labor and management groups, and individuals is emphasized. Prerequisite: Sixth-term standing.

3.326 AUTOMATIC TRANSMISSIONS (3 class hrs/wk) 3 Term Units
 3.327 AUTOMATIC TRANSMISSIONS LAB (3 lab hrs/wk) 1 Term Unit 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. Prerequisite: Applied Fluid Mechanics and Power Trains or equivalent.

3.310 FUEL SYSTEMS AND CARBURETION I (2 class hrs/wk) 2 Term Units
 3.311 FUEL SYSTEMS AND CARB. LAB I (3 lab hrs/wk) 1 Term Unit A course in the fundamental principles of carburetion, and overview of principles of engine fuel systems. Basic instruction on carburetor circuits.

Prerequisites: Internal Combustion Engines I. Practical Physics II concurrently.

- 3.312 FUEL SYS. AND CARBURETION II (2 class hrs/wk) 2 Term Units
- 3.313 FUEL SYS. AND CARBURETION LAB II (3 lab hrs/wk) 1 Term Unit An advanced course in techniques and procedures for overhaul and service of carburetors and carburetion accessories, including all types of single and multiple throat models. Diagnosis and testing procedures involving carburetion systems are covered.

Prerequisite: Fuel Systems and Carburetion I.

3.304 INTERNAL COMBUSTION ENGINES I (2 class hrs/wk) 2 Term Units
 3.305 INTERNAL COMB. ENGINES LAB I (3 lab hrs/wk) 1 Term Unit Instruction in the 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.

3.306 INTERNAL COMBUSTION ENGINES II (2 class hrs/wk) 2 Term Units 3.307 INTERNAL COMB. ENGINES LAB II (6 lab hrs/wk) 2 Term Units

INTERNAL COMB. ENGINES LAB II (6 lab hrs/wk) 2 Term Units Instruction in overhaul methods, trouble-shooting, general engine performance and testing, and service techniques covering valve, cylinder, and bearing systems.

Prerequisite: Internal Combustion Engines I. Practical Physics II concurrently.

3.314—POWER STEERING (1 class - 3 lab hrs/wk) 2 Term Units
This is a course in practical power steering work covering trouble-

shooting, dismantling, inspection of parts, reassembly, and adjustment to cover principles of repair procedure on those power steering units common to the automotive trade.

Prerequisite: Second-year standing or instructor's approval and Applied Fluid Mechanics.

3.316 POWER TRAINS

(2 class hrs/wk) 2 Term Units

3.317 POWER TRAINS LAB (5 lab hrs/wk) 2 Term Units

A course covering all components of the power train, including clutch, standard and overdrive type transmissions, drive line, and final drive. Prerequisite: Automotive Chassis I or equivalent.

3.324 TUNE-UP AND DIAGNOSIS

(2 lab hrs/wk) 2 Term Units

3.325 TUNE-UP AND DIAGNOSIS LAB (5 lab hrs/wk) 2 Term Units Instruction in diagnosing malfunctions in the automotive engine and its accessory systems. Advanced methods of testing electrical and car-

all engine accessories directly to engine performance. Prerequisite: Second-year standing and Automotive Electricity II or equivalent.

buretion systems. Developing the ability to analyze the operation of

FARM EQUIPMENT SERVICE

(2 Year Program)

This program will provide training essential to prepare a mechanic to service farm equipment. This program will give sufficient breadth to qualify a person to do the shop repair work and adequately prepare a person for field service and trouble-shooting maintenance and repair. This is a field for which there is an increasing demand because of the complicated equipment being used on the farm.

This is a new program and will be the only program of its kind serving western Oregon. Demand for trained personnel in this field is greater than the available supply. The Pacific Northwest Hardware and Implement Association, and the Farm Equipment Advisory Committee to the State Department of Education has requested this training program because of the critical need for mchanics in this field.

CURRICULUM

The following courses will be offered to qualified applicants for this curriculum. The credit units and amount of time that will be given to each course are in the process of being developed (at the time of this catalog printing). The total course will cover two school years of six terms. A summer session between the first and second year will be devoted to supervised on-the-job training.

Farm Equipment Industry Orientation Implement Laboratory I Implement Laboratory II Implement Laboratory III Implement Laboratory IV Implement Laboratory V Fundamentals of Engines Advanced Engines Basic Electricity Advanced Electricity and Electrical Systems Hydraulics I, II, III, & IV Power Trains I, II Fuel Systems Crawler Tractors Tractor Major Overhaul Mathematics II Practical Physics I. II Communication Skills I, II Welding I. II Machine Shop Orientation Machine Tool Operation Cleaning and Painting Shop Management

DIESEL MECHANICS

(2 Year Program)

Training offered in the Diesel Mechanics program is planned to provide basic instruction in automotive heavy equipment and diesel heavy equipment repair.

The training in the Diesel Mechanic field is planned to prepare a person for employment in entry occupations leading to jobs such as heavy duty mechanic, bus mechanic, truck mechanic, tractor mechanic, fuel injection technician, diesel tune-up technician and related jobs.

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.

FIRST YEAR		LL k units	WINT hrs/wk		SPRI hrs/wk	
Automotive Chassis I Automotive Chassis Lab I	3 6	3 2				
(Heavy Equipment) Internal Combustion Engines I, I		2	2	2		
Internal Comb. Engines I, II Lab Power Trains	3	1	6 2	2 2		
Power Trains Lab, Hvy Equip.			5	2 2		
Fuel Systems & Carb., Hvy Equip Fuel Systems & Carb. Lab).		2 3	1		
(Heavy Equipment) Diesel Engines I					2	2
Diesel Engines Lab I					6	2
Fuel Injection Systems I Fuel Injection Systems Lab I					2 4	$\frac{2}{1}$
Automotive Electricity					3	3
Automotive Electricity Lab (Heavy Equipment)					3	1
Machine Shop Orientation	5	3	5	3		
Machine Tool Operations Employee-Employer Relations			ð	3	2	2
Practical Physics I, II, III,	5	$\frac{4}{3}$	5	4	5	4
Mathematics II	3		_			_
	27	18	30	18	27	17
SECOND YEAR		ALL /wk units	WINT	ER wk units	SPR hrs/wk	
Fuel Injection Systems II	2	2	57		57	
Fuel Injection Systems II Lab	6	2				
Diesel Engines II	2 6	$\frac{2}{2}$				
Diesel Engines Lab II Diesel Tune-Up & Diagnosis	U	2	2	2		
Diesel Tune-Up & Diagnosis Lab			5	2	12	27
Diesel Engine Repair I, II			9	3	9 5	3 3
Heavy Equipment Hydraulics Auxiliary Systems					2	2
Auxiliary Systems Lab					3	1
Applied Fluid Mechanics	2 5	$\frac{2}{2}$				
Welding IA Welding IB	3	2	5	2		
Welding IIB					5	2
Communication Skills I, II	3	3	$\frac{3}{4}$	3 2		
Power Steering Automotive Service Management			4	2	2	2
Health			2	2		
		15	30	16	26	13
				10	20	20
DIESEL MECHANICS, MAJOR (3.320 APPLIED FLUID ME			PTIONS	(See A	uto Mecl	nanics)

3.300 AUTO CHASSIS I 3.300

(See Auto Mechanics)

3.346 AUTO CHASSIS LAB I, HEAVY EQUIP 3.346E

(6 lab hrs/wk) 2 Term Units Lab practice to develop the ability to use basic hand tools, measuring tools and shop equipment in the overhauling and adjusting of various types of automotive and truck suspension and steering systems. Brake service, hydraulic overhaul, and air brake servicing.

Prerequisite: Automotive Chassis I should be taken concurrently.

3.308 AUTO ELECTRICITY I 3.308

(See Auto Mechanics)

- 3.352 AUTO ELEC. LAB I, HEAVY EQUIP (3 lab hrs/wk) 1 Term Unit Practical application of the theory studied in Automotive Electricity I as related to heavy equipment.

 Prerequisite: To be taken concurrently with Automotive Electricity.
- 3.812 AUXILIARY SYSTEMS (2 class hrs/wk) 2 Term Units
 3.813 AUXILIARY SYSTEMS LAB (3 lab hrs/wk) 1 Term Unit
 This is a 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, blower and superchargers, governors and air compressors are also covered.
 Prerequisite: Diesel Engines 3.800 and 3.802 or equivalent.
- 3.800 DIESEL ENGINES I (2 class hrs/wk) 2 Term Units
 3.801 DIESEL ENGINES LAB I (6 lab hrs/wk) 2 Term Units
 This is a beginning course in diesel engines and is designed to give the student an understanding of the types and construction of these engines with emphasis on the fundamentals, and cooling and lubrication systems.
 - Prerequisite: Third-term standing on Diesel Mechanics Curriculum.
- 3.802 DIESEL ENGINES II (2 class hrs/wk) 2 Term Units
 3.803 DIESEL ENGINES LAB II (6 lab hrs/wk) 2 Term Units
 Valve operating mechanism, air intake systems, piston and connecting rod servicing, crankshaft servicing, cylinder and block servicing, engine performance superchargers and blowers, and mechanical and hydraulic governors.

 Prerequisite: Diesel Engines I and Lab or equivalent.
- 3.811 DIESEL ENGINE REPAIR I (9 lab hrs/wk) 3 Term Units Shop and/or lab course in which the students can develop additional abilities and understandings through the diagnosis and repair of operating diesel equipment and components. It will include overhaul and maintenance procedures and practices as they relate to the removal, disassembly, repair, reassembly, and testing of typical diesel engines and their components.

 Prerequisite: Sixth-term standing.
- 3.816 DIESEL ENGINE REPAIR II (9 lab hrs/wk) 3 Term Units This course will include diagnosis, repair and overhaul procedures on the engines, their removal, disassembly, overhaul, reassembly installation and testing of component parts. Inspection, servicing and repair of fuel systems, carburetion, electrical systems, power trains, hydraulic units and fuel injection systems.

 Prerequisite: Sixth-term standing.

- 3.808 DIESEL TUNE-UP AND DIAGNOSIS (2 class hrs/wk) 2 Term Units
 3.809 DIESEL TUNE-UP & DIAGNOSIS LAB (5 lab hrs/wk) 2 Term Units
 A study of the various troubles encountered in tune-up and diagnosis of diesel engines with emphasis on accurate and systematic procedures.
 Prerequisite: Diesel Engines I and II. Fuel Injection Syst. I & II or equivalent.
- 3.804 FUEL INJECTION SYSTEM I (2 class hrs/wk) 2 Term Units
 3.805 FUEL INJECTION SYSTEMS LAB I (4 lab hrs/wk) 1 Term Unit This course covers diesel fuel systems, fuel-oil transfer pumps, injection systems, fuel injection pumps and nozzles.
 Prerequisite: Second-year standing and Diesel Engines I or Lab I or equivalent.
- 3.806 FUEL INJECTION SYSTEMS II (2 class hrs/wk) 2 Term Units
 3.807 FUEL INJECTION SYSTEMS LAB II (6 lab hrs/wk) 2 Term Units
 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.

 Prerequisite: Fuel Injection Systems I.
- 3.349 FUEL SYST. & CARB., HEAVY EQUIP. (2 class hrs/wk) 2 Term Units
 3.350 FUEL SYST. CARB., HVY EQUIP. LAB (3 lab hrs/wk) 1 Term Unit Fundamental principles of carburetion, engine fuel systems and fuels and the functions of all types of gas fuel systems with an understanding of carburetors and carburetor circuits on automotive and heavy duty gasoline engines. Techniques and procedures for overhaul and service of carburetors and carburetor accessories, with emphasis on heavy duty and special carburetion equipment such as supercharger and automotive fuel injection.
 Prerequisite: Internal Comb. Eng. I. Practical Phys. II taken concurrently.
- 3.353 HYDRAULICS, HVY. EQUIP. (2 class 3 lab hrs/wk) 3 Term Units The 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, couplings, torque converters and power accessories such as are used on bulldozers, fork lifters, loaders, etc. Prerequisite: Sixth-term standing.
- 3.304 INTERNAL COMBUSTION ENGINES I (See Auto Mechanics)
- 3.305 INTERNAL COMBUSTION ENGINES LAB I (See Auto Mechanics)
- 3.306 INTERNAL COMBUSTION ENGINES II (See Auto Mechanics)
- 3.348 INTER. COMB. ENG. LAB II, HEAVY EQUIP.

 (6 lab hrs/wk) 2 Term Units
 Practical experience in heavy duty engine reconditioning. Diagnosis
 of troubles directly related to the engine and its performance is practiced with the use of test instruments. A companion course for Internal Combustion Engines II. Special practice with heavy duty engines.
 Prerequisite: Pract. Phys. I, Int. Comb. Eng. II, Pract. Phys. II taken
 concurrently.

3.316 POWER TRAINS

(See Auto Mechanics)

3.351 POWER TRAINS LAB, HEAVY EQUIP. (5 lab hrs/wk) 2 Term Units This course is designed for developing skills in servicing, overhauling and adjusting units in automatic and heavy equipment power trains. Work will be performed on laboratory units in conjunction with units in Power Trains theory.

Prerequisite: To be taken concurrently with Power Trains.

MACHINE SHOP

(2 Year Program)

Instruction and training in the Machine Shop training program are planned to give the basic principles and fundamentals in machine and related metal work. Class instruction in theory with shop practice and related courses in technical fields is provided.

The training offered in this program is directed at preparing a person for entrance occupations in machine shop or related industries.

Opportunities for employment in this field 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.

FIRST YEAR	FALL		WINT	ER	SPRING		
	hrs/wk	units	hrs/wk	units	hrs/wk	units	
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 & B			5	2	5	2	
Applied Economics					3	3	
	_	_	_	_	_	—	
	27	16	29	15	28	16	
SECOND YEAR	FAI	LL	WINT	ER	SPRI	NG	
	hrs/wk	units	hrs/wk	units	hrs/wk	units	
Machine Shop IV, V VI	3	3	3	3	3	3	
Machine Shop IV, V, VI Lab	12	4	12	4	12	4	
Communication 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					2	2	
Employer-Employee Relations					2	2	
	_	-	_	_	_	_	
	26	15	28	14	27	16	

MACHINE SHOP, MAJOR COURSE DESCRIPTIONS

3.380	MACHINE SHOP I	(3 class hrs/wk) 3 Term Units
3.381	MACHINE SHOP I LAB	(12 lab hrs/wk) 4 Term Units

Covers the fundamentals and workable knowledge of industrial processes and machines required of the machinist. The basic fundamentals of layout and machining metal by drilling, turning, and boring, milling, grinding, shaping, planing and slotting are presented. The use and maintenance of machinist hand tools are presented. Safety practices. Use of abrasive wheel, drilling gauge, surface plate and surface gauge.

3.382 MACHINE SHOP II

(3 class hrs/wk) 3 Term Units

3.383 MACHINE SHOP II LAB

(12 lab hrs/wk) 4 Term Units

Covers the use and operation and maintenance of the machine lathe. Instruction in tool grinding, drilling with the lathe, 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 Term Units

3.385 MACHINE SHOP III LAB (12 lab hrs/wk) 4 Term Units Precision lathe work. Instruction in varied uses of lathe. Thread cutting procedures. Methods and procedures for machining on face plate.

Prerequisite: Machine Shop II.

3.386 MACHINE SHOP IV

(3 class hrs/wk) 3 Term Units

3.387 MACHINE SHOP IV LAB

(12 lab hrs/wk) 4 Term Units

Instruction and demonstration in the use and set up of machine shop shapers and planers; calculation of cutting speeds and feed rate for different metals; use of hand devices, fixtures and vises. Instruction in making angular cuts, vertical cuts, horizontal cuts, contour cuts, key way cuts, and slotting. Instruction in machining single and double tongue groove, castiron blocks, dovetail, and sliding joints. Contoured sawing.

Prerequisite: Machine Shop III.

3.388 MACHINE SHOP V

(3 class hrs/wk) 3 Term Units

3.389 MACHINE SHOP V LAB

(12 lab hrs/wk) 4 Term Units

Different types of milling machines and their uses. Types of various sizes of milling machines are presented with instruction in their use and maintenance with instruction on proper safety precautions. The use of milling cutters and cutter holding devices is presented. Instruction is given in speeds for feeds of cutters. Information is given on plane and differential indexing. Theory of gear cutting. Key slotting for woodruff keys. Surface grinding.

Prerequisite: Machine Shop IV.

3.390 MACHINE SHOP VI

3.391

(3 class hrs/wk) 3 Term Units

MACHINE SHOP VI LAB (12 lab hrs/wk) 4 Term Units Theory of spur gears, center-to-center distance of gears, chain sprockets, chain drivers, bearings, bronze anti-friction and babbitt, hydraulic power transmission, cylinders and control valves are presented. Layout, machining, and assembly of simple machines. Field trips to machinery manufacturing plants. Prerequisite: Machine Shop V.

OCCUPATIONAL RELATED COURSES

- 3.392R MACHINE SHOP ORIENTATION (2 class 3 lab hrs/wk) 3 Term Units This course will acquaint the student with the various machine shop tools and their use. Instruction will be provided in the set-up and operation of machine shop.
- 3.393R MACHINE TOOL OPERATION (2 class 3 lab hrs/wk) 3 Term Units This course will provide for machine shop practice with such machine tools as drill press, lathe, and grinder. This course is to provide basic practice on machine tools that a person may need to know how to set-up and operate in certain fields other than the machinist's trade.

WELDING

- 4.150 WELDING IA (1 class 4 lab hrs/wk) 2 Term Units This course introduces set-up and operation of oxyacetylene welding equipment. Demonstrations and practice in welding, brazing and soldering ferrous and non-ferrous metals and their alloys. Various types of welds are made and tested. Technical information is correlated with actual practice with various methods of fabrication in construction, maintenance and repair.
- 4.151 WELDING IB (1 class 4 lab hrs/wk) 2 Term Units 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 Term Units 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 Term Units 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.



Child Development

Dental Assistant

Home Health Aide

Licensed Practical Nursing

Management in Family Living

Marriage and Family

Nutrition



OCCUPATIONAL COURSES AND PROGRAMS

PRACTICAL NURSING

(One Year Program)

The purpose of this one year program (48 weeks) in practical nursing is to prepare acceptable female applicants between the ages of 18-50 years to give nursing care to patients who do not need the constant attention of a professional nurse, and to maintain good standards of nursing service within the limits of this education. The program is accredited by the Oregon State Board of Nursing and graduates will be eligible to write the State Board Examination for licensure in Oregon, which may also qualify them for licensure in other states by endorsement. Cost, over the normal tuition, will be about \$125.00.

The practical nurse shares in the care of acutely ill patients as a member of the nursing team. She gives care to the convalescent and the chronically ill, she assists in rehabilitation programs, she helps in the prevention of illness, but she always works under the supervision of a licensed physician and/or registered nurse. She may be employed by hospitals, homes for the aged, private homes, doctors' offices, health agencies, and public, private, or industrial institutions.

Applicants to this program must be graduates of an accredited high school or have satisfactorily completed the equivalency test (GED) with an average score of 45 or better. They must be in good physical and mental health as determined by a doctor's examination and they must have suitable personality and character traits necessary for this occupation. For admission a personal interview will be required and a pre-test may be requested. The final selection of class membership will be made by recommendations of an interviewing committee from the Advisory Board and the administration of the school. Applications to the course may be made at any time during the year, but only those which are on file before April 15 will be considered for the class starting the first Monday in July. Those on file October 30 will be considered for the class starting the first Monday in January. Special admissions will be considered on an individual basis.

The curriculum is made up of 600 hours of classroom instruction and 1200 hours of supervised practice in community health facilities. Sacred Heart General Hos-

pital cooperates with the school in giving the students the major portion of their clinical practice, for which they pay the student 75c per hour. Lane County Public Health Department provides one week of observation in public health nursing.

	Summer Units	Fall Units	Winter Units	Spring Units
Nursing Skills	6	2	2	1
Normal Health Growth & Development	6	2	1	_
Personal & Vocational Relationship	3	1	2	1
Care in Conditions of Illness	2	2	2	6
	_			
Total Uni	ts 17	7	7	8

(Students will be assigned to the following clinical courses by rotation as a convenience to the hospital after the first five weeks of theory.)

Clinical Practice	Total Hours	Units
Medical	360	7
Surgical	360	7
Orthopedics	90	2
Obstetrics	270	6
Pediatrics	150	3
	_	_
Total Hours and Units	1,230	25

COURSE DESCRIPTION FOR PRACTICAL NURSING

5.500 NURSING SKILLS (100 class - 90 lab hrs) 11 Term Units This is the study of the basic methods used in caring for the sick in the hospital, office or the home. It includes the study of First Aid, Diversional Activities, Rehabilitation Nursing, and Civil Defense.

5.510 NORMAL HEALTH, GROWTH, AND DEVELOPMENT

(120 class hours) 10 Term Hours

This is the study of normal anatomy, physiology, child development, the aging process, as well as diet and nutrition.

5.520 PERSONAL AND VOCATIONAL RELATIONSHIPS

(90 class hours) 8 Term Units

A study of professional ethics teaches correct manners in dealing with patients, their friends and relatives, as well as with co-workers. It acquaints the student with community resources available to the ill and with the health agencies which may assist patients or which help to maintain health and welfare of the community. The value of professional organizations and the procedure of obtaining licenses or work in other states are learned in this course.

- 5.530 CARE IN CONDITIONS OF ILLNESS (120 class hours) 12 Term Units A study of the many forms of disease and other abnormal conditions which produce ill health, considered in relation to the patient care given at the hospital; concerns all age groups, emergency situations, diet therapy, and care of the ill in the home.
- 5.540 MEDICAL CLINICAL PRACTICE (330 clinical hours) 7 Term Units Includes medication for women and men. Practice in diet kitchen.
- 5.542 SURGICAL CLINICAL PRACTICE (390 clinic hours) 8 Term Units Includes experience on women's gynecology, men's genito-urinary and neuro-surgery services.

- 5.550 ORTHOPEDICS (90 clinic hours) 2 Term Units Orthopedics gives experience with patients who have fractures, who need traction, or surgery, on bones and muscles.
- 5.552 OBSTETRICS (270 clinic hours) 6 Term Units
 Care of mother in labor, during post partum and the care of the newborn infant.
- 5.556 PEDIATRICS (150 clinic hours) 3 Term Units
 Care of infants and children includes all illness of infants, and children up to 16 years of age, including isolation.
- Note: (1) A 10 week training program is being planned to train Home Health Aides (Medicare term) and/or Nurses Aides. This program will begin sometime during the 1966-67 college year.
 - (2) For a description of the Dental Assistant training program see the M.D.T.A. Division of this catalog. The Dental Assistant program is not open to all students, but open only to those that qualify under the M.D.T.A. requirements.

COLLEGE TRANSFER COURSES

R. N. NURSING

(In cooperation with the Diploma Program at Sacred Heart General Hospital School of Nursing)

Lane Community College provides pre-nursing courses for those students who wish to complete the diploma program at Sacred Heart School of Nursing. The students go through normal college registration procedures and are under direction of the college for these courses.

Students interested in this program must first make application and be accepted into the nursing program at Sacred Heart Hospital before registering at Lane Community College. Applications are accepted any time after Septembr of the year prior to entering this nursing program. The pre-testing and screening procedure is done by Sacred Heart General Hospital School of Nursing during the winter, spring and early summer so that the student may make satisfactory plans for the beginning of the college term. Applicants should address their correspondence to: Director, Sacred Heart General Hospital School of Nursing, 1200 Alder Street, Eugene, Oregon.

Students planning to enter the Sacred Heart School of Nursing should confer with the school director to plan their program of studies.

HOME ECONOMICS COURSES

The following courses are offered to give students an opportunity to broaden their understanding of family responsibilities. These courses may be taken for college transfer credit or general self improvement.

- FL 222 MARRIAGE 2 hours
 Open to men and women. Courtship period, factors in a successful marriage.
- FL 223 FAMILY LIVING 2 hours
 Open to men and women. Marriage and relationship in the beginning family.
- FL 225 CHILD DEVELOPMENT 3 hours
 The infant and young child; observations in nursery school.
- HM 240 MANAGEMENT IN FAMILY LIVING 2 hours
 Management as decision making. Emphasis on time problems.



American Government
Anthropology
General Sociology
Geography
Hist. of Western Civilization
International Relations
Law Enforcement
Principles of Economics
U.S. History



COLLEGE TRANSFER COURSES

- PS 201, AMERICAN GOVERNMENT (3 term hours each)
 202, 203 201, principles of American constitutional system, political process, and organization of national government; 202, powers and functions of national government; 203, practical operations and contemporary reforms in government at state and local level.
- Anth 101, GENERAL ANTHROPOLOGY (3 term hours each)
 102, 103 Fall: Man as a living organism; biological evolution; fossil man. Winter: Prehistoric cultures. Spring: Organization and functioning of culture. 2 lectures, 1 discussion period.
 - Psy 201, GENERAL PSYCHOLOGY (3 term hours each)
 202, 203 Basic principles and theories of behavior. Discussion of individual differences, intelligence, aptitude, methods of psychological measurement and testing, drives and motives, emotions and reactions to stress, perception, learning, thinking, reasoning, personality; the response mechanism, communication processes, attitudes and social processes, frontiers of psychology. Sophomore standing recommended.
 - Soc 204, GENERAL SOCIOLOGY (3 term hours each)
 205, 206 Introduction to the sociological perspective with particular emphasis on the analysis and understanding of modern society and contemporary social problems.
 - Hst 101,
 102, 103
 History 101 covers the origins and development of Western civilization from ancient times to the middle ages. History 102 covers the end of the middle ages to 1789. History 103 covers from 1789 to present.

- Hst 201, HISTORY OF THE UNITED STATES (3 term hours each)
 202, 203 This is the story of the United States from the Age of Discovery to the present. The emergence of the New American and of the new Nation during the 17th and 18th centuries is emphasized during the first term. The second term covers the development of political, social, and economic institutions in the American democracy, the Civil War, and the industrial revolution in the 19th century. Analyzing the changes in American civilization that have occurred under the stress of 20th century technical revolutions and global conflicts completes this historical survey.
- Geog 105, INTRODUCTORY GEOGRAPHY (3 term hours each)
 106, 107 A general introduction to the field of geography; 105, physical geography; 106, regional survey of the world; 107, cultural geography.
 - PS 205 INTERNATIONAL RELATIONS (3 term hours)
 Analysis of the nature of relations among states, with specific reference to contemporary international issues; a study of the motivating factors, including nationalism, imperialism, economic rivalries, quest for security, etc., study of the problems of national sovereignty and its relation to international cooperation. One term course.
- Ec 201, PRINCIPLES OF ECONOMICS (3 term hours each)
 202, 203 The study of general economic principles and policies and their relation to specific goals and policies of our national economy.

 Prerequisite: sophomore standing.

OCCUPATIONAL COURSES

- 1.600 AMERICAN INSTITUTIONS (3 class hrs/wk) 3 Term Units 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. Topics considered are: Culture, its functions and changes; social groups in relation to problems of urban living; the American economic system and the American political system.
- 1.506 APPLIED ECONOMICS (3 class hrs/wk) 3 Term Units Industrial Economics deals with the principles involved in the operation of the American economic system. The role of business and industry in the total economy is studied. Basic economic principles are applied to the relationship of employer and employee. 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.

4.500 EMPLOYER-EMPLOYEE RELATIONS 4.500

(2 class hrs/wk) 2 Term Units 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 coverd.

- 1.606 INTRODUCTION TO PSYCHOLOGY (3 class hrs/wk) 3 Term Units To acquire a basic knowledge of the concept of human behavior and to provide an understanding of the fundamental motivational drives. Instruction of the association of the relationship of the individual to his social environment.
- 1.608—PSYCHOLOGY OF HUMAN RELATIONS (3 class hrs/wk) 3 Term Units
 This course is a study of the principles of psychology that will be of
 assistance in the understanding of personal relationships on the job.
 Motivations, feeling, emotions, and principles of learning are considered with particular reference to "on-the-job" problems. Topics studied are: Job Placement Tests, Employment Selections, Supervision,
 Job Satisfaction and Industrial Conflicts as they relate to the work situation. Attention is also given to personal grooming and cultural consideration in applying for and retaining employment.

LAW ENFORCEMENT CURRICULUM

(2 Year 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, sheriff's 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.

Qualifications for Acceptance in Law Enforcement Curriculum:

Those persons who meet minimum physical, emotional, intellectual, citizenship, and moral standards, are eligible for the program provided they meet the school entrance requirements. Local police departments make a routine investigation including fingerprinting of all applicants for study in the program. Students may participate in the program on a full-time or part-time student basis, or on a cooperative part-time basis, whereby the student is employed part-itme and also attnds school part-time.

FIRST YEAR	FALL		WINTER		SPRING		
	hrs/wk	units	hrs/wk	units	hrs/wk	units	
Introduction to Law Enforcement	t 3	3					
Administration of Justice	3	3					
Defense Tactics	2	1					
First Aid I, II, III	2	1	2	1	2	1	
Communication Skills I, II	3	3	3	3			
Typing I, II	6	2	6	2			
Criminal Law I, II			3	3	3	3	
Traffic Control					5	3	
Police Report Writing					3	3	
Introduction to Psychology					3	3	
Electives		3		6		3	
	_	_	_	_	_	_	
	19	16	14	15	16	16	

SECOND YEAR	FALL hrs/wk units		WINTER hrs/wk units		SPRING hrs/wk units	
Criminal Investigation I, II, III	5	3	5	3	5	3
Criminal Evidence	5	3				
Patrol Procedures	5	3				
Firearms I, II, III	2	1	2	1	2	1
Field Work I, II	2	1	2	1		
Public Speaking	4	2				
Problems of Physical Evidence			5	3		
Juvenile Procedures			5	3		
American Institutions			3	3		
Jail Procedures					2	1
Psychology of Human Relations					3	3
Defensive Tactics II						1
Electives		3		3		3
	_	_	_	_	_	_
	23	16	22	17	12	12

LAW ENFORCEMENT COURSE DESCRIPTIONS

- 5.202 ADMINISTRATION OF JUSTICE (3 class hrs/wk) 3 Term Units 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 (2 class 3 lab hrs/wk) 3 Term Units
 The kinds and degrees of evidence and the rules governing the admissibility of evidence in court.
- 5.216 CRIMINAL INVESTIGATION (2 class 3 lab hrs/wk) 3 Term Units 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 (2 class 3 lab hrs/wk) 3 Term Units Continuation of 5.216 including collection and preservation of physical evidence; scientific aids; modus operandi; sources of information interviews and interrogation, follow-up and case preparation.
- 5.218 CRIMINAL INVESTIGATION (2 class 3 lab hrs/wk) 3 Term Units A continuation of Criminal Investigation 5.217. Description to be developed.
- 5.208 CRIMINAL LAW I (3 class hrs/wk) 3 Term Units 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 Term Units A continuation of Criminal Law 5.208. Description to be developed.

- 5.204 DEFENSIVE TACTICS I (2 lab hrs/wk) 1 Term Unit A course designed to teach the rudiments of self-defense and attack. Boxing, wrestling, and hand-to-hand combat will be offered.
- 5.206 DEFENSIVE TACTICS II (2 lab hrs/wk) 1 Term Unit A continuation of Defensive Tactics 5.204. Description to be developed.
- 5.230 FIELD WORK (2 lab hrs/wk) 1 Term Unit Actual field practice (as a member of the Campus Police) in traffic control, buildings and grounds security, crowd control at campus functions; further practice in police report writing, communications and maintenance of records; civil service procedures.
- 5.231 FIELD WORK (2 lab hrs/wk) 1 Term Unit A continuation of Field Work 5.230. Description to be developed.
- 5.226 FIREARMS I (2 lab hrs/wk) 1 Term Unit The 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 Term Unit A continuation of Firearms 5.226. Description to be developed.
- 5.228 FIREARMS III (2 lab hrs/wk) 1 Term Unit A continuation of Firearms 5.227. Description to be developed.
- 5.212 FIRST AID I (2 lab hrs/wk) 1 Term Unit A class in standard First Aid procedures and techniques designed to meet graduation requirements of all students as well as adults who wish to secure first aid training. Upon a successful completion of course, a standard First Aid Card may be secured.
- 5.213 FIRST AID II (2 lab hrs/wk) 1 Term Unit A continuation of First Aid 5.212. Description to be developed.
- 5.214 FIRST AID III (2 lab hrs/wk) 1 Term Unit A continuation of First Aid 5.213. Description to be developed.
- 5.200 INTRODUCTION TO LAW ENFORCEMENT

(3 class hrs/wk) 3 Term Units The philosophy and history of law enforcement; overview of 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 Term Unit Basic instruction covering the receiving, booking, and searching of prisoners and their care and custody; the laws relative 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 Term Units
 The organization, functions, and jurisdiction of juvenile agencies, the
 processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures.
- 5.220 PATROL PROCEDURES (2 class 3 lab hrs/wk) 3 Term Units Purpose of patrols, perception and observation, protection, prevention, suppression, identification and apprehension, types of patrols, purpose, hazards, assignments, response to emergencies, action to be taken, officer's approach on foot, in an auto, home, building or room, operation of motor vehicle.

5.234 PROBLEMS OF PHYSICAL EVIDENCE

(2 class-3 lab hrs/wk) 3 Term Units Techniques of locating, collecting and identifying physical evidence. Use of fingerprinting, casts and molds, photography and sketching. Basic laboratory aids and the use of scientific equipment in the evidence process.

- 5.240 POLICE REPORT WRITING (3 class hrs/wk) 3 Term Units This is a course which supplies knowledge of the principles of composition and basic forms of writing reports. The subjects covered are: Why reports are written, types of reports, make-up of reports, effectiveness of writing styles, gathering of facts for a report, planning a report, method of writing a report, layout and typing of a report, and visual aids in a report.
- 5.210 TRAFFIC CONTROL (2 class 3 lab hrs/wk) 3 Term Units Traffic law enforcement, regulation and control; fundamentals of traffic accident investigation: Oregon Motor Vehicle Code.



Federal Manpower Development and **Training Act Programs**

Applicants for training under the Federal Manpower Development and Training Act must qualify under the provisions of this act. Interested persons should inquire at a local office of the Oregon State Employment Service to determine if they are eligible for the benefits of the program. The Manpower Development Training Act Division of Lane Community College works directly with the Oregon State Employment Service in the determination of the occupational training needs of the College District. When training needs have been identified, they are brought before the area MDTA Committee for approval.

CURRENT TRAINING PROGRAMS OFFERED UNDER MDTA

Basic Education (indeterminate in length) is designed to remedy shortcomings in math, reading level, and social development. Trainees are transferred from basic education when they reach a level that will enable them to profit from more advanced MDTA training programs.

DENTAL ASSISTANT					9 n	nonths	
	FALL WINTER		SPRING				
	hrs/wk	units	hrs/wk	units	*tot hrs	units	
Introduction to Practice	10	9					
X-Ray (Part 1)	4	3					
Orientation	4	3					
Dental Anatomy							
(Physiology and Histology)	2	2					
Dental Sciences							
(Gross Anatomy, Microbiology,							
Histology, Nutrition, Physiolog	у,						
Bacteriology, Pharmecology)	5	4					
Typing	5	3					
Practices and Procedures			12	8			
Patient Management and Applied							
Psychology			4	4			
X-Ray (Part 2)			4	2			
Communication Skills and							
Technical Report Writing							
for Dental Assistants			3	3			
Pathology			2	2			
Bookkeeping, Accounting							
(Dental Records and Reports)			5	3			
X-Ray (3 weeks)					45	2	
First Aid (3 weeks)					30	1	
Clinical Experience (6 weeks)					240	9	
Review and Practice (2 weeks)					60		
			_	_	_	-	
	30	24	30	22	375	12	

^{*}Total hours of class or clinical practice during term.

ELECTRICAL APPLIANCE REPAIR (9 months, September to June) is a program of class instruction in theory and fundamental principles, shop practice, and related class instruction on electric ranges, automatic washers and dryers.

FRY COOK (14 weeks) Practical training given in a modern commercial kitchen under actual working conditions. Instruction will include all phases of fry cook work including food costs and control, food purchasing, menu construction, and personal labor relations. Good citizenship, correct work habits, and the development of an appreciation of the arts of the trade are a part of the program.

GAS ENGINE REPAIR (two and four cycle—16 weeks) Elements of this course will include: basic engine theory, use of hand tools, diagnostic principles, cost estimating and actual repair to engines. Students get work experince on lawn and garden equipment, chain saws, scooters, motorcycles, outboard motors, and small industrial-type engines.

OFFICE OCCUPATIONS

CLERK-STENOGRAPHER (24 weeks) Trainees are expected to develop competence in taking shorthand, operating adding machines, calculators, and dictating machines. Practice in working with figures and simple bookkeeping are included. Students must be able to type accurately at a minimum of 40 words per minute, and take dictation at a minimum of 80 words per minute. Before the end of the course, most trainees will have some exposure to PBX Board, key punch, duplicating machines, and other office equipment.

GENERAL OFFICE CLERK (12 weeks) A practical course that includes all phases of general office work and procedures. Instruction in the areas of typing, business english, mathematics, bookkeeping and accounting, office machines, office practice, and introduction to key punch will be given. The courses will include instruction in job finding techniques, personal grooming, and office relations. All students will be requested to take a Civil Service Examination prior to the course ending date.

SALES PERSON (8 weeks) offers instruction and training in displays, demonstrations, sales presentations, selection, and writing up sales transactions. Caring for stock, wrapping articles, making change are also included in Sales Person training.

STOCK CLERK (5 weeks) offers instruction and training terminology and equipment used in the occupation. Use of receiving and shipping documents, methods of shipping and rates, ways of handling merchandise, stock control, inventory systems and safety procedures are all covered in the Stock Clerk course.

Adult Education Programs

(NON-CREDIT COURSES)

The Adult Education Program offers certain regular classes each year, but is always willing and usually able to establish classes in any demand area. Classes are set up where the greatest number of people reside when a sufficient number are interested. The administration would rather send a teacher to the group than bring the group to the teacher. Persons interested in taking classes through the Adult Education Program should remember that in addition to all the classes listed in the catalog, classes to meet a group's needs will be started anywhere in the District and at any time of day or night.

Enrollment in the Adult Education Program is open to anyone interested in learning for his or her own benefit except in certain areas which are covered by specific prerequisites.

As a general rule classes are set up with a tuition charge of \$12 for each thirty hours of instruction. This varies with the number of hours needed for a particular class. Also there is an extra charge if classes are held in an area where the cooperating school district charges a rental for facilities. Books are available on a rental basis in some classes; other courses require the purchase of books and these may be purchased through the college book store. Materials fees are charged in classes which require special materials. There is no refund after the second meeting of a class.

Class schedules are available prior to the start of each term. The basic program is similar from year to year. The specific courses presented at any one time may vary from those given in the previous term.

Registration for the adult education program classes takes place at the first class meeting.

The Adult Education Program, through the Community College counseling section, will provide counseling for students when such counseling is either requested by the individual or by the school administration.

Certificates are available upon the completion of any class or series of classes scheduled by the Adult Education Program. Cards designating work completed in any one class will also be provided upon request.

APPRENTICESHIP related training classes are provided whenever there is a request from an apprentice trade committee. Lane Community College Adult Education Program cooperates with the State Division of Vocational Education and the State Bureau of Labor through its Bureau of Apprenticeship in conducting classes. Classes are established upon the request of the local trade committee when such a committee notifies the school that it has a sufficient number of indentured apprentices to justify a class. Persons interested in apprenticeship training should first contact either the state apprenticeship representative, Mr. R. Wayne Douglass, State Office Building, Room 9, Seventh and Pearl Streets, Eugene (telephone 342-1361, extension 207) or the federal apprenticeship representative, Mr. Myron D. Johnston, 835 Park East, Wylie Professional Building, Eugene (telephone 342-5141, extension 316 and 317). At the present time the Lane Community College Adult Education Program operates 23 apprenticeship classes covering 14 different trades.

FIREMEN AND POLICE training classes are scheduled throughout the year for people already employed in various fire departments and police departments in the Lane Community College area.

INDUSTRIAL SUPERVISORY training classes are designed for those already employed in a supervisory capacity or those who are setting as their goal a job in this category.

HEALTH OCCUPATIONS classes are provided for licensed practical nurses, employed medical secretaries, and employed dental assistants.

TRADE EXTENSION classes are designed to aid people employed in industrial work to improve their knowledge of that particular job or add knowledge that may result in moving up to a better job.

CUSTODIAL training classes are provided for people employed in this field, especially those working for various school districts.

BUSINESS EDUCATION classes include typing, shorthand, office machines, book-keeping and accounting, as well as secretarial training in specialized fields.

DISTRIBUTIVE EDUCATION classes such as retail selling and show card writing are available to those in sales and distribution occupations. Also available are classes in property appraisal.

HOME ECONOMICS classes, including the Bishop sewing method, interior decorating, and upholstering, are designed to aid the homemaker in improving conditions in the home.

AGRICULTURE education course offerings will be directed primarily to the interest of several specialized groups. Examples are commercial farmers, their families, their employees, rural residents and their families. Courses will be offered in a local community (high school district) if twelve or more persons enroll and if an instructor is available. Standard fees of \$12 for ten meetings or 30 class hours, plus the cost of supplies and mileage for the instructor, if he is brought in, will apply. Suggested courses are: farm accounting, typing, bookkeeping, farm law, greenhouse management, nursery management, livestock health problems, home landscaping, tractor maintenance and soils and fertilizers. Courses in welding (arc, acetylene, and heliarc) will be offered in local communities if facilities, equipment and instructors are available. Other courses will be offered on request of people interested in a specialized agricultural technique.

GENERAL education classes of all types are available. General education includes such classes as refresher mathematics, foreign languages, reading improvement, etc.

PRE-RETIREMENT (avocational) classes are designed to aid people in the area of avocations rather than in the vocations. Included in this category are: woodworking (hobby), basic camera, basic darkroom, color photography, radio service, auto mechanics for women, mosaics, rocks and minerals, metal art, leathercraft, photographic composition, flower arrangement, sketching, woodcarving, and recreational pursuits.

HIGH SCHOOL COMPLETION PROGRAM

The following policy on high school completion was adopted by the Lane Community College Board:

A. If a student has less than one year to complete work for his high school diploma and is under age 19, the Community College staff will clear with the student's local high school (high school of student's residence) concerning the amount of work needed and request the school's permission to offer the student this work. Upon successful completion of a course or courses at Lane Community College for this particular student, the College staff will send the grade or grades to the student's high school of residence. It will be the responsibility of the local high school to issue the diploma.

If the student is under 19 years of age and his local high school refuses him permission to take this course, Lane Community College would not allow the student to enter the Community College high school completion program until

he reaches the age of 19.

NOTE: Some students, age 15 or 16, who need ten to fifteen credits yet for graduation have been referred to us to enter the high school completion program. This is not the intent of this program. This is aimed at students who only need one or two credits to complete graduation. The 15 or 16 year old student who needs many credits is still the responsibility of the local school district.

B. A second and completely different high school completion program will operate for those who have achieved the age of 19 or over. These people will be referred to the Lane Community College Counseling Center where they will take a battery of tests which will determine the areas of instruction which will aid them most in rounding out the equivalent of a high school education. Upon completion of the courses as determined by the results of the testing, the Community College staff will ask the local school district (of the individual's residence) to grant him or her a high school diploma identified as an adult education high school completion program diploma.

ADULT EDUCATION TIME SCHEDULES ARE AVAILABLE FROM THE DEAN OF ADULT EDUCATION OFFICE, 200 NORTH MONROE, EUGENE.



1966 Summer Program

June 20 to August 12, 1966

A limited number of courses are being planned for the summer session for 1966. This is the first summer session to be offered at Lane Community College and as a consequence, offerings are being given only in the beginning courses, or courses for which there have been requests.

Registration for this summer session will take place on Monday June, 20th. However, counselors will be available to answer questions and pre-register at any time

prior to this date.

*OCCUPATIONAL OPPORTUNITY PROGRAM (1 week each)

Seventeen different occupational exploratory programs will be offered at LCC this summer. Each course will last for 3 hours a day for a one week period. In this manner it is possible that a student could explore in depth 8 different occupations during the 8 week summer session. This program will be open to anyone 16 years of age or older. The cost to the student for this program will be \$7 per week or \$55 for the entire 8 weeks. It is anticipated that individuals will only want to explore a few occupational areas rather than attending the entire 8 weeks.

In each occupational area the student will have an opportunity to receive information regarding the job opportunities in industry or business related to the curriculum. Actual lab experiences and, in some courses, field trips would be

provided to explore all aspects for which the curriculum prepares.

Lectures will be given regarding course work and laboratory work to be given in the curriculum area. Actual demonstration and participation in lab and shop activities will be provided to give the student opportunity to experience activities related to an occupational field.

During the summer session students who are taking the occupational opportunities courses will be able to discuss their interests with guidance counselors. The guidance counselors will assist the student in making selection for further training or possibly job placement. If aptitude tests or interest tests are needed to further assist in determining occupational objectives, these will be provided.

The main purpose of the occupational opportunity survey is to assist the student in arriving at a decision for future training and/or employment.

	BUSINESS DIVISION	Clock Hrs/Wk	Term Hours
2.113	Bookkeeping and Accounting IV	5	3
BA 101	Introduction to Business	5	4
	*Occupational Opportunities in Secretarial and Office		
	Clerical Jobs	15	0
BA 211		5	4
2.547		5	3
	CONSTRUCTION DIVISION		
4.101	Drafting I	6	2
	*Occupational Opportunities in Cabinetmaking	15	0
	*Occupational Opportunities in Carpentry	15	0
	*Occupational Opportunities in Civil and Structural		
	Technology	15	0
	*Occupational Opportunities in Drafting Technology	15	0
	*Occupational Opportunities in Forestry	15	0

	COMMUNICATIONS DIVISION	Clock Hrs/Wk	Term Hours
1.100	Communication Skills I	4	3
Wr 111		4	3
Wr 113	- Significant Composition	4	3
Eng 101	9	4	3
Eng 103		4	3
Sp 111	Speech	4	3
	ELECTRONICS DIVISION		
4.92E	Electrical Theory I	6	4
	*Occupational Opportunities in Appliance Repair	15	0
	*Occupational Opportunities in Electronic Technology	15	0
	*Occupational Opportunities in Radio Broadcasting	15	0
	*Occupational Opportunities in Radio TV Service	6	4
	HEALTH DIVISION		
HE 252	First Aid	4	2
HE 250		4	2
PE 190	Physical Education for Men (Selection of swimming,	-	_
	golf, or tennis)	4	1
PE 180	Physical Education for Women (Selection of swimming		-
	golf, or tennis)	4	1
	MATH AND SCIENCE DIVISION		_
GS 101	Biology	6	4
Mth 101	College Algebra	5	4
Mth 100	Intermediate Algebra	5	4
4.102	Math II (Basic Algebra)	4	4 3
Mth 191	Math for Elementary Teachers	5	4
GS 104		5	4
4.300		6	4
6.261	Technical Mathematics I	5	4
0.201		J	*
	MECHANICS DIVISION		
3.392E	Machine Shop Orientation	6	3
	*Occupational Opportunities in Airframe and		
	Powerplant (2 weeks)	15	0
	*Occupational Opportunities in Auto Body & Fender	15	0
	*Occupational Opportunities in Auto Mechanics	15	0
	*Occupational Opportunities in Diesel	15	0
	*Occupational Opportunities in Machine Shop	15	0
4.150	*Occupational Opportunities in Powerplants Welding IA	15	0
4.130		6	2
	PRACTICAL NURSING (Applicants must have filed applications by April 20, 1966)		
	SOCIAL SCIENCE DIVISION		
1.506	Applied Economics	1	9
Psy 201	* *	4	3
Soc 204	General Psychology General Sociology	4	3
Hst 101	History of Western Civilization	4	3
Geog 105	Introduction to Geography	4	3
Jeog 103	*Occupational Opportunities in Law Enforcement	15	0
Ec 202	Principles of Economics	4	3
Hst 201	U.S. History	4	3
		7	J

REMEDIAL INSTRUCTION Programmed instruction in basic subjects such as Reading, Mathematics, and English grammar will be offered on an individual basis. Clock Hrs/Wk Hours 5 to 15

TRADE EXTENSION & ADULT EDUCATION

(Courses to be determined by request)

NOTE: A limited number of credit classes will be offered in Cottage Grove, Florence, Junction City and Oakridge upon sufficient student demand.

GLOSSARY OF TERMS

A curriculum is any organized program of study arranged to provide vocational, cultural, or professional training toward a degree.

A term is an approximately eleven-week period of study. There are three terms, in addition to the Summer Term, in a college year. The Fall Term begins at the end of September and lasts until Christmas vacation; the Winter Term begins at the first of the year and lasts until the 15th or 20th of March, and the Spring Term begins at the end of March and lasts until about the middle of June. Summer Term is usually shorter than the regular terms. Terms are sometimes referred to as quarters.

A credit, term hour, or unit is comparable in definition to the 186 quarter hours of credit required by the schools of the State System of Higher Education for receiving a bachelor's degree. Normally a credit hour represents an hour's attendance in class each week for a term (eleven weeks). Generally a student who wishes to perform satisfactorily must spend at least two hours in study and preparation for each hour of attendance in class.

Laboratory classes are work or activity classes where most of the work is done during the class session. As a result, a student usually spends two or three hours time in a laboratory class for one hour's credit.

A course is any class or subject (English Composition, Biology, Drafting) offering for which a student may register for a term's work.

A sequence is a series of courses which are closely related to one another. They are usually numbered consecutively.

Course numbering follows a particular pattern which distinguishes vocational credits from college transfer credits. All courses which grant credit toward a vocational degree have four numbers with a decimal point while those which are transferable to four-year colleges are numbered with three digits and follow closely those used by the degree-granting schools in the state. Courses numbered from 100-199 are normally considered to be freshman courses; those numbered from 200-299 are normally sophomore courses. College transfer courses are preceded by a letter prefix such as Wr., or Hst., etc.

A full-time student is defined by the Associated Student Body Constitution as anyone who is carrying nine or more credit hours of work. This status entitles a student to full privileges such as voting, holding office, and admittance to college functions. It is important to know that the definition of a full-time student varies with agencies. For example, the Selective Service Board defines a full-time student as one carrying twelve credit hours of work. The Social Security Administration also requires twelve hours of work for full-time status.

