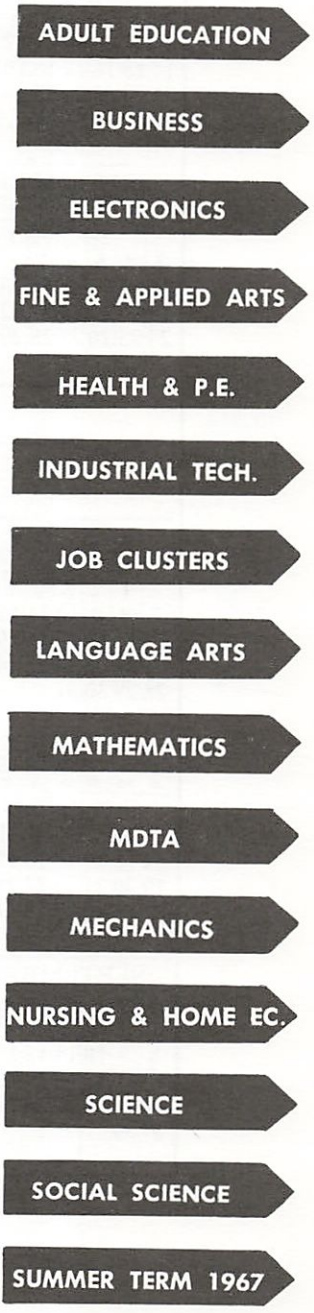
Enclosure 5

Catalog...1967-68

THUMB INDEX



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

NO. 3 APRIL 1967

CALENDAR FOR 1967

MAY

S	M	T	W	T	F	S
. .	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	. .	. .	. .
. .	. .	. .	. .	. .	. .	. .

JUNE

S	M	T	W	T	F	S
. .	. .	. .	. .	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	. .
. .	. .	. .	. .	. .	. .	. .

JULY

S	M	T	W	T	F	S
. .	. .	. .	. .	. .	. .	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	. .	. .	. .	. .	. .

AUGUST

S	M	T	W	T	F	S
. .	. .	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	. .	. .
. .	. .	. .	. .	. .	. .	. .

SEPTEMBER

S	M	T	W	T	F	S
. .	. .	. .	. .	. .	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
. .	. .	. .	. .	. .	. .	. .

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	. .	. .	. .	. .
. .	. .	. .	. .	. .	. .	. .

NOVEMBER

S	M	T	W	T	F	S
. .	. .	. .	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	. .	. .
. .	. .	. .	. .	. .	. .	. .

DECEMBER

S	M	T	W	T	F	S
. .	. .	. .	. .	. .	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	. .	. .	. .	. .	. .	. .

CALENDAR FOR 1968

JANUARY

S	M	T	W	T	F	S
. .	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	. .	. .	. .
. .	. .	. .	. .	. .	. .	. .

FEBRUARY

S	M	T	W	T	F	S
. .	. .	. .	. .	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	. .	. .
. .	. .	. .	. .	. .	. .	. .

MARCH

S	M	T	W	T	F	S
. .	. .	. .	. .	. .	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	. .	. .	. .	. .	. .	. .

APRIL

S	M	T	W	T	F	S
. .	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	. .	. .	. .	. .
. .	. .	. .	. .	. .	. .	. .

MAY

S	M	T	W	T	F	S
. .	. .	. .	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	. .
. .	. .	. .	. .	. .	. .	. .

JUNE

S	M	T	W	T	F	S
. .	. .	. .	. .	. .	. .	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	. .	. .	. .	. .	. .	. .

JULY

S	M	T	W	T	F	S
. .	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	. .	. .	. .
. .	. .	. .	. .	. .	. .	. .

AUGUST

S	M	T	W	T	F	S
. .	. .	. .	. .	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
. .	. .	. .	. .	. .	. .	. .

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	. .	. .	. .	. .	. .
. .	. .	. .	. .	. .	. .	. .

NOVEMBER

S	M	T	W	T	F	S
. .	. .	. .	. .	. .	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
. .	. .	. .	. .	. .	. .	. .

OCTOBER

S	M	T	W	T	F	S
. .	. .	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	. .	. .
. .	. .	. .	. .	. .	. .	. .

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	. .	. .	. .	. .
. .	. .	. .	. .	. .	. .	. .

Academic

1967-68 CALENDAR

SUMMER TERM 1967

June 5-16	(Monday-Friday)	Registration
June 19	(Monday)	Classes Start
June 19	(Monday)	Late Fees Start
July 7	(Friday)	Last Day for Refunds
August 4	(Friday)	Last Day to Withdraw
September 1	(Friday)	Term Ends

FALL TERM 1967

July 17-Sept. 22	(Monday-Friday)	Registration
September 25	(Monday)	Classes Start
September 25	(Monday)	Late Fees Start
October 13	(Friday)	Last Day for Refunds
November 10	(Friday)	Last Day to Withdraw
December 15	(Friday)	Term Ends

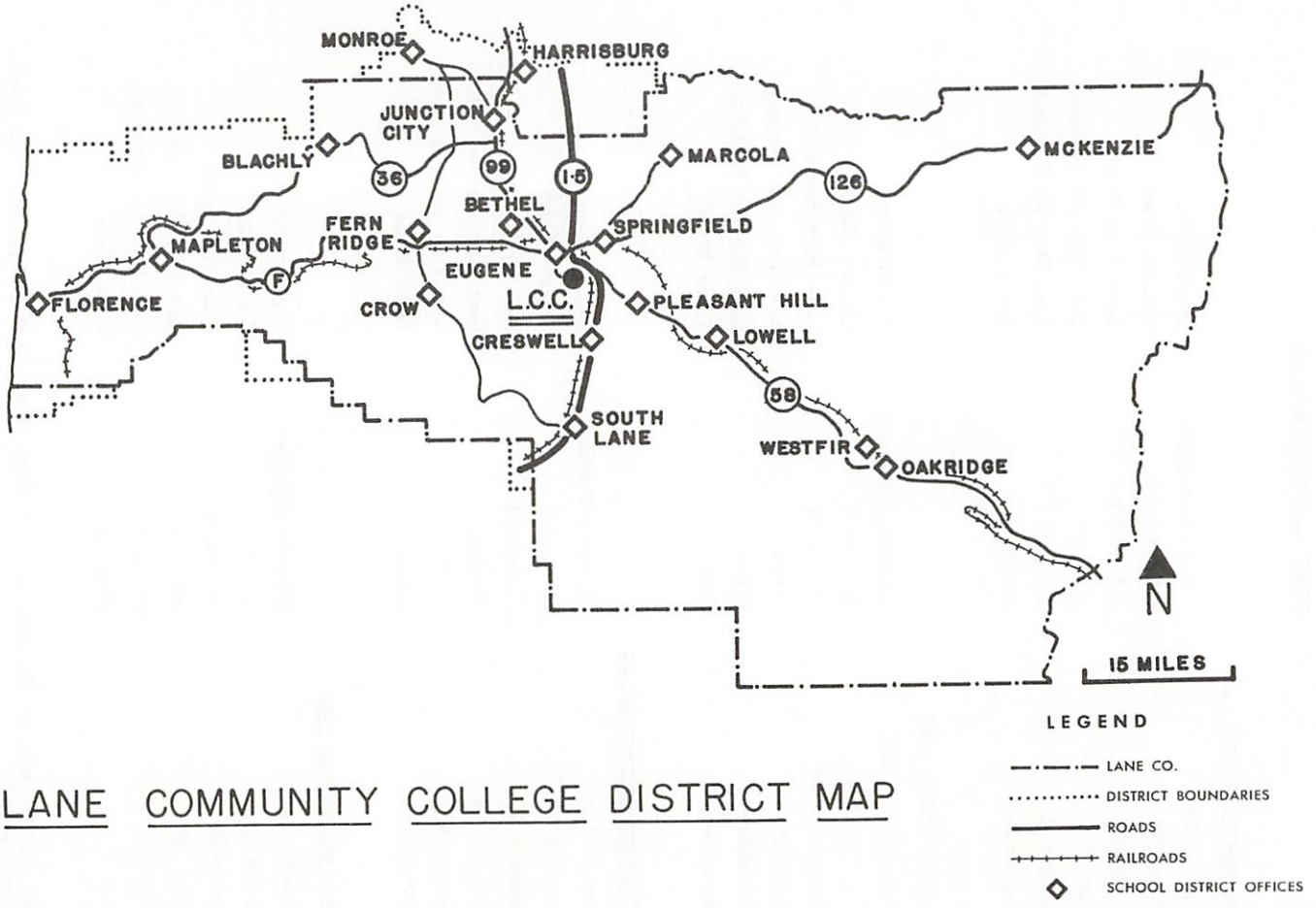
WINTER TERM 1967-68

Dec. 11-Jan. 2	(Monday-Tuesday)	Registration
January 2	(Tuesday)	Classes Start
January 2	(Tuesday)	Late Fees Start
January 19	(Friday)	Last Day for Refunds
February 16	(Friday)	Last Day to Withdraw
March 15	(Friday)	Term Ends

SPRING TERM 1968

March 11-22	(Monday-Friday)	Registration
March 25	(Monday)	Classes Start
March 25	(Monday)	Late Fees Start
April 12	(Friday)	Last Day for Refunds
May 10	(Friday)	Last Day to Withdraw
June 7	(Friday)	Term Ends

(No student will be allowed to enter class more than 7 calendar days after classes start.)



LANE COMMUNITY COLLEGE DISTRICT MAP

BOARD OF EDUCATION

Functions of the Lane Community College Board are similar to those of any school board and college board of trustees. 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.

ROBERT ACKERMAN
Springfield
Attorney
Zone 3
Term expires 1969

Chairman
LYLE SWETLAND
Eugene
Printer
At-Large Zone
Term expires 1970

Vice-Chairman
DEAN WEBBS, DDS
Cottage Grove
Dentist
Zone 4
Term expires 1968

ALBERT BRAUER, M.D.
Florence
Physician
Zone 1
Term expires 1968

OLGA FREEMAN
Eugene
Retired Public Official
At-Large Zone
Term expires 1967

WILLIAM BRISTOW, Jr.
Eugene
Jeweler
Zone 5
Term expires 1970

CLIFFORD MATSON, DDS
Junction City
Dentist
Zone 2
Term expires 1967

Administration

DALE PARNELL, D.Ed.
College President and
Executive Officer of the Board

WILLIAM HEIN
Dean of Instruction

WILLIAM COX
Dean of Administration

I. S. HAKANSON
Dean of Students

WILLIAM MANSELL
Clerk - Controller

General Information

WHAT ARE THE PURPOSES OF LANE COMMUNITY COLLEGE

1. Counseling and guidance in vocational and educational planning.
2. Occupational education for preparation for employment in technical and vocational fields.
3. 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.

WHAT HAS BEEN THE ORGANIZATION AND DEVELOPMENT?

The College was voted into existence October 19, 1964, by voters of Lane County and Harrisburg Union High School District, and Monroe Elementary District. It 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 College. The Eugene School District facilities are being leased, and will be used for the technical-vocational programs until a new campus is occupied. Classes are also being held in the Georgia-Pacific office building in Springfield, and in the former Bethel Elementary School in Eugene and Sacred Heart Hospital. High schools in Eugene, Springfield, Cottage Grove, Florence, Junction City, Oakridge, Harrisburg, and Monroe provide facilities for evening classes.

The College is organized under provisions of the Oregon Community College Act, Chapter 602, Oregon Laws.

It provides two years of post high school education, varying from single courses to offerings necessary for an Associate of Arts or an Associate of Science degree. The College maintains an open door policy, affording educational opportunity for all. Every effort is made to provide complete curricular offerings day and night.

The student body selected the nickname TITANS (after Greek mythology); and chose blue and white as the school colors. Its regular student body publications are a weekly newspaper, THE TORCH, and a yearbook, THE TITAN.

IS LANE COMMUNITY COLLEGE ACCREDITED?

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 are approved.

College transfer courses are 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 are approved by the Oregon State Department of Education. Occupational instructors are certified to teach in their assigned fields.

LCC is provisionally accredited by the Northwest Association of Secondary and Higher Education. The College is a member of the American Association of Junior Colleges.

WHAT ARE FUTURE CAMPUS PLANS?

Construction of a new campus is in progress at E 30th Avenue and Interstate 5 Freeway south of Eugene. 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.

The entering freshman class in 1967 will be the first class to graduate from the new campus in 1968-69.

COUNSELING STAFF

I. S. HAKANSON
Dean of Students

WILBERT BAILEY

JOHN BERNHAM

RALPH BURNS

PAULINE DIXON

KENNETH HILLS

FRANCES HOWARD

IRENE PARENT

WILLIAM WRIGHT

WHAT ARE THE STUDENT SERVICES?

Counseling and Guidance Services. One of the advantages offered by Lane Community College is having counselors available to help students in planning toward maximum self-development. Counselors are continuously and conveniently available to **all** who are seeking educational and vocational guidance.

Placement and Follow Up. A counselor, assisting students in finding employment reports that the graduates of all the vocational programs offered at Lane Community College have been successfully placed. The counselor follows up on the employment records of students to determine their needs and successes, and makes recommendations to the College administration about the strengths or weaknesses of the educational programs.

Registration in person with the office of the Placement Coordinator is required. For those desiring more than a temporary position, a file of credentials must be established. For more information, contact the student placement office, 200 N. Monroe, Eugene, or telephone 342-4931 ext. 42.

Foreign Students. Foreign students needing help or seeking information about programming, special courses, or personal problems may consult with a counselor who gives particular attention to their needs.

Information for Veterans and Students on Military Matters. Veterans and students seeking such information will find it readily available from a counselor who works closely with Selective Service offices and the Veterans Administration. He assists students in preparing forms and planning programs which will satisfy the standards of those organizations.

For student information, write or call the Dean of Student's Office, 200 N. Monroe, Eugene, Oregon. Telephone 342-4931, Ext. 65 or 66.

Counselors will help students plan programs, register for or withdraw from classes, and locate housing. They will aid in finding employment or obtaining financial assistance, or arrange activities. They are always ready to assist with answers to any of the major and minor questions arising in the daily pursuit of education. Students should seek these services as the needs arise.

FINANCIAL ASSISTANCE FOR STUDENTS

Financial assistance is available to Lane Community College students in several forms as follows:

(1) The Board of Education gives every year a tuition scholarship to a graduating senior from each of the 24 high schools in the college area. In addition, they give a limited number of scholarships to graduates of the Lane Community College Adult Education program and second-year students.

(2) The college receives from private sources and service clubs some scholarships which each year are awarded to needy and deserving students. Some of these are awarded directly by the donors and some are given to the college to award.

(3) The college has received from the Federal Government a substantial grant of money to be used to employ students in various jobs around the school. These range from office workers and teacher aides to custodial helpers and grounds' keepers. These assignments are known as work-study employment and include summer work as well as school-year employment. They usually pay $1.25 to $1.50 per hour.

(4) In addition, assistance in finding work in the community is available through the office of the Placement Coordinator. Interested students register in person to receive this help.

(5) The college participates with the Federal Government in administering N.D.E.A. an dgovernment guaranteed loan funds. These are long-term loans which a student may receive to finance his education. The rate of interest is low, three per cent, and payment of the loan does not begin until the student ceases or finishes his educational program. Applications for these loans are available from the Financial Aids Counselor.

(6) The college has received from the government an allotment of money which may be distributed to students as grants. Grant money is awarded as outright gifts and is not to be repaid; however, there are stipulations about how it can be given since it must be matched with other money in each case where it is apportioned to the student.

Students needing financial assistance are encouraged to see the Financial Aids Counselor. For information write Financial Aids Counselor, 200 N. Monroe, Eugene, Oregon; or call 342-4931, Ext. 42.

SCHOLARSHIPS

A limited number of tuition scholarships is available. Information can be obtained from counselors.

The Board of Education awards a total of 45 scholarships to current graduates of each of the high schools in the College District, second-year students, and Adult Education students. In addition, the following local organizations awarded scholarship aid to one or more students during the 1966-67 school year. (More are in the process of being established.)

Blue River Veneer Citizenship Scholarship
Dr. Albert Brauer
Central Tractor Co.
Corvallis Elks Club
Cottage Grove American Legion
Creswell High School Scholarship Fund
Creswell P.T.A.
Emil Johnson Memorial Scholarship Fund
Eugene Kiwanis Club
Eugene Rotary Club
Eugene Women of the Moose
Florence Rotary Club
Lane Paschelke Scholarship Fund
McKenzie Community Scholarship Fund
McKenzie High School
Mickey Giles Memorial Scholarship Fund
Mohawk High School
Monroe Community Scholarship
Northwest Christian College
Oregon Retail Clerks
Patsy Diehl Memorial Scholarship Fund
Pepsi-Cola Scholarship Fund
River Road B.P.W.
Riverside Speedway
South Salem High School
Dr. Howard Stenger
Stu Burge Builders
Thurston High School
Timber Bowl, Inc.
Umpqua Daffodil Ass'n.
Dr. Dean Webb
Woodburn P.T.A.
Yoncalla Community Fund

Student Health Services. A registered nurse from the Nursing Division is assigned to initiate and develop health services. Health records will be set up and maintained. Emergency first aid care will be provided. However, students needing medical treatment should contact their own physicians.

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.

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, located adjacent to the Eugene Campus at 662 Cheshire, has been provided as an educational evaluation center where students, staff, and members of the community may come to obtain professional aid in the removal of educational barriers impeding the progress of the individual toward personal goals.

Specially trained personnel are available at the Study Skills Center to provide assistance in the areas of reading, mathematics, writing, oral communications, study habits, memory training, typing, shorthand, use of foreign language tapes, and in use of programmed materials in many academic disciplines.

You do not need to register for the Study Skills Center's services. These services are available to students at any time. Hours are: daily from 8:00 a.m. to 10:00 p.m., and Saturday from 8:00 a.m. to 12:00 noon.

For further information, contact the Study Skills Center, 662 Cheshire, Eugene, telephone 342-4931, Ext. 73.

ADMISSIONS AND REGISTRATION

Admission Procedure: (for credit program)

1. Pre-registration counselor conference (preferably several weeks before classes begin).
2. Each applicant must complete and submit an Application for Admission.
3. The student should file with admissions office a copy of his high school transcript and transcripts of all post high school work he has taken. If not a high school graduate, special arrangements may be made by a counselor.
4. 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 Testing examination, such scores should be filed with the admissions office.
6. At the time of registration for classes, each student must make a $10.00 non-refundable tuition deposit. This fee will be credited toward tuition if the student enrolls in school the ensuing term.

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

1. 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.
2. There are several programs in electronics and engineering requiring a student to have a significant background in mathematics. Those desiring to enroll must be high school graduates and score satisfactory on qualifying examinations.
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.
   The Counseling Center is open throughout the summer with trained counselors available to talk with prospective students concerning plans for college. The College recommends that incoming students take advantage of this opportunity. The advantages of a summer interview are many: counselors are able to give more time to each individual; the interested student can talk with a counselor without feeling pressure from other activities or from other people; the general atmosphere is conducive to leisurely but thorough planning.
2. The student arranges time schedule and selection of classes with a counselor.
3. The following registration materials should be filed with the Registrar:
   a. Application for admission
   b. Transcript of high school work
   c. Transcrips of post high school work
   d. Physical examination form
   e. $10 registration deposit
4. The student arranges 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.

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 day or evening. 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.

The Business Office is located at 200 N. Monroe, Eugene, Oregon. Telephone 342-4931, Ext. 63-64.

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, and the Social Security Administration.

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 through 9 credit hours.

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:

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

Typical student yearly expense excluding board, room, and transportation:

Tuition	$165
Books	60
Fees and Miscellaneous	25
	$250

*Permanent Residence: A resident is a student whose parents are bona fide residents of Lane County, Monroe elementary school, or Harrisburg school districts. 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. In no case may a foreign student qualify as a resident.

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 preregistration. 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 class day after classes begin. In no case will a student be admitted to classes after seven calendar days from the first class sesion.

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 student-initiated change of course.

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.

Transcripts Charge: Reasonable requests for transcripts of students will be honored without charge. A student should order these in person or by written request from the Registrar's office.

Insurance: Group Insurance is available through the college 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
I—0 points (incomplete)

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 will have a GPA of 4.00.

Honors List: Each term an honors list 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.

Credit By Examination: 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 apply for credit by examination. 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 up through 7 calendar days 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, or with approval of the instructor.

No-Grade Courses: A large 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, adult education. 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 of 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.

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 and student 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:

1. Complete a minimum of 93 term hours of credits with a cumulative grade point average of 2.00.
2. 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.
4. 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 diplomas 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. College operated snack bars are available at the Eugene and Bethel Campuses.

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 emergencies which may arise.

Campus Radio—Lane Community College operates FM radio station KPNW which daily provides students with information and notices pertinent to college life and activities.

Instructional Television—Closed circuit television is available on the Eugene campus for instruction and general college informational services.

Robert Wimberly
1966-67 Student Body President

STUDENT ACTIVITIES

Student Government: A student 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 Fellowship of Christian Students 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 journalism.

Social Events: Social Activity is an important part of College 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 Centers are temporarily located in quarters on each 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 centers for many types of instructional materials the Library and Learning Resources centers facilitate 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 Centers are 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.

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 classe 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 regulations of the individual libraries.

Employment Opportunities in Lane County and Suggested Secondary School Preparation

VOCATIONAL GUIDANCE INFORMATION

Employment opportunities can be grouped into related clusters. The following section is included in this catalog to give students information about the potential needs estimated for expansion and/or replacement in various occupations. Following each job cluster is a suggested course preparation for that particular job cluster from the ninth grade through the community college.

For students in high school, this chart can be valuable in career planning. For the entering college student, the chart will indicate the type of background that would be helpful in completing an occupational choice.

Information used in this section was obtained from the Oregon State Employment Service.

The information provided here is to be used for guidance purposes only. As the field of occupational education develops, the secondary schools of the region and Lane Community College will undoubtedly be able to refine this information to make it more useful. Under the suggested preparation section it is not intended that each area listed be a separate course, but that students have experiences in these areas. It is anticipated that high school counselors will feel free to make course substitutions as individual needs dictate.

The figures listed in this report indicate the estimated job needs for expansion and replacement during 1965-1967.

OFFICE OPERATIONS CLUSTER I

Bookkeeping Type Jobs

Accountants and Auditors	35
Escrow Officers	5
Real Estate Appraisers	15
Bookkeepers	155
Librarian Assistants	15
Tellers and Cashiers	60
Credit Clerks	20
Payroll Clerks and Timekeepers	5
Meter Readers	0
TOTAL	310

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orient. to Careers
Typing I or
Home Economics

Grade 10
Typing I
Business English
Bookkeeping I

Grade 11
Business Law
Business Mathematics
or Equivalent
Bookkeeping II

Grade 12
Business Machines
Principles of Data Processing
Mathematics

Community College 1 & 2 Year Programs
Mid-Management
Bookkeeping
Data Processing
Real Estate
Purchasing

OFFICE OPERATIONS CLUSTER II

Secretarial Type Jobs

Employment Interviewers and Other Office Operators	50
Secretaries	170
Stenographers	155
Typists	10
Clerk Typists	120
File Clerks	5
Desk Clerks	5
Bookkeeping Machine Operators	30
Office Machine Operators	20
Telephone and Telegraph Operators	40
General Office Clerks	225
Receptionists	130
Cashiers	25
Total	985

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Typing I
Home Economics

Grade 10
Typing II
Business Math
Business English

Grade 11
Bookkeeping I
Business Law
Stenography

Grade 12
Office Lab
Business Machines
Principles of Data Processing
or
On-The-Job Training

Community College 1 & 2 Year Programs
Secretarial Specialties
Data Processing
Clerical
Mid-Management

GRAPHIC ARTS CLUSTER

Graphic Arts Occupations

Commercial Artists and Decorators	0
Photographers	0
Musicians and Other Artists	20
Compositors and Typesetters	20
Pressmen and Plate Printers	15
Printing and Publishers Workers	25
Photograph Developers and Finishers	35
Total	115

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Industrial Arts
Typing I

Grade 10
Business English
Basic Design (Art I)
Drafting I

Grade 11
Business Law
Art II
Drafting II

Grade 12
Speech
Music
Business Math

Community College 1 & 2 Year Programs
Commercial Art
Teacher Aides
Publishing and Printing
Communications Technician
Technical Illustration
Broadcasting and Telecasting
Photography

DOMESTIC AND CUSTODIAL SERVICES CLUSTER

Domestic and Custodial Services

Building Maintenance Foreman	10
Building Maintenance Men	15
Janitors and Porters	150
Charwomen and Cleaners	65
Hotel Maids and Housemen	30
Housekeepers and Dayworkers	170
Park and Camp Attendants	10
Transportation Equipment Cleaners	5
Total	455

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Industrial Arts or
Home Economics

Grade 10
Business English
Drafting I
Typing I

Grade 11
Business Law
First Aid and Safety
Power Mechanics or
Home Economics I

Grade 12
Speech
Home Economics II or
Welding
Business Math or
On-The-Job Training
for Job Entry

Community College 1 & 2 Year programs
Custodial
Maintenance
Vocational Housekeeping
Nurse Aid

TRANSPORTATION CLUSTER

Transportation Occupations

Truck Drivers	170
Bus Drivers	15
Chauffeurs	0
Routemen	20
Delivery Boys	10
Railroad Trainmen	45
Truck Driver Helpers	10
Transportation Foremen	5
Transportation Equipment Workers	0
Tire Recappers and Repairmen	20
Total	295

Suggested Preparation For This Job Cluster

Grade 9
Typing I
General Business
Orientation to Careers
Industrial Arts

Grade 10
Basic Electronics
Business Math
Business English

Grade 11
Business Law
First Aid and Safety
Power Mechanics I

Grade 12
Welding
Drafting I
Bookkeeping I or
On-the-Job Training for
Job Entry

Community College 1 and 2 Year Programs
Heavy Equipment
Clerks

TIMBER PRODUCTS CLUSTER

Timber Products Occupations

Fallers and Buckers	45
Riggers and Climbers	5
Donkey Puncher	40
Logging Laborers	20
Logging Foremen	10
Log Scaler	10
Log and Lumber Graders	20
Pondmen	5
Headsaw Operators	30
Sawyers	5
Resawyers and Trimmermen	10

Green Chainman	10
Sorters and Stackers	5
Sawmill and Planermill Off-Bearers	10
Kiln Operators	0
Sawmill Laborers	25
Sawmill Foreman	0
Barker Operators	0
Veneer Clippers	10
Veneer Drier	10
Patching Machine Operator	15
Plywood Patcher	5
Gluemen	0
Plywood and Veneer Press Operators	5
Veneer and Plywood Graders	20
Veneer Laborers	60
Veneer and Planingmill Foremen	15
Woodworking Sawyers	5
Woodworking Machine Operators	25
Hand and Machine Sanders	5
Woodworking Shapers and Assemblers	40
Door and Frame Makers	0
Furniture Assemblers	15
Planer Mill Laborers	30
Pulp Machine Tenders	0
Paper Cutters	5
Pulp and Paper Laborers	15
Pulp and Paper Foremen	0
Hoistmen	0
Tool Setters and Grinders	0
Shingle Packers	35
Boiler Tenders	10
Powder Monkeys	0
Foresters and Forester Aides	35
Total	610

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Industrial Arts

Grade 10
Lumber Economics
Business Math
Construction I
(Shop II)

Grade 11
First Aid and Mill Safety
Drafting I
Business Law

Grade 12
Welding
Forestry I
Power Mechanics or
On-the-Job Training for Job Entry

Community College 1 and 2 Year Programs
Lumber Entry
Heavy Equipment
Forestry Aide
Logger Program

METAL WORKING CLUSTER

Metal Working Occupations

Sheet Metal Workers	5
Sheet Metal Laborers	0
Boilermakers	0
Machinists	25
Welders	45
Metal Working Machine Operators	25
Metalworking and Machineshop Foremen	5
Tool Sharpener and Dressers	5
Machineshop Laborers	5
Metal Working Laborers	15
Foundry Workers	0
Total	130

Suggested Preparation For This Job Cluster

Grade 9
General Business
Typing I
Orientation to Careers
Industrial Arts

Grade 10
Business Math
Business English
Construction I

Grade 11
Business Law
Drafting I
Metals I

Grade 12
Welding
Drafting II
Shop Math

Community College 1 and 2 Year Programs
Apprenticeship
Machine Shop
Welding
Metal Fabrication
Tool Design
Drafting
Appliance Repair

MECHANICS CLUSTER

Mechanic Occupations

Automobile Mechanics	65
Farm Mechanics	10
Truck and Bus Mechanics	10
Diesel Mechanics	15
Auto-body Repairman	15
Automobile Wreckers	5
Mechanics Helpers	0
Service Station Attendants	100
Auto Garage Foremen	5
Oilers	0
Millwrights	30
Maintenance Men and Maintenance Mechanics	25
Total	280

Suggested Preparation For This Job Cluster

Grade 9
Typing I
General Business
Orientation to Careers
Industrial Arts

Grade 10
Basic Electronics
Business Math
Business English

Grade 11
Business Law
Drafting I
Power Mechanics I

Grade 12
Welding
Mathematics
Power Mechanics II

Community College 1 and 2 Year Programs
Aircraft Mechanics
Auto Body and Fender
Farm Mechanics
Auto Mechanics
Diesel Mechanics
Small Engine Mechanics
Marine Mechanics
Service Station Mechanic
Flight Training
Instrumentation
Business Machine Service

AGRICULTURE CLUSTER

Agriculture and Related Occupations

Farmers	-150
Farm Hands	-15
Grounds Keepers and Landscape Gardeners	25
Agriculture Sales	25
Total	-115

Suggested Preparation For This Job Cluster

Grade 9
General Business
Typing I
Orientation to Careers
Industrial Arts

Grade 10
Agriculture I
Business Math
Basic Electronics or
Bookkeeping I

Grade 11
Agriculture II
Drafting I
Business Law

Grade 12
Welding
Business English
Power Mechanics or
On-the-Job Training for Job Entry

Community College 1 and 2 Year Programs
Agriculture Sales
Agriculture Mechanics
Landscape
Floriculture and Horticulture
Agriculture Management

SALES CLUSTER

Sales Occupations

Retail Supervisors	0
Apparel Salespersons	15
General Salespersons	80
Sales Clerks	225
Solicitors and Peddlers	0
Recreation Attendants	0
Ticket Agents	10
Appliance Salesmen	50
Auto Parts Salespersons	30
Insurance Salesmen	115
Real Estate Salesmen	40
Advertising Salesmen	0
Wholesale Food Stuffs Salesmen	15
Wholesale Dry Goods Salesmen	20
Wholesale Auto Accessories Salesmen	0
Wholesale Housefurnishings Salesmen	5
Wholesale Building Supplies Salesmen	45
Wholesale Machine and Equipment Salesmen	10
Ttotal	660

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Industrial Arts or
Home Economics

Grade 10
Business English
Bookkeeping I
Typing I

Grade 11
Business Law
Business Math
Speech

Grade 12
Business Machines
Principles of Data Processing
Retail Selling and Lab

Community College 1 and 2 Year Programs
Mid-Management
Retail Selling
Bookkeeping
Real Estate
Insurance
Sales Clerks
Business Machines

TEXTILES CLUSTER

Textile and Upholstery Processing

Seamstresses	5
Sewing Machine Operators	10
Laundry and Drycleaning Workers	25
Markers and Packers	35
Upholsterers and Furniture Repairmen	10
Auto Upholsterers	15
Tailors	5
Paint and Chemical Workers	45
Total	150

Suggested Preparation For This Job Cluster

Grade 9
General Business
Typing I
Orientation to Careers
Industrial Arts or
Home Economics

Grade 10
Business Math
Business English
Bookkeeping I

Grade 11
Business Law
Applied Chemistry
Textiles I

Grade 12
Drafting I
Retail Selling
Textiles II

Community College 1 and 2 Year Programs
Tailoring
Upholstering
Dry Cleaning
Machine Operators
Retail Selling

MANAGERIAL CLUSTER

Managerial Occupations

Company Officials	10
General Managers	10
Personnel Managers	5
Credit Managers	5
Advertising Agents	5
Office Managers	20
Administrative Secretaries	10
Plant Superintendents	25
Wholesale Managers	5
Retail Store Managers	40
Buyers and Department Heads	25
Purchasing Agents and Brokers	5
Sales Managers	5
Floor Managers — Store	10
Hotel and Restaurant Managers	10
Finance and Insurance Officials	40
Transportation Officials	5
Communications Officials	5
Utilities Officials	0
Service Managers	5
Hospital and Institutional Superintendents	5
Union Officials	5
Postmasters and Other Public Officials	0
Radio Programming Officials	0
Total	255

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Industrial Arts

Grade 10
Typing I
Business English
Bookkeeping I

Grade 11
Business Law
Business Math or Equivalent

Grade 12
Business Machines
Principles of Data Processing
Mathematics

Community College 1 and 2 Year Programs
Mid-Management
Real Estate
Insurance
Bookkeeper
Data Processing
Retail Selling
Purchasing
Hotel-Motel Management

FOOD SERVICE CLUSTER

Food Service Occupations

Bus Boys	15
Dish Washers	30
Kitchen Helpers	30
Cook Helpers	15
Waiters and Waitresses	240
Bartenders	10
Cooks	110
Dieticians and Other Food Service	5
Grain Mill Workers	10
Bakers and Helpers	25
Butchers and Meat Cutters	25
Poultry Processing Workers	10
Dairy Product Processors	10
Canning and Other Food Processors	15
Total	550

Suggested Preparation For This Job Cluster

Grade 9
General Business
Typing I
Orientation to Careers
Industrial Arts or
Home Economics

Grade 10
Business Math
Business English
Bookkeeping I

Grade 11
Business Law
First Aid and Safety
Foods I

Grade 12
Applied Chemistry
Retail Selling
Foods II or
On-the-Job Training for Job Entry

Community College 1 and 2 Year Programs
Waitresses
Cooks
Restaurant Management
Butchers
Retail Selling
Baking

CONSTRUCTION AND REPAIR CLUSTER

Construction and Repair Occupations

Carpenters	85
Plumbers and Steamfitters	25
Painters	20
Electricians	45
Brick and Stone Masons	10
Plasterers	5
Cement and Concrete Finishers	5
Carpet and Linoleum Layers	10

Roofers	0
Cat Skinner	35
Construction Foreman	30
Excavating and Grading Equipment Operator	15
Construction Equipment Operators	20
Construction Laborers	115
Concrete Workers	25
Utility Workers	20
Municipal Services	30
Household Appliance Servicemen	25
Office Machine and Instrument Repair	20
Electronics Technician	25
Total	565

Suggested Preparation For This Job Cluster

Grade 9
General Business
Typing I
Orientation to Careers
Industrial Arts

Grade 10
Basic Electronics
Business Math
Construction I

Grade 11
Business Law
Drafting I
Power Mechanics I

Grade 12
Welding
Drafting II
Shop Math

Community College 1 and 2 Year Programs
Apprenticeship
Heavy Equipment Operator
Construction Technician
Appliance Repair
Electronics Technician
Civil and Structural Engineering Aide

STOCK CONTROL CLUSTER

Stock Control Occupations

Traffic Managers	5
Shipping and Receiving Clerks	10
Tallymen	5
Auto Parts Managers	5
Stock Clerks	55
Grocery Checkers	65
Jitney Drivers	20
Lumber Carrier Drivers	10
Car Loaders	15
Retail Laborers	30
Warehouse Laborers	40
Post Office Clerks	5
Mail Carriers	5
Total	270

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Home Economics or
Industrial Arts
Typing I

Grade 10
Business English
Bookkeeping I
Drafting I

Grade 11
Business Law
Business Math
Bookkeeping II

Grade 12
Speech or
Business Machines
Principles of Data Processing
Retail Selling or
Math or
On-the-Job Training for Job Entry

Community College 1 and 2 Year Programs
Mid-Management
Retail Selling
Bookkeeping
Sales Clerks

HEALTH SERVICE CLUSTER

Health Service Occupations

Physicians and Surgeons	30
Dentists	10
Veterinarians	0
Pharmacists	10
Embalmers	0
Nurses	120
Practical Nurses	30
Nurses' Aides and Orderlies	100
Veterinary Hospital Attendant	10
Dental Assistants	50
Opticians	0
Barbers and Beauticians	15
Matrons	5
Medical Technician	10
Total	390

Suggested Preparation For This Job Cluster

Grade 9
General Business
Orientation to Careers
Home Economics or
Industrial Arts

Grade 10
Business English
Typing I
Business Math

Grade 11
Business Law
Applied Chemistry
Typing II

Grade 12
Speech
Biology II or
Bookkeeping I
Mathematics

Community College 1 and 2 Year Programs
Assoc. Degree Reg. Nurse
Practical Nurse
Nurses Aide
Dental Hygienist
Dental Assistant
Medical Technician
X-ray Technician
Sanitation Technician
Dietetics
Medical Librarian

SOCIAL SERVICES CLUSTER

Protective Service Occupations

Law Enforcement Officers	35
Firemen and Fire Chiefs	15
Watchmen and Lot Attendants	5
Inspectors, etc.	5
Total	60

Social Service Occupations

Clergy	10
Lawyers	30
College Professors	515
Social Scientists	15
Primary, Secondary and Special Teachers	365
Social Workers	60
Housemothers	10
Ushers, Bellhops and Elevator Operators	5
Baby Sitters	370
Total	1,380

Suggested Preparation For This Job Cluster

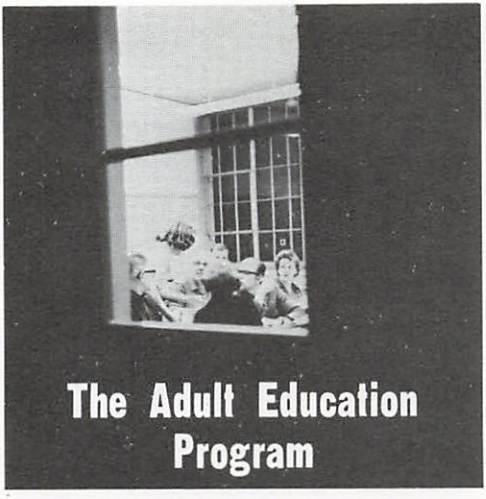
Grade 9
General Business
Orientation to Careers
Industrial Arts or
Home Economics

Grade 10
Business English
Bookkeeping I
Typing I

Grade 11
Business Law
First Aid and Safety
Drafting I or
Typing II

Grade 12
Speech
Home Economics or
Business Machines
Business Math

Community College 1 and 2 Year Programs
Teacher Aide
Case Aide
Mid-Management
Law Enforcement
Fire Science
Library Assistant
Nursery School
Recreation Aide



The Adult Education Program

HOW ARE CLASSES ESTABLISHED?

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.

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

HOW DO STUDENTS REGISTER?

Registration for the Adult Education Program classes takes place at the first class meeting.

ARE CERTIFICATES OF COMPLETION GIVEN?

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.

WHAT IS THE TUITION?

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 agency charges a rental for facilities. Books are available on a rental basis in High School Completion classes; other courses require the purchase of books and they may be purchased through the college book store. Material fees are charged in classes which require special materials. There is no refund after the second meeting of a class.

ADULT EDUCATION TUITION SCHEDULE

State Approved Occupational Courses	30 clock hours—$12.00 per course
Self Improvement, Avocational Courses	30 clock hours—$20.00 per course
Driver Education	15 clock hours—$47.00 per course
High School Completion	36 clock hours—$12.00 per course
Textbooks	May be purchased in the first class or in the LCC Bookstore

WHAT ARE THE COURSES AVAILABLE?

Agriculture and Home Economics

Most of the home economics courses offered by the Lane Community College Adult Education Program are in the areas of sewing, cooking, home accessories, household furnishings and interior decoration. Other courses will be offered whenever twelve or more persons request a particular offering, providing an instructor and adequate facilities are available for the instruction. Class offerings generally are available in the morning and afternoon as well as the evening hours. The morning and afternoon classes are currently held in public recreation district facilities, YMCA's, community centers and churches. Evening classes are also conducted in these facilities in addition to many of the public schools in Lane County.

Household Furnishing (Upholstery Lab)

A study of the principles of upholstery aimed specifically at aiding the housewife to understand the basic beginning upholstering and re-upholstering techniques. The course will provide information on design, materials and form.

Knit and Fashion Fabrics

A study of the methods of fabricating specialized materials such as knits, stretch, and fashion fabrics.

Food Preparation for Special Occasions

An introduction to food patterns and preparations of various cultures to develop in the student an interest in a variety of foods and give a wide basis of information to make her kitchen hours more creative and productive.

Flower Arranging and Home Decorating

Provides specific techniques in the areas of flower arranging, corsage making, gift wrapping, etc. so the student may attractively and economically make these items.

Accessories for the Home

A course designed to stimulate awareness and appreciation for appropriate, well-designed, and coordinated home accessories, such as lamps, pictures, and other wall, mantel, table, and bookshelf accessories.

The Family in the Money World

Designed to help families and individuals understand the importance of financial stability, to develop a plan for management of income based on needs and wants, to utilize all available resources to obtain the family's desires, and to choose wisely among the great variety of available goods and services.

Drapery, Curtain, Bedspread, Cushion and Pillow Construction

A course involving instruction in measuring windows to figure yardage and pattern match. Experience is provided in making draperies and other types of curtains and bedspreads. Previous sewing experience is not necessary.

Bishop Sewing, Beginning

The student will learn the basic sewing techniques developed by Mrs. Edna Bishop primarily for use in the garment industry with the emphasis now placed on home use.

Bishop Sewing, Advanced

Students review previous work and study advanced techniques in clothing construction using a variety of fabrics and patterns. Demonstrations will be short with more time for the student to work supervised by the teacher.

Bishop Tailoring

The course consists of constructing a coat or suit jacket using the tailoring techniques developed by the Bishop Method.

Bishop Tailoring, Advanced

In this course the student will construct a coat or suit with set-in sleeves, separate facing and notched collar. The coat or suit will be completely underlined.

Couture

A series of lessons devoted to precise work with design, special fabrics, and tailoring. This is a flexible course adapted to fit the specific needs of the individual students under the supervision and instruction of the teacher. Students must have had Bishop sewing and tailoring courses.

Home Sewing

A series of lessons in general sewing in which the students select their own projects and make them with instruction and supervision. This is a flexible course in which the instructor adapts the lessons to fit the specific needs of the individual student and his project.

Home Tailoring

A series of lessons in general home tailoring in which students select their own projects and make them under the supervision and direction of the instructor. This is a flexible course in which the instructor adapts the lessons to fit the needs of the individual student.

Sewing Children's Clothing

Designed to develop skills in sewing and knowledge of materials aimed specifically at the sewing of clothing for children.

Interior Decorating I

A study of the principles of interior decorating aimed specifically at the use of design, color, texture, space, and form. The course will provide information on window treatments, wall finishes, furniture, floor covering, lighting, and accessories.

Interior Decorating II

An advanced study of furniture styles and periods, principles of furniture arrangement, landscaping as viewing from the interior, and the development of student plans.

Agriculture

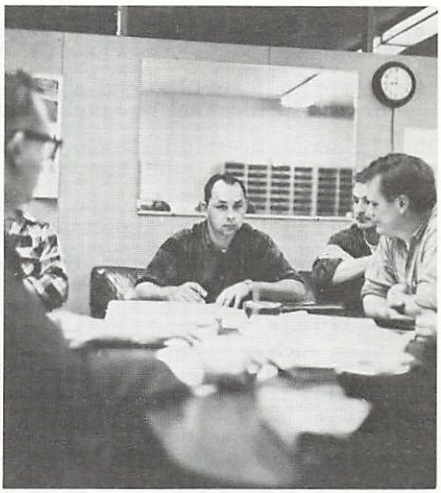
Agriculture education course offerings will be directed primarily to the interest of specialized groups. Examples are commercial farmers, their families, their employees, rural residents and their families. Courses will be offered in a local community (high school district) if twelve or more persons enroll and if an instructor is available. Suggested courses are: farm accounting, typing, bookkeeping, farm law, ornamental horticulture, livestock health problems, 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 problem.

Some courses offered in urban areas are those designed for the maintenance, improvement, and beautification of the family home. Each course involves thirty hours of instruction. Examples are:

Fundamentals of Greenhouse Management
Developed to provide the student with information concerning the techniques of greenhouse operation and management.

Landscape Gardening
A study of plant material and design, principles of planting and maintenance.

Pruning and Grafting of Trees and Shrubs
The skills and principles of pruning and grafting are developed in this course.



APPRENTICE TRAINING

This program offers an organized system for providing young people with the manipulative skills and technical or theoretical knowledge needed for competent performance in skilled occupations. Since apprentices learn the skills of the craftsman through on-the-job work experiences and the related information in the classroom, the program involves cooperation among schools, labor, and management. The minimum terms and conditions of apprenticeship are regulated by state and local statutes or agreements.

Some of the basic qualifications for entrance in apprenticeship are:

1. Generally, 16 years as a minimum age requirement.
2. Good health and physical fitness for the trade.
3. High school graduation preferred. (Note: Many trades place high value on mathematics, mechanical drawing, the sciences, and all expect the ability to read, spell, write, and speak intelligently. High school transcripts are required of applicants.)
4. Completion of aptitude tests.
5. Acceptance after interview by a joint apprenticeship committee. (A joint apprenticeship committee is generally composed of 4 employers and 4 journeymen who administer the apprenticeship system locally.)
6. Willingness to work, study, and attend classes.
7. Desire and ability to maintain proper conduct in school and on the job.
8. Successful completion of a probationary period.

Some of the advantages of apprenticeship are:

1. The apprentice is an employed worker.
2. An apprentice is paid wages while he learns.
3. An apprentice becomes self-reliant at a comparatively young age.
4. An apprentice learns to produce with modern tools and machines.
5. An apprentice gains experience in the latest methods.
6. An apprentice will have current knowledge of industrial materials.
7. An apprentice will properly use or install thousands of dollars worth of materials during his apprenticeship.
8. An apprentice works under the direction of a competent journeyman at all times. He receives close personal attention and supervision.
9. An apprentice will attend classes for six hours each week to learn those things which cannot be taught economically in the shop or at the job site.
10. The apprenticeship instructor is a capable, practical man selected from the industry by the joint apprenticeship committee.
11. The apprentice's work reports, class grades, and attendance will be reviewed by the joint apprenticeship committee before each wage increase.

Lane Community College Adult Education Program cooperates with the State Division of Vocational Education and the state and federal bureaus of labor through the State Apprenticeship and Training Council 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 1, Seventh and Pearl Streets, Eugene (telephone 342-1361, ext. 207) or the federal apprenticeship representative, Mr. Fred Koehler, 835 Park East, Wylie Professional Building, Eugene (telephone 342-5141, ext. 316 and 317). At the present time the Lane Community College Adult Education Program offers 23 apprenticeship classes covering 14 different trades.**

Included in the apprenticeship programs are the following trades:

Carpentry
Floor Covering
Industrial Maintenance Electrician
Inside Wireman
Maintenance Electrician
Meterman
Painters
Plasterer
Plumber
Power Lineman
Roofer
Sheet Metal
Station Wireman
Steamfitter

BUSINESS

Business education offerings in the Adult Education Program include standard basic skill courses. In addition, courses are offered in areas where specialized groups wish to improve their competencies. As in other areas, whenever a group of twelve or more persons requests a particular course, it is offered providing instructors and adequate instructional facilities are available. An example of such a specialized course is "Preparation of Income Tax for Professionals". Persons enrolled in such courses are employed in the roles of bookkeeping and accounting services. Examples of standard course offerings in business education are typing, shorthand, business machines, bookkeeping, accounting, etc. Most of these courses are organized to include 30 clock hours of instruction in the evenings from 7-10:00 p.m. If instructors and facilities are available, they can also be offered in the day time. Examples of standard courses are:

ACCOUNTING, BEGINNING

The student receives instruction by means of workbooks and practice sets relating to the professional, merchantile, and manufacturing enterprises. An understanding of accounting, business administration, and secretarial science is developed.

ACCOUNTING, ADVANCED
This is a continuation of Beginning Accounting.

BOOKKEEPING, BEGINNING
Fundamentals of bookkeeping which are the basis for both manual and machine bookkeeping are provided. The student receives instruction in the techniques of journals and ledgers and has supervised practice in the use of these books.

BOOKKEEPING, ADVANCED
A continuation of Beginning Bookkeeping.

PREPARATION OF INCOME TAX FOR PROFESSIONALS
Provides a fairly intense review of federal income tax law and procedures for individuals who have had same experience or exposure to federal income tax matters as a result of assisting others in the preparation of tax returns.

BRIEFHAND
Offers the student a logical, easy-to-use, easy-to-learn system for abbreviating longhand. It can be learned for either personal or vocational use by virtually anyone who can write longhand.

BUSINESS LAW
Designed to develop the ability to use simple legal instruments and to know when the circumstances of a particular exigency require the use of profssional legal advice. Familiarity with legal forms in common use in business will be stressed.

BUSINESS MACHINES
Fundamental instruction on transcribers, calculators, and adding machines is provided.

COMBINATION BUSINESS
A refresher instruction in typing, shorthand, and bookkeeping. This is a flexible course in which the instructor adapts the lessons to fit the specific needs and objectives of the individual students.

CREDIT UNION ACCOUNTING
The principles of credit union accounting and the bookkeeping work of a credit union are taught.

SECRETARIAL I — EDUCATIONAL
This course is a series of lectures by authorities in several areas of education. It provides a general orientation to the field of education for secretaries and others aspiring to the position of education secretary. It is also intended as a review and "brush up" for persons employed as secretaries in this field.

SECRETARIAL PROBLEMS — EDUCATIONAL
Designed to increase the efficiency of school secretaries through the study of English skills and clerical practices and to aid the school secretaries in their progress toward certification in the National Education Secretaries professional standards program.

SECRETARIAL I — LUMBER
General overall information needed in the lumber industries is provided. The student receives instruction in the areas of retail and wholesale outlets for veneer, plywood, and timber. Information covers the operation of the lumber industry from the cutting of trees to the selling of the finished products. The course is open to the public but is designed for employed secretaries.

SECRETARIAL I — BASIC MEDICAL
A course designed for persons entering or planning to enter the field. The course is a study of the nomenclature normally used by members of the medical profession and a description of common disorders.

SECRETARIAL II — MEDICAL
Designed to acquaint the medical secretary with all phases of work connected with a typical medical office. The course will cover human relations, medical law, typical office skills as adapted to medical communication, accounting, medical records, examination room techniques, and laboratory orientation. The course is for employed medical secretaries.

SHORTHAND, BEGINNING
A beginning course in Gregg Shorthand Simplified with emphasis placed on basic shorthand theory, spelling, punctuation, and good practice procedures.

SHORTHAND, ADVANCED
A continuation of Beginning Shorthand with emphasis placed on speed and accuracy.

TYPING, BEGINNING
A study of correct typing techniques, control of the operative parts of a typewriter, and mastery of the keyboard. Typical business prospects are to be stressed.

TYPING, ADVANCED
A continuation of Beginning Typing with concentration on speed, accuracy, and forms.

TRADE EXTENSION
This program offers instruction which is planned to develop basic manipulative skills, safety judgment, technical knowledge and related occupational information for the purpose of fitting persons for initial employment in industrial occupations and upgrading or retraining workers employed in industry. These courses are generally offered in the evenings; however, some classes are offered in the daytime when there is a request and instructors and facilities are available. The most common offering is for thirty clock hours although the length of the course is often determined by the subject area covered. Instructors are ordinarily chosen from business and industry when their experience and education warrant their selection. Some examples of standard courses are welding, drafting and blueprint reading, supervision, and phychology.

Some of the courses are described as follows:

AUTOMOTIVE ELECTRICAL TUNE-UP
Designed to provide the mechanics with an understanding of the automotive electrical system and covers various tests and check systems.

FRONT END ALIGNMENT
A study of the basic fundamentals of front end alignment.

BASIC OIL BURNER SERVICE
A study of fuels, burners, pumps, nozzles, controls, servicing, electricity, and motors. Information will also be provided on competitive fuels and customer relations.

ENGLISH ESSENTIALS
A study of verbs, nouns, pronouns, adjectives, spelling, and the use of the dictionary.

GENERAL WELDING
A series of lessons in arc and gas welding in which the instructor adapts the lessons to fit the specific needs of the individual student.

MACHINE SHOP I
The course covers machinist apprentice-related material developed by the state with revision to cover recent developments in the machine shop field.

RADIO OPERATOR'S LICENSE PREPARATION I
The course is designed to provide the basic information and techniques involved in radio operator's license preparation and should enable the student to acquire a radio-telephone third- and second-class commercial license,

RADIO OPERATOR'S LICENSE PREPARATION II
Provides additional information for the student in acquiring a better rating in radio operation work and should enable the student to acquire a radio-telephone first-class license.

RADIO THEORY I
A study of radio theory from the basic concept of the construction of matter up to and including transformers. The study includes circuits, power equations, power formulae, magnetics, and generators.

RADIO THEORY II
Presents the methods of computing impedance, voltage and current in circuits, and the study of mathematics needed to solve the problems involved in the study of electronics.

ELEMENTS OF SUPERVISION
A basic introductory course covering in general terms the total responsibility of a supervisor in industry, such as organization, duties and responsibilities, human relations, grievances, training, rating promotion, quality-quantity control, management-employee relations, etc.

BASIC PSYCHOLOGY FOR SUPERVISORS
Course to assist the supervisor in understanding the people with whom he works, with emphasis on the psychological aspects, perceptions, learning processes, emotions, attitudes, and personalities.

HUMAN RELATIONS (Developing Supervisory Leadership)
To show the practical application of basic psychology in building better employer-employee relationships by studying human relations techniques.

LABOR-MANAGEMENT RELATIONS
The history and development of the Labor Movement. Development of the National Labor Relations Acts, the Wagner Act, the Taft-Hartley Act. The supervisor's responsibility for good labor relations. The union contract and grievance procedure.

INDUSTRIAL ECONOMICS
Significant economic facts. Development of a critical attitude toward industrial economics. Institutions and practices that determine our social environment. Management-supervisory-employee relationships to economics and local industry.

METHODS OF IMPROVEMENT FOR SUPERVISORS (Work Simplification)
The supervisor's responsibility for job methods improvement. The basic principles of work simplification. Administration and the problems involved. Motion study fundamentals for supervisors. Time study techniques.

COST CONTROL FOR SUPERVISORS
How costs are determined in industry. Cost control and its functions. The supervisor's responsibility for costs. Factors in cost control such as costs, materials, waste, salvage, quality control, quantity control, control of time.

ORAL COMMUNICATION FOR SUPERVISORS
How we communicate. Effective speaking and listening. Kinds of supervisory communications. Saying what we mean, which covers oral versus written communications. Understanding what is communicated as related to intent and effect. Conference leading and practice for supervisors.

WRITTEN COMMUNICATIONS FOR SUPERVISORS
Review of writing mechanics covering grammar, punctuation, sentence structure, and paragraph structure. Business letter writing involving the principles, planning, and dictating of letters. Memorandum and bulletin writing with emphasis on format, content, structure, tone, and style. Manual writing covering format, content, and structure.

DEVELOPING THE EMPLOYEES THROUGH TRAINING (Teacher Training)
The supervisor's responsibility for developing employees through training. Orientation and induction. Vestibule and on-the-job techniques. Job instruction principles. Apprenticeship training. Technical training. Supervisory training and management development. Use of outside agencies. Advisory committee.

WRITTEN COMMUNICATIONS
Review of writing mechanics covering grammar, punctuation, sentence and paragraph structure.

REFRIGERATION I
The basic fundamentals of refrigeration including basic physical and electrical principles.

DRAFTING, BASIC I
Designed to acquaint the student with basic information and techniques about the fundamentals of drafting, aid the student in shop drawings, and prepare him for sketching and drafting ideas connected with his shop work.

DRAFTING AND BLUEPRINT READING FOR PLUMBERS AND PIPEFITTERS
Covers fundamentals of mechanical and architectural drawing, isometric and diagrammatic plumbing drawing, and practical application problems.

INTRODUCTION TO WATER WORKS FIELD
Designed to develop an understanding of some of the basic principles of water supply, delivery, rudimentary design of systems, and a testing and maintenance procedure for systems and machinery.

WAITRESS TRAINING
A study of proper dining room service procedure and the necessary skills.

RETAIL SELLING FUNDAMENTALS
A study of retailing, personal requirements, mathematics, and selling techniques.

ADVANCED RETAILING
To train those persons employed in retailing for future mid-management positions as buyers, assistant buyers, and department managers.

COMMERCIAL ART (Advertising)
The course includes general lettering, showcard and poster design, and pen, brush, and color layout.

PROPERTY APPRAISAL
A study of the fundamental principles and theories concerned with real estate appraising.

MEDICAL TERMINOLOGY FOR LICENSED PRACTICAL NURSES
A general study of terminology of the profession.

MEDICATIONS FOR PRACTICAL NURSES
A refresher course on action, use, administration, and effect of medications as applied to various anatomical systems plus the study of new medications now available for use.

READING IMPROVEMENT
Designed to improve the student's speed and comprehension in reading.

FIREMAN TRAINING
Training classes are scheduled throughout the year for people employed in fire departments in Lane County. These include courses applicable only to employed firemen and academic courses designed to improve general abilities.

LAW ENFORCEMENT
These training classes are designed to further police officers' knowledge in law enforcement methods and academic subjects.

CUSTODIAL TRAINING
Designed for people employed in this field, especially those employed by various school districts.

HIGH SCHOOL COMPLETION PROGRAM

The High School Completion Program offers the opportunity for people who have not completed high school to enter into a program leading to a diploma. Primarily, the program is limited to persons 19 years of age or older. On request of a school district or a court, where circumstances warrant, Lane Community College will cooperate to advance the education of students under 19 years of age. Normally the High School Completion Program will consist of six basic courses: English Grammar, American Literature, U. S. History, Modern Problems, and a fundamental science and mathematics course. One area of the curriculum is offered at a time, ordinarily on Monday and Thurs-

day evenings from 7-10:00 p.m. for a six-week period. A person may enter the High School Completion Program at the beginning of any one of the six classes. Proven proficiency in these six fields will merit an adult education diploma awarded through the participating school district.

Classes in high school completion are offered in all school districts of the community college area where interest is sufficient to warrant holding the classes. Counseling and guidance services are available for all persons interestd in this program.

ADULT BASIC EDUCATION PROGRAM

Adult Basic Education is available without cost to persons wanting assistance to raise their educational level to the equivalent of an eighth grade graduate. People attending these classes represent the most basic needs, learning to read and write, up to a person doing refresher work before entering High School Completion Program. Classes are kept small and assisting teachers are utilized to provide one-to-one learning situations when necessary. One of these classes is specialized to provide English instruction for the foreign born.

Sessions are offered both during the day and evening to accommodate as many students as possible. Counselling and guidance services are available to all persons interested in Adult Basic Education. Further information is available through the Office of Adult Education, Lane Community College.

FORUM, PUBLIC EVENTS, GENERAL EDUCATION

Part of the function of the Adult Education Office is to establish and maintain a college forum and public events program. The general philosophy is to offer informational and service programs of quality to the lay as well as college community. Some examples of the programs provided are lecturers of national acclaim in academic and occupational areas; information on job search; veterans rights and responsibilities; and information on common areas of interest to assist the process of day-to-day living. This facet of the Office of Adult Education will supply the administrative vehicle for cooperating with any public or private agency or group to facilitate arrangements for speakers, displays, and other events. The scope of this function of the Office of Adult Education is always available for utilization and suggestion. The breadth of participation is limited only by quality and good taste. Possible future events are a family information series, trade fairs and occupational displays, and political events of originality.

Courses in general education are offered on a non-credit basis to an agency, public or private, or individuals. Many of thse courses are supplemental to occupational areas. Some examples are:

MATHEMATICS including Refresher Mathematics, Beginning and Elementary Algebra, Geometry, Business Mathematics.

COMMUNICATION including Refresher English, Business English, Reading Improvement, Public Speaking.

FOREIGN LANGUAGES including Spanish, German, French, Russian, Arabic.

Federal Manpower Development and Training Act Programs

NATURE AND PURPOSE OF PROGRAM

This program provides occupational training for unemployed and underemployed persons who cannot reasonably be expected to obtain appropriate full-time employment without training. Basic education may also be provided when it is required to enable trainees to undertake occupational training. Training programs undr the MDTA are in the following broad categories: institutional, on-the-job, and experimental and demonstrative.

The program provides for payment of training allowances for up to 104 weeks to eligible trainees, and transportation and subsistence allowances. The institutional allowance costs are paid by the federal government.

ELIGIBILITY

Workers having priority for selection for training are: unemployed workers (including members of farm families with less than $1,200 annual net family income); underemployed workers who are working below their skill capacity or substantially less than full-time, or who will be unemployed because their skills have or will become obsolete; disadvantaged youth 16 years old but under 22, who are out of school and in need of occupational training; persons who will be trained for skills needed first within the labor area in which they live, and second within the State where they live.

OPERATION

The Oregon State Employment Service provides the initial vocational counseling, testing, and screening prior to the student's referral into an occupational training program. Vocational counseling is available to students throughout their training. The employment service is responsible for student placement and provides follow-up statistics on all training programs.

Lane Community College provides the supervision for the Manpower Development and Training Act Programs. Educational counseling is provided for each trainee along with the services of the college placement officer.

During the 1967-68 school year, Lane Community College expects to offer the following occupational courses:

AUTO SERVICE MECHANIC (16 weeks)

This course will include instruction and practical experience in electrical systems, carburetion, tune-up procedures, front-end alignment, wheel balancing, brake systems, lubrication and oil change procedures, customer service, and sales techniques.

BASIC EDUCATION

Basic Education (indeterminate in length) is designed to remedy shortcomings in mathematics, reading level, and social development. Trainees who have not formed occupational goals are given an opportunity to explore occupations through actual work experience, observation, and counseling. Trainees are transferred from basic education when they reach a level that will enable them to profit from more advanced MDTA training programs.

BOOKKEEPER (24 weeks)

Trainees will receive instruction in bookkeeping and accounting, typing, business English, mathematics, office procedures, office machines (including bookkeeping machines), and introduction to data processing. Instruction in preparing balance sheets, profit and loss statements, tax reports, payrolls, and invoices will be given. Good grooming and human relations will be stressed throughout the course.

BUILDING MAINTENANCE (6 weeks)

A practical course that includes all phases of building maintenance and care. The following areas of instruction are included: floor maintenance (stripping, sealing, waxing, and polishing); maintenance of grounds; general maintenance including plumbing, electrical, hardware, wood, heating and ventilating equipment; safety, job requirements, and employer relations.

CLERK STENOGRAPHER (36 weeks)
Trainees are instructed in shorthand, adding machines, calculators, and dictating machines. Practice in working with figures and simple bookkeeping is 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.

CLERK STENOGRAPHER (Upgrading) (24 weeks)
Same description as Clerk Stenographer.
Prerequisite: Beginning Typing and Shorthand.

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

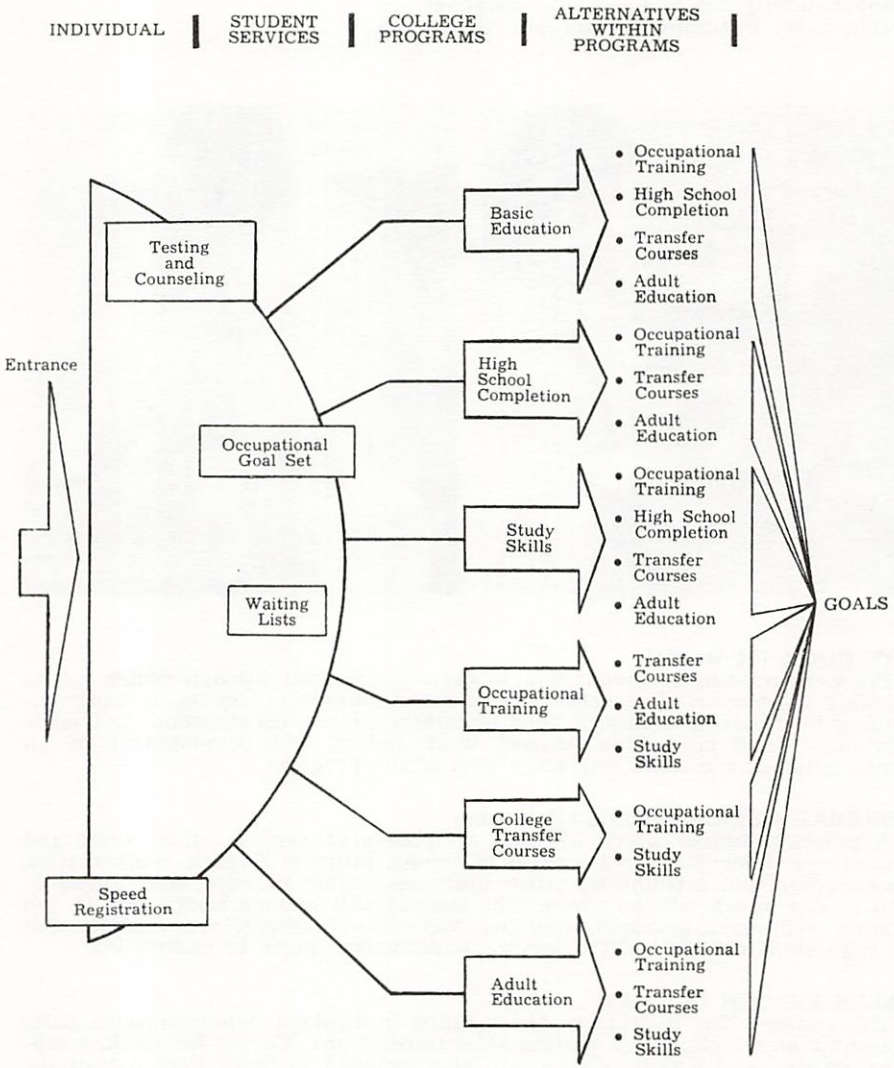
GENERAL OFFICE CLERK (15 weeks)
A practical course which includes all phases of general office work and procedures. Instruction in the areas of typing, business English, mathematics, bookkeeping and accounting, office machines, office practice, and introduction to key punch will be given. The courses 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 completion.

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

WELDING (9 weeks)
An applied course which includes instruction and practice in the use of the oxygen acetylene torch; metal arc welding; inert arc welding; metal identification and metallurgy of welding; brazing; pipe layout; blueprint reading; cutting methods and welding of mild steels, medium carbon steel, cast iron, aluminum, and copper and alloys. Good work habits and safety procedures are an important part of the instruction.

STUDENT PROGRAM PATHS

The following chart has been developed to show the many student alternatives and opportunities offered at Lane Community College.



Individual + Student Services + College Programs = Individual Improvement

Degree, Diploma, and Certificate Programs

Courses in the following areas are offered for credit in degree, diploma, and certificate programs. Those equivalent to lower division work in higher education may be transferred to four-year schools. Complete description will be found in the next section of the catalog.

BUSINESS EDUCATION DIVISION

Occupational Training Programs

Bookkeeping & Accounting	1 year
Computer Programmer	1 year
Key Punch Operator	1 term
Mid-Management	2 years
Secretarial	1 year
Tab Machine Operation	1 year

College Transfer Courses

Applied Stenography
Business Law
Business Statistics
Introduction to Business
Principles of Accounting
Stenography
Typing

LANGUAGE ARTS DIVISION

Ocupational Training Programs

Communications Technician
1 or 2 years

Communications Skills, Speech, and Technical Report Writing are courses available for related Occupational Training Programs.

College Transfer Courses

Editing
English Composition
Expository Writing
French
Fundamentals of Speech
German
Journalism Lab
Shakespeare
Speech Interpretation
Speech and Theatre Workshop
Survey of American Literature
Survey of English Literature

INDUSTRIAL TECHNOLOGY DIVISION

Occupational Training Programs

Cabinetmaking & Millwork	1 year
Civil & Structural Engineering	2 years
Construction Mid-Management	1 year
Construction Technology	1 or 2 years
Forestry Aide	1 term
Forest Technician	2 years
Retail Lumber Sales	1 year
Technical Drafting	2 years

College Transfer Courses

Engineering Orientation
Graphics

ELECTRONICS DIVISION

Occupational Training Programs

Domestic Refrigeration Service	1 year
Electronic Engineering Technician	2 years
Home Appliance Service	1 year
Radio Broadcasting & Engineering	1 year
Radio & Television Service	2 years
Radiotelephone Operation	2 terms

FINE AND APPLIED ARTS

College Transfer Courses

Art

Basic Design
Ceramics
Drawing
Painting

Music

Band
Basic Voice
Survey of Visual Arts
Introduction to Music and Literature
Music Theory

HEALTH AND PHYSICAL EDUCATION

College Transfer Courses

Community Health
First Aid (also Occupational)
Introduction to Health and Physical Education
Personal Health (also Occupational)
Physical Education for Men
Physical Education for Women

MATHEMATICS DIVISION

College Transfer Courses

Calculus w/Analytic Geometry
College Algebra
Elementary Algebra
Intermediate Algebra
Math for the Elementary Teacher
Trigonometry

Occupational Training Courses

Even though not complete training programs, several mathematics courses are available as related courses for various programs.
Electrical Math
Engineering Problems
Mathematics I, II, III
Practical Descriptive Geometry
Slide Rule
Technical Math

MECHANICAL DIVISION

Occupational Training Programs

Airframe Mechanics	1 year
Auto Body & Fender	1 or 2 years
Automotive Mechanics	1 or 2 years
Diesel Mechanics	2 years
Flight Technology	1 or 2 years
Farm Equipment Service	2 years
Machine Shop	2 years
Powerplant Mechanics	1 year
Air	
Welding Technology	1 or 2 years

NURSING AND HOME ECONOMICS

Occupational Training Programs

Dental Assistant	1 year
Dental Hygienist	2 years
Nursing Aide	1 term
Nursing, RN (in cooperation with Sacred Heart Hospital)	2 or 3 years (also College Transfer)
Practical Nursing	1 year

College Transfer Courses

Family Living
Marriage
Nutrition

SCIENCE DIVISION

College Transfer Courses

General Biology and Labs
General Botony and Labs
General Chemistry and Labs
General Physics and Labs
General Zoology and Labs
Physical Science and Labs

Occupational Training Courses

Even though not complete training programs, several science courses are available as related courses for various programs.
Applied Physics
Human Anatomy and Physiology
Microbiology
Practical Physics

SOCIAL SCIENCE DIVISION

Occupational Training Programs

Fire Science	2 years
Law Enforcement	2 years

Related Courses

American Institutions
Applied Economics
Employer-Employee Relations
Introduction to Psychology
Labor-Management Relations
Psychology of Human Relations

College Transfer Courses

American Government
Elements of Law
Field Methods in Geography
General Anthropology
General Psychology
General Sociology
History of the United States
History of Western Civilization
International Relations
Introductory Geography
Organization and Administration of Law
Police and Society
Principles of Economics
Problems of Philosophy

SPECIAL MANPOWER OCCUPATIONAL TRAINING PROGRAMS

Auto Service Mechanics	16 weeks
Bookkeeping	24 weeks
Building Maintenance	6 weeks
Clerk-Steno	36 weeks
Fry Cook	14 weeks
General Office Clerk	15 weeks
Sales Person	8 weeks
Teacher Aides	36 weeks
Welding	9 weeks

DEVELOPMENTAL EDUCATION

Basic Education (basic reading, writing, and math, Indeterminate length).

High School Completion 1 year

Study Skills — Memory training, study habits, reading rote, special arithmetic problems, and programmed learning for many specific areas.

ADULT EDUCATION (Non College-credit programs and courses)

Apprenticeship

Lane Community College Adult Education Program cooperates with the State Division of Vocational Education and the state and federal Bureaus of Labor through the State Apprenticeship and Training Council 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 apprenticesship training should first contact either the State Apprenticeship Representative, Mr. R. Wayne Douglass, State Office Building, Room 1, Seventh and Pearl Streets, Eugene, (telephone 342-1361, extension 207); or the Federal Apprenticeship Representative, Mr. Fred Koehler, 835 Park East, Wylie Professional Building, Eugene (telephone 342-5141, extensions 316 and 317). At the present time the Lane Community College Adult Education Program offers 23 apprenticeship classes covering 14 different trades.

Included in the apprenticeship programs are the following trades:

Carpentry
Floor Covering
Industrial Maintenance Electrician
Inside Wireman
Maintenance Electrician
Meterman
Painters
Plasterer
Plumber
Power Lineman
Roofer
Sheet Metal
Station Wireman
Steamfitter

In addition the following areas are included in adult education:

Agriculture and Related Classes
Business Occupations Extension
Distributive Occupations Extension
Forums and Public events
General Education and Avocational Courses
Health Occupations Extension
Home Economics
Trade and Industry Extension

Summer Term — 1967

- Registration
  June 5-16, 1967
- Late Registration
  June 19-26, 1967
  ($1 for each day beginning June 19, 1967)
- Classes begin June 19, 1967; end September 1, 1967 (eleven-week term)
  (Some classes may be organized to complete in 5½ weeks.)
- What is the purpose of Summer Term?

  The Summer Term offers students opportunity:

  1. To begin regular collegiate instruction earlier than normal.
  2. To undertake sequences necessary for degrees or programs which the students, for various reasons, have been unable to complete.
  3. To shorten and compress the normal time necessary to meet degree and program requirements.
  4. To take diverse offrings not normally available in sequential programs.
  5. To study areas which climatic and economic conditions make possible only in the summer.
  6. To participate in short-term, job entry level skill courses designed to lead to immediate employment.
- Summer Term courses are offered on the basis of demand. Most general education and pre-employment programs are represented. Initial enrollment must be twelve or more for a class to continue.

BUSINESS EDUCATION

Code	Course Title	Units
2.110	Bookkeeping and Accounting	3
1.120	Business English	3
BA 226	Business Law	3
2.519	Business Mathematics	2
BA 101	Intr. Business	4
BA 211	Prin. Accounting	3
2.105	Shorthand I	3
2.602	Survey/Data Processing	3
2.101	Typing I	3

ELECTRONICS

Code	Course Title	Units
6.115	Electrical Mathematics	4
4.920	Electrical Theory	4
4.915R	Radio Operator Preparation	4
3.401	Radio Broadcasting Lab	4
3.411	Telecasting Lab	4

HEALTH - PHYSICAL EDUCATION

Code	Course Title	Units
HE 252	First Aid I	3
PE 180-190	PE	1
HE 250	Personal Health	3

INDUSTRIAL TECHNOLOGY

Code	Course Title	Units
4.107	Architectural Drafting	2
3.339	Blueprint Reading/Sketching	1
6.122	Construction Codes	2
6.110	Construction Estimates	2
4.101	Drafting I, II	2
4.103	Electrical Drafting	2
6.601	General Forestry	3
4.102	Intr. Specifications	3
6.101	Plane Surveying	3
6.127	Practical Des. Geometry	2
6.645	Tree Identification	2

LANGUAGE ARTS

Code	Course Title	Units
1.100	Comm. Skills I	3
Wr 111, 112, 113	English Composition	3
Eng 101, 102, 103	English Literature	3
Wr 10	Remedial English	0
Eng 201	Shakespeare	3
Sp 111, 112, 113	Speech	3

MATHEMATICS

Code	Course Title	Units
Mth 100	Intermediate Algebra	4
Mth 10	Elementary Algebra	0
Mth 101	College Algebra	4
4.200	Math I	0
4.202	Math II	3
4.204	Math III	3

MECHANICS

Code	Course Title	Units
3.300	Auto. Chassis I Lab	3
3.392	Machine Shop Orientation	3
3.393R	Machine Tool Operation	3
3.324	Tune-up/Diagnosis	2
4.150	Welding Ia, Ib, IIb	2

SCIENCE

Code	Course Title	Units
GS 101	Biology	3
GS 104	Physical Science	3
4.300	Practical Physics I	4

SOCIAL SCIENCE

Code	Course Title	Units
1.506	Appl. Economics	3
Psy 201, 202, 203	General Psychology	3
Soc 204, 205, 206	General Sociology	3
Hst 101, 102, 103	History Western Civilization	3
Ec 201, 202, 203	Principal Economics	3
Hst 201, 202, 203	U. S. History	3
PS 205	International Relations	3

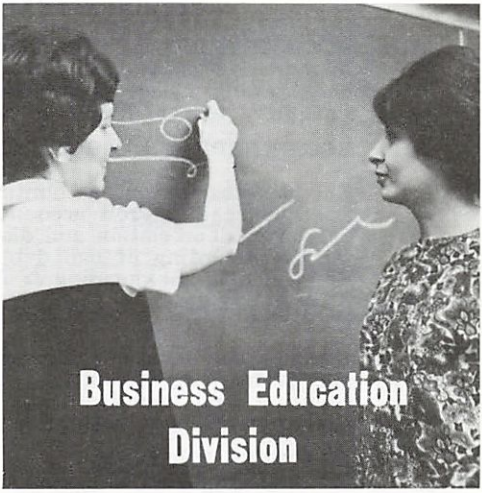
* Specialized Occupational Course
  Repair of Citizens Band Equipment

* Job Entry Training Programs
  (Designed to prepare an individual for entry-level service in the following areas):
  Basic Bookkeeping & Accounting
  Clerical Practices
  Fry Cook
  Home Health Aide
  Landscape Aide
  School Bus Driver
  School Custodian
  School Lunch Worker
  Service Station Attendant
  Shorthand Theory
  Small Appliance Repair
  Small Engine Repair
  Waitress Training

* Although these courses do not carry college credit, completion certificates will be awarded.

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

John Kreitz
Division Chairman



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 term (45 unit) sequence. Should individuals wish to enroll in only selected courses this is also possible.

SECRETARIAL PROGRAM

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Shorthand & Transcription I, II, III	4	3	4	3	4	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
	20	15	20	15	20	15

BOOKKEEPING/CLERICAL PROGRAM

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Bookkeeping & Accounting I, II, III	4	3	4	3	4	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
	20	15	20	15	20	15

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

OCCUPATIONAL COURSES

2.110 BOOKKEEPING & ACCOUNTING I (3 class - 1 lab hrs/wk) 3 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
(3 class - 1 lab hrs/wk) 3 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.
Prerequisite: Bookkeeping & Accounting I.

2.112 BOOKKEEPING & ACCOUNTING III
(3 class - 1 lab hrs/wk) 3 Units
Introduction to accounting principles as applied to departmental and partnership accounting; controls and records, corporation accounting, and manufacturing accounting.
Prerequisite: Bookkeeping & Accounting II.

1.120 BUSINESS ENGLISH I (3 class hrs/wk) 3 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 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 letters will be introduced; speech and informal personal communications studied. Practical application in writing of business letters will be stressed.
Prerequisites: Business English I or equivalent.

1.124 BUSINESS ENGLISH III (3 class hrs/wk) 3 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 (2 class - 1 lab hrs/wk) 2 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, percentages, 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 reasoable skills in their use is a major goal.

2.521 OFFICE MACHINES II (2 class - 1 lab hrs/wk) 2 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, 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.

2.523 OFFICE MACHINES III (2 class - 1 lab hrs/wk) 2 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.

2.512 OFFICE PROCEDURES I (1 class - 2 lab hrs/wk) 2 Units
This first course in Office Procedure 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.
Prerequisite: Typing I.

2.514 OFFICE PROCEDURES II (1 class - 2 lab hrs/wk) 2 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.

2.516 OFFICE PROCEDURES III (1 class - 2 lab hrs/wk) 2 Units
This is a continuation of Office Procedure II with emphasis on those office duties that require meeting the public such 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.

2.105 SHORTHAND & TRANSCRIPTION I
(3 clas - 2 lab hrs/wk) 3 Units
Introduction to theory of Gregg Shorthand Simplified, including the alphabet, brief forms, phrasing and abbreviating principles.

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

2.107 SHORTHAND & TRANSCRIPTION III
(2 class - 2 lab hrs/wk) 3 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 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 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.
Prerequisite: Typing I (2.101)

2.103 TYPING III (1 class - 4 lab hrs/wk) 3 Units
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.
Prerequisite: Typing II. (2.103)

2.316 SALESMANSHIP (3 class hrs/wk) 3 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 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, and licensing requirements. Information is also included on salary records, employee records, procedures for making out orders, charges, billings, inventory control, and other administrative details.
Prerequisite: Second-year standing.

OCCUPATIONAL COURSES AND PROGRAMS

DATA PROCESSING

(Two year Program)

The Business Data Processing Program is structured to provide training for persons planning to work as Data Processing Machine Operators and Data Processing Programmers. Course offerings are subject to the availability of equipment.

Demand for trained personnel in this field is growing beyond the availability of trained personnel, and with the increasing complexity of business it is anticipated that this condition will continue. Applicants planning to enter this program should have had some background in high school business courses or practical experience in business; and an interest in working with records, developing systems of processing and planning for business records and reports.

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Survey of Data Processing	3	3				
Bookkeeping and Accounting	5	3				
(or Principles of Accounting)	(3)	(3)				
Mathematics II	3	3				
(or an elective College Transfer Math.)						
Communication Skills I	3	3				
(or English Composition)	(3)	(3)				
Elective (suggest Introduction to Business)	3	3				
Unit Record Equipment I			5	4		
Bookkeeping and Accounting			5	3		
(or Principles of Accounting)			(3)	(3)		
Mathematics III			3	3		
(or elective College Transfer Math.)			(3)	(3)		
Communication Skills II			3	3		
(or Fundamentals of Speech)			(3)	(3)		
Personal Health			3	3		
Unit Record Equipment II					8	4
Bookkeeping and Accounting					5	3
(or Principles of Accounting)					(3)	(3)
Mathematics for Data Processing					5	5
Applied Economics					3	3
(or Principles of Economics)					(3)	(3)
	17	15	19	16	24	15
Data Processing Field Projects: Fourth Term					30	10

	5th Term		6th Term		7th Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Computer Programming I	9	5				
Introduction to Psychology	3	3				
(or General Psychology)	(3)	(3)				
Introduction to Business Statistics	3	3				
Elective	3	3				
Computer Programming II			9	5		
Automated Systems and Procedures			3	3		
Psychology of Human Relations			3	3		
(or General Psychology)			(3)	(3)		
Electives			6	6		
Computer Programming III					9	5
Recent Developments in Data Processing					5	4
Introduction to Business Law					3	3
Labor management Relations					3	3
	18	14	21	17	20	15

2.623 AUTOMATED SYSTEMS & PROCEDURES
(3 class hrs/wk) 3 Units
Fundamentals of automated data systems and procedures. Techniques and principles of systems analysis, forms design and control, systems economics, feasibility studies, and the installation of electronic data processing systems.
Prerequisite: Second-year standing in Data Processing curriculum.

2.611 COMPUTER PROGRAMMING I (3 class - 6 lab hrs/wk) 5 Units
This course will include instruction in the functions and capacities of computers. Instruction and practice in block diagramming and problem definition will be provided. Introduction to the IBM 360 computer will be given. General background and instruction in language for computers and their uses will be provided.
Prerequisite: Second-year student in Data Processing curriculum.

2.613 COMPUTER PROGRAMMING II (3 class - 6 lab hrs/wk) 5 Units
Continued instruction and practice in the use of computers; instruction in tab and/or disk and magnetic storage media. Further applications of data processing language to various machines.
Prerequisite: Computer Programming I (2.611)

2.605 COMPUTER PROGRAMMING III (3 class - 6 lab hrs/wk) 5 Units
Survey of general languages used in data processing and their applications. Provides specific problems oriented to language use.
Prerequisite: Comunter Programming II (2.613)

2.610 DATA PROCESSING FIELD PROJECTS
(30 hrs field work/wk) 10 Units
Practical work experience in business data processing. Actual production work in machine processes and basic functions of data processing. Supervision and conference session will be included in this course.
Prerequisite: Three terms Business Data Processing curriculum completed.

1.281 MATHEMATICS FOR DATA PROCESSING
(5 class hrs/wk) 5 Units
Basic logic, numbering systems, algebra with emphasis on problem solving; computation with logarithms and with numbers in bases other than ten, and Boolean Algebra.
Prerequisite: Mathematics III (4.204 or equivalent).

2.625 RECENT DEVELOPMENTS IN DATA PROCESSING
(3 class - 2 lab/wk) 4 Units
Information on latest developments in data processing. Guest lecturers from leading manufacturers invited to present current and proposed changes in data processing. Visitation to establishments using the latest equipment.
Prerequisite: Sixth-term standing in Data Processing Curriculum.

2.601 SURVEY OF DATA PROCESSING (3 hrs/wk) 3 Units
An introduction to basic methods, techniques, and systems of manual, mechanical, and electronic data processing. Covers the history and development of data processing, including manual, machine accounting, punched card data processing, punched tape data processing, and electronic data processing. Course is designed to serve as foundation for detailed study of data processing systems.

2.602 UNIT RECORD EQUIPMENT I (3 class - 2 lab hrs/wk) 4 Units
This course includes instruction on basic machines used in data processing. It will include instruction and practice in the use of the key punch, interpreter, sorter, collator, and reproducing punch.
Prerequisite: Survey of Data Processing (2.601).

2.604 UNIT RECORD EQUIPMENT II (2 class - 6 lab hrs/wk) 4 Units
This course covers advanced instruction and practice on data processing machines. This will include the tabulating machine with and/or without the calculator. Planned projects will be undertaken that provide for applications in the various functions of data processing.
Prerequisite: Unit Record Equipment I (2.602).

COLLEGE TRANSFER COURSES

BA 101 INTRODUCTION TO BUSINESS 4 Units

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 BUSINESS LAW 3 Units

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 Units

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, 212, 213 PRINCIPLES OF ACCOUNTING 3 Units each term

Introduction to field of accounting; technique of account construction; preparation of financial statements; application of accounting principles to practical business problems; prorietorship studies from standpoint of single owner, partnership, and corporation.

SS 111, 112, 113 STENOGRAPHY 3 Units each term

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 S S111 only upon recommendation of the instructor. Five 1-hour periods.

SS 121, 122, 123 TYPING 2 Units 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.

SS 211, 212, 213 APPLIED STENOGRAPHY 3 Units each

Advanced principles and phrases; dictation and transcripts covering vocabularies of representative business; legal forms; newspaper and magazine articles.
Prerequisite: SS 113, 123 or equivalent.

Electronics

Home Appliance Service

Domestic Refrigeration Service

Radio and TV Programming

Radio and TV Servicing

Radiotelephone Operator

ROGER HOUGLUM
Division Chairman

OCCUPATIONAL COURSES AND PROGRAMS

HOME APPLIANCE SERVICE

(One Year Sequence)

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

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

NOTE: The Associate of Science degree is awarded after completion of the sequence in Home Appliance Service and the sequence in Domestic Refrigeration Service.
The curriculums may be taken in either sequence, but the preferred sequence is Home Appliance Service the first year and Domestic Refrigeration the second.

FIRST YEAR	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Home Appliance Service I, II, III	5	5	3	3	3	3
Home Appliance Service I, II, III Laboratory	15	5	17	6	17	6
*Electrical I (DC), II (AC)	5	4	5	4		
*Electrical Drafting					4	2
*Mathematics II (Algebra)	3	3				
Practical Physics I (Mechanics)			5	4		
Communication Skills I					3	3
	28	17	30	17	27	14

* If student elects to take Domestic Refrigeration Service sequence in his first year, these (*) courses must be taken the first year. The following courses must be taken to meet the requirement for the Associate of Science degree: Applied Economics (3 units); Health (2 units); Communication Skills II (3 units). It is suggested that these courses be scheduled during the summer, between the Appliance and Refrigeration sequencs.

3.600 HOME APPLIANCE SERVICE I (5 class hrs/wk) 5 Units

3.601 HOME APPLIANCE SERVICE I LAB (15 lab hrs/wk) 5 Units
Use of hand and machine tools and their maintenance. Use of electrical meters and mechanical test equipment. Operation of basic electrical components used in modern appliances. Shop safety.

3.602 HOME APPLIANCE SERVICE II (3 class hrs/wk) 3 Units

3.603 HOME APPLIANCE SERVICE II LAB (17 lab hrs/wk) 6 Units
Work with mock-ups of appliance components to gain familiarity with their characteristics and operation. How to "trouble-shoot" appliance components which are operating incorrectly. Laboratory work with the repair of appliance components. Introduction to modern home appliances.
Prerequisite: Home Appliance Service I.

3.604 HOME APPLIANCE SERVICE III (3 class hrs/wk) 3 Units

3.605 HOME APPLIANCE SERVICE III LAB (17 lab hrs/wk) 6 Units
Diagnosis of both mechanical and electrical faults in such modern domestic appliances as washers, dryers, ranges, dishwashers, and waste disposals. Development of ability to locate cause of equipment malfunction by deduction and reasoning ability. Performing actual service operations on modern home appliances.
Prerequisite: Home Appliance Service II.

DOMESTIC REFRIGERATION SERVICE
(One Year Sequence)

Education and training for employment in the field of Domestic Refrigeration Service are provided to develop the skills, basic knowledge, proper attitudes, and appreciation for successful entrance and advancement in the field of Domestic Refrigeration. A flexible and complete program is available in the lecture-demonstration-laboratory methods used in the three-term program and related class instruction.

The opportunity for employment in the appliance field upon completion of the complete two-year Appliance Service Program is available in appliance servicing, appliance retail or distributor service (factory service) departments, general service repair shops, or in specialized service shops.

Successful completion of school courses and work experience can lead to positions such as service manager, ownership, and/or management of an appliance repair business.

NOTE: The Associate of Science degree is awarded after completion of the sequence in Home Appliance Service and Domestic Refrigeration Service.

The curriculums may be taken in either sequence, but the preferred sequence is Home Appliance Service the first year and Domstic Refrigeration the second.

FIRST YEAR	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Domestic Refrigeration Service I, II, III	5	5	3	3	3	3
Domestic Refrigeration Service, I, II, III Lab	15	5	17	6	17	6
**Machine Shop Orientation	5	3				
**Welding IA	5	2				
**Machine Shop Operation			5	3		
Practical Physics II (Heat, Sound, Light)			5	4		
**Psychology of Human Relations					3	3
Salesmanship					3	3
	30	15	30	16	26	15

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

3.606 DOMESTIC REFRIGERATION I (5 class hrs/wk) 5 Units

3.607 DOMESTIC REFRIGERATION I LAB (15 lab hrs/wk) 5 Units
Introduction to the Principles of refrigeration. Use of hand tools and their care. Bending and flaring of copper tubing. Silver soldering. Theory of compressors. Use of gauges and manifold assemblies.

3.608 DOMESTIC REFRIGERATION II (3 class hrs/wk) 3 Units

3.609 DOMESTIC REFRIGERATION II LAB (17 lab hrs/wk) 6 Units
The effect of temperature and pressure on gases and liquids. The theoretical operation of expansion valves, floats and receivers, and condensers. Purging systems of air and moisture. Charging refrigeration systems. Lubrication problems. Testing the refrigeration system after repairs have been made.
Prerequisite: Domestic Refrigeration I.

3.610 DOMESTIC REFRIGERATION III (3 class hrs/wk) 3 Units

3.611 DOMESTIC REFRIGERATION III LAB (17 lab hrs/wk) 6 Units
Types of compressors used in mechanical refrigeration systems. Non-mechanical refrigeration systems. Metering devices. Supplementary system controls. Electrical circuits in typical modern refrigeration units. Shop experience will include actual experience in repairing and servicing modern domestic refrigeration units.
Prerequisite: Domestic Refrigeration II.

ELECTRONIC ENGINEERING TECHNICIAN
(Two 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 employment as an electronic engineering technician, electronic instrument technician, electronic lab technician, guided missile technician, industrial electronic technicians, 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	1st Term		2nd Term		3rd Term	
	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		
Communications Skills I, II	3	3	3	3		
Drafting I	4	2				
Electrical Drafting			4	2		
Practical Descriptive Geometry					4	2
Electrical Circuits					3	3
Electrical Circuits Lab					6	2
Vacuum Tube & Trans. Anal.					3	3
Vacuum Tube & Trans. Lab					3	1
	23	18	23	18	23	15

SECOND YEAR	4th Term hrs/wk	4th Term units	5th Term hrs/wk	5th Term units	6th Term hrs/wk	6th Term 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 Electronics Circuits					5	3
Automation Systems					3	3
Microwaves					5	3
	25	17	23	15	22	14

6.216R ADVANCED ELECTRONIC CIRCUITS
(2 class - 3 lab hrs/wk) 3 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. Laboratory 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 Units

6.215 AMPLIFIER CIRCUITS AND DESIGN LAB
(6 lab hrs/wk) 2 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 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.

6.204R ELECTRICAL CIRCUITS (3 class hrs/wk) 3 Units
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: Sixth-term standing or approval of department head.

6.205R ELECTRICAL CIRCUITS LAB (6 lab hrs/wk) 2 Units
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.

6.240 ELECTRONIC DATA PROCESSING (3 class hrs/wk) 3 Units
An introduction to the principles of electronic digital computers, 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 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 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 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 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 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 sync-separation, 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 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 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 wave-guides 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 Units

6.213R OSCILLATOR CIRC. AND DES. LAB (6 lab hrs/wk) 2 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.

6.336R SERVO SYSTEMS (1 class - 3 lab hrs/wk) 2 Units
Principles of servo and data transmission systems with emphasis on fundamentals. Covers control systems and servo-mechanisms, elementary forms of control systems, servo systems, synchros, servo elements, electronic and magnetic amplifiers, direct current servomotors, performance improvers, methods for servos and measurement, and examples of servos and servo systems.
Prerequisite: Fourth-term standing or approval of department head.

6.210R VAC. TUBE & TRANS. ANAL. (3 class hrs/wk) 3 Units

6.211R VAC. TUBE & TRANS. ANAL. LAB (3 lab hrs/wk) 1 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-cathods vacuum and gas diodes and semiconductor diodes; three element vacuum tubes and transistors; multigrid tubes including tetrodes, pentodes and beam-power tubes; special transistors and diodes.
Prerequisite: Third-term standing or approval of department head.

6.234R WAVE GENERATION AND SHAPING
(2 class - 3 lab hrs/wk) 3 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 studied.
Prerequisite: Fourth-term standing or approval of department head.

TELECOMMUNICATIONS

In recent years the demand for radio station personnel has continuously exceeded the supply of men and women trained for jobs in radio broadcasting. As the number of stations continues to increase the shortage of trained personnel is expected to become critical.

A questionnaire recently sent to all of Oregon's TV stations revealed that they were experiencing a similar difficulty in obtaining trained workers, particularly those with technical training. Consequently, the Lay Advisory Committee for Electronics has recommended that a one-year course in Telecasting be offered, starting in the Fall of 1967.

Completion of Radio Broadcasting I, II, and III is the normal prerequisite to TV Studio and Control Room Techniques. Students with previous com-

mercial experience in broadcasting or telecasting may be admitted to the latter course upon consent of the instructor.

Students who expect to earn an Associate Degree in Radio Communications will be expected to complete both the one-year curriculum in Radio Broadcasting and the one-year curriculum in Telecasting.

RADIO BROADCASTING
(One Year Program)

The radio communications training program in broadcasting has been planned to give the student the basic instruction and training required for employment in a commercial radio broadcast station.

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

Instruction and training in this program are aimed at preparing a person for employment as a combination man, announcer-technician, or announcer. Usually employment is first found in the radio stations in smaller communities with the possibility of promotion to larger stations and more specialized jobs after obtaining a year or two of experience.

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Radio Broadcasting I	3	3				
Radio Broadcasting Lab I	12	4				
Electrical Theory I, II	5	5	5	4		
Mathematics II, III	3	3	3	3		
Electrical Drafting	4	2				
Radio Broadcasting II			3	3		
Radio Broadcasting Lab II			12	4		
Communication Skills I, II			3	3	3	3
Radio Broadcasting III					3	3
Radio Broadcasting Lab III					12	4
Electronic Circuits					4	3
Radio Oper. Preparation I, II			5	4	5	4
	27	17	31	21	27	17

3.400 RADIO BROADCASTING I (3 class hrs/wk) 3 Units

3.401 RADIO BROADCASTING LAB I (12 lab hrs/wk) 4 Units
History of radio broadcasting. Technical development of the broadcasting industry. Broadcasting in the U. S. as compared to broadcasting systems in other countries. The Federal Communications Commission rules and regulations. Basic station organization and job responsibilities. The radio station's technical equipment, its operation and maintenance. Fundamentals of radio programming. "Mood" and "block" programming. Development of program formats.

3.402 RADIO BROADCASTING II (3 class hrs/wk) 3 Units

3.403 RADIO BROADCASTING II LAB (12 lab hrs/wk) 4 Units
Microphone types and their response patterns. Advantages and disadvantages of each type. Development of speed and accuracy in reading, and warmth and friendliness in communication. Vocabulary development. Words frequently mispronounced by announcers. Rules of pronunciation for modern foreign languages. Pronunciation of classical composers and their compositions. Introduction to radio advertising. Sponsored programs. Spot announcements. Writing radio copy that sells.
Prerequisite: Fundamentals of Radio Broadcasting I or consent of instructor.

3.404 RADIO BROADCASTING III (3 class hrs/wk) 3 Units

3.405 RADIO BROADCASTING LAB III (12 lab hrs/wk) 4 Units
The technical equipment of the radio station: control room equipment, studio equipment, transmitting equipment. Routine maintenance of technical equipment. Interpreting meter readings. Procedures in event of equipment failure. Setting up studio for live programs. Keeping engineering and program logs. Public relations; public service responsibility of a licensee as viewed by the FCC. Problems of station management; personnel, development of a "station image", sales promotions.
Prerequisite: Fundamentals of radio Broadcasting II, or consent of instructor.

TELECASTING
(One Year Program)

Planned to give students with previous background in communications the basic instruction and job experience necessary for employment in the TV broadcasting field.

Class instruction is given in the fundamentals of television control room and studio techniques, using LCC's new closed-circuit TV installation as a training laboratory. Students may specialize in some training area such as camera work, switching, set construction and lighting, or TV announcing.

Normal prerequisite: Completion of Radio Broadcasting I, II, III, or previous radio or TV station experience.

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Telecasting I 3.410	3	3				
Telecasting I Lab 3.411	12	4				
Practical Physics I, II	5	4	5	4		
Applied Economics	3	3				
Telecasting II 3.412			3	3		
Telecasting Lab II 3.413			12	4		
Salesmanship			3	3		
Audio Systems			5	4		
Telecasting III 3.414					3	3
Telecasting Lab III 3.415					12	4
Psychology of Human Relations					3	3
Employer-Employee Relations	2	2				
Business Records and Reports					3	3
Health					2	2
	25	16	28	18	23	15

3.410 TELECASTING I (3 class hrs/wk) 3 Units

3.411 TELECASTING I LAB (12 lab hrs/wk) 4 Units
TV station organization. Technical and production facilities of TV stations. TV networks. TV system fundamentals. Studio and control room procedure.

3.412 TELECASTING II (3 class hrs/wk) 3 Units

3.413 TELECASTING II LAB (12 lab hrs/wk) 4 Units
TV cameras and their operation. Camera lenses. Floor management. TV lighting. Video switching of TV productions. Audio in TV productions.

3.414 TELECASTING III (3 class hrs/wk) 3 Units

3.415 TELECASTING III LAB (12 lab hrs/wk) 4 Units
Producing and directing TV productions. Use of film and video tape. Production of TV commercials and announcements. Use of graphic materials. TV announcing. Special effects in program production.

4.915R RADIOTELEPHONE OPERATOR'S PREPARATION I
(3 class - 2 lab hrs/wk) 4 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. Laboratory demonstrations.
Prerequisite: Electrical Theory I or consent of instructor.

4.917 RADIOTELEPHONE OPERATOR'S PREPARATION II
(3 class - 2 lab hrs/wk) 4 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. Laboratory demonstrations.
Prerequisite: Radiotelephone Operator's Preparation I. Also open to present holders of FCC Radiotelephone Second Class commercial license.

RADIO AND TELEVISION SERVICE
(Two Year Program)

Instruction and training are given in the basic fundamentals of trouble-shooting, repair, alignment, adjustment of radio and TV receivers and citizens band transceivers. 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	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Fundamentals of Radio Service	3	3				
Fund. of Radio Service I Lab	12	4				
Electrical Theory (DC) I, (AC) II						
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	3
Electronic Circuits					5	3
Applied Economics					3	3
	27	16	26	17	26	16

SECOND YEAR	4th Term		5th Term		6th Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
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 Service 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

6.914 COLOR TELEVISION SERVICE (5 class hrs/wk) 5 Units

6.915 COLOR TELEVISION SERVICE LAB (10 lab hrs/wk) 3 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.

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

3.379E FUND. OF RADIO SERVICE I LAB (12 lab hrs/wk) 4 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 Units

3.491E RADIO SERVICE LAB II (12 lab hrs/wk) 4 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. Laboratory 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 Mathematics III to be taken concurrently.

3.492E RADIO SERVICE III (3 class hrs/wk) 3 Units

3.493E RADIO SERVICE LAB III (12 lab hrs/wk) 4 Units
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 class hrs/wk) 3 Units

3.495E TELEVISION SERVICE I LAB (12 lab hrs/wk) 4 Units
This is a course designed for the serviceman 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 class hrs/wk) 3 Units

3.497E TELEVISION SERVICE II LAB (12 lab hrs/wk) 4 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 systerms, 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 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 laboratory practice.
Prerequisite: Electronic Circuits.

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

4.920E ELECTRICAL THEORY (DC) I (3 class - 2 lab hrs/wk) 4 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 Mathematics II.

4.922E ELECTRICAL THEORY (AC) II (3 class - 2 lab hrs/wk) 4 Units
Electrical measurement including use of ammeters, voltmeter, dynamometer, etc. Introduction to AC, 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.

Band

Basic Design

Ceramics

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

AA 290 PAINTING 1-2 Units any term
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 Units.

Art 255 CERAMICS 2-4 Units
Introduction to ceramics techniques and materials. Throwing, molding, and hand building. Surface decoration of two- and three-dimensional surfaces. Students participate in stacking, firing, and drawing the kilns.

AA 291 DRAWING 1-2 Units any term
Training in observation and selection of significant elements. Registration permitted any term but it is desirable that the work be started in the fall. Maximum credit: 6 Units.

AA 201, 202, 203 SURVEY OF THE VISUAL ARTS 3 Units each
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 51 BASIC VOICE (3 units maximum credit) 1 Unit
A class for beginners in the field of vocal music. The class deals primarily with the problems of breath control, tone production, articulation, and enunciation in a group situation. Frequent classroom performance of simple songs. Study of song literature.

Mus 195 BAND (6 units maximum credit) 1 Unit
Presently being offered as an extracurricular, non-credit program. Designed for the student desiring to study dance music, radio, or theatre music. Opportunity is provided for practical experience in organizing instrumental combinations of all kinds and sizes. Training in standard dance band phrasing and improvization. The dance band is also performing for the College at community affairs.

Mus 197 **CHORUS** 1 Units each
(No more than 6 units total credit may be earned in Mus 195, 196, 197)

Mus 201 **INTRODUCTION TO MUSIC AND ITS LITERATURE** 3 Units each

202, 203 Cultivation of understanding and intelligent enjoyment of music through a study of its elements, forms and historical styles.

Mus 111, 112, 113 **MUSIC THEORY I, II, III** 4 Units each
Theory I and II are basic courses in music. They provide a thorough groundwork in the elements of music science — melodic, harmonic, and rhythmic — taught through analysis of the styles of Bach, Haydn, Mozart, Beethoven, and other eighteenth and nineteenth century composers.

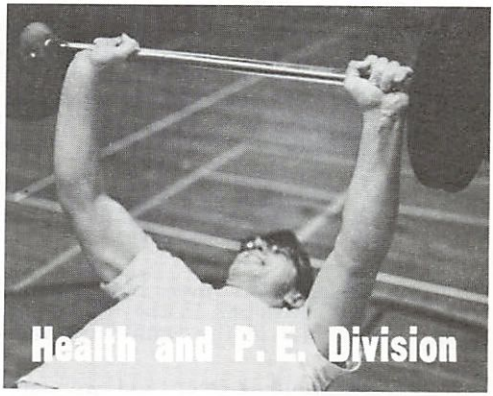
NOTE: It is also being planned that men's and women's glee clubs and small ensemble groups will be offered on a non-credit basis.

First Aid

Health

Men's and Women's P.E.

CECIL HODGES
Division Chairman



OCCUPATIONAL COURSES

1.605 HEALTH EDUCATION (2 hrs/wk) 2 Units
This course is designed to develop desirable mental and physical health practices as they relate to the individual and the community.

5.212 FIRST AID (2 lab hrs/wk) 1 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 successful completion of the course, a standard first aid card may be secured.

5.213 FIRST AID (2 lab hrs/wk) 1 Unit
A class in advanced first aid procedures and techniques to meet the needs of special interest groups which have opportunity to give first aid care frequently in the course of their daily routines. Upon successful completion of the course an American Red Cross Advanced First Aid card may be secured.

5.214 FIRST AID (Emergency Care & Rescue) (2 lab hrs/wk) 1 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 251 COMMUNITY HEALTH 3 Units
Methods of handling health and sanitation problems in the community with special reference to water supply, food and milk sanitation, sewage disposal, insect and rodent control, air pollution, hospitals, nursing homes, and state and local official and voluntary health agencies.

PE 131 INTRODUCTION TO HEALTH AND PHYSICAL EDUCATION 2 Units
Professional orientation; basic philosophy and objectives; professional opportunities and qualifications in each of the areas and sub-areas.

HE 250 PERSONAL HEALTH 3 Units
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 3 Units
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.

PE 180 (women) or PE 190 (men) **PHYSICAL EDUCATION** (3 hrs/wk) 1 Unit each
A variety of activities of physiological and recreational value is offered for all students. Activities include individual, dual, and team sports. To meet college requirements for an associate degree, five teams of physical education are required. Only one activity may be repeated for credit.
Adaptive Activity (men and women)

Students with physical limitations or deviations are assigned to programs of adapted physical activity by a physician or departmental staff.

Badminton (men and women)
Instruction in the fundamental skills of servings, strategy, play, 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. Also, other conditioning methods are introduced.

Bowling — Beginning (men and women) (*additional fee).
Basic fundamentals, techniques, rules, and social etiquette of bowling.

Bowling — Intermediate (men and women) *additional fee
Perfection of straight ball delivery, introduction of hook and curve ball delivery, and tournament play.

Conditioning (men only)
Primarily concerned with cardio-vascular development, variations in running, jogging, interval work, and wind sprints.

Cross Country (men and women)
A study and practice of the techniques of running. Individual and group competition.

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.

Folk Dance — beginning (men and women)
Participation and instruction in the fundamentals and patterns of folk and square dancing.

Fundamentals of Movement (women only)
Analysis and development of physical potential. Designed to maintain figure, form, fitness; and to increase knowledge and performance of basic sports skills.

Golf (men and women) *additional fee).
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.

Handball (men only)
Basic fundamental techniques and rules; and singles and doubles competition.

Skiing — beginning (men and women) (*additional fee).
Selection and use of equipment, flat turning, walking, climbing, straight running position, open and closed skiing, traverse position, turning and side slipping.

Skiing — intermediate (men and women) (*additional fee).
Continuation of the sequence for beginning skiing. Student is guided to parallel skiing as rapidly as time permits.

Soccer (men only)
Fundamentals, techniques of offensive and defensive play, strategy, rules, team play.

Softball (men and women)
Fundamentals of the game, rules, and team play.

Swimming — beginning (men and women)
Orientation to water, introduction to prone and supine float, front crawl, back crawl, breast stroke, side stroke, and elementary diving.

Swimming — intermediate (men and women)
Development of the front crawl, breast stroke, back stroke, survival swimming, turns, and endurance.

Swimming — advanced (men and women)
Perfection of all strokes, water games, diving, and lifesaving 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.

Construction Technology

Civil/Structural Engineering

Drafting

Engineering Orientation

Forest Technician

CARL BLOOD
Division Chairman

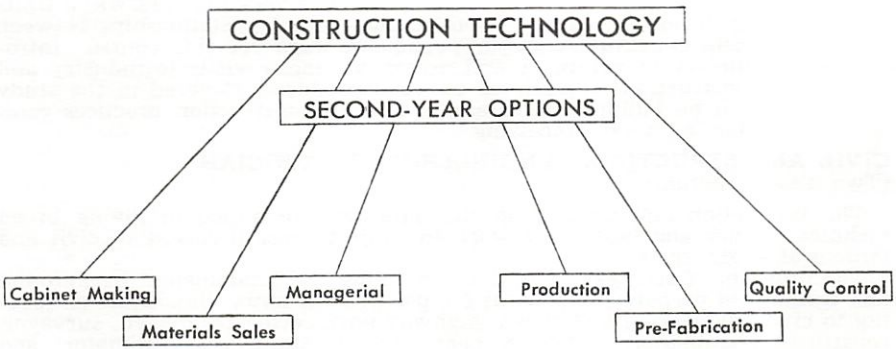
OCCUPATIONAL COURSES AND PROGRAMS

CONSTRUCTION TECHNOLOGY
(Two Year Program)

Construction Technology prepares the student to enter one of the many fields of the construction industries. Typical positions are construction materials and equipment salesmen, inspectors, estimators, quality control technicians, and manufacturing processing technicians. Persons entering employment in these areas will have the background necessary for ultimate promotion into supervisory positions. The curriculum will consist of a year of common study and laboratory experience, and a second year of specialized options.

Study and laboratory experiences aim to establish a balance between fundamental theory and its practical application in the varied fields of the construction industries. To achieve balance, the student will study mathematics, physics, communication skills, psychology, and business; as well as second-year on-the-job experiences. These experiences will correlate theory to practical work application.

The Construction Technology program is being organized to expand subject matter areas of the present Cabinetmaking and Carpentry programs. This program at the time of printing this catalog is being organized to provide the first year of the construction technical program for the school year 1967-68.



FIRST YEAR	1st Term hrs/wk	1st Term units	2nd Term hrs/wk	2nd Term units	3rd Term hrs/wk	3rd Term units
Construction Practices I, II, III	5	5	5	5	5	5
Construction Practices I, II, III Lab	10	3	10	3	10	3
Drafting I & II	4	2	4	2		
Architectural Drafting					4	2
Intro. to Construction Practices			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	29	18	27	17

Second year options in Construction Technology may include:

Cabinet Making
Construction Materials Sales
Construction Managerial Assistant
Production Practices
Pre-fabrication Practices
Quality Control

4.050 CONSTRUCTION PRACTICES I (5 class hrs/wk) 5 Units

4.051 CONSTRUCTION PRACTICES I LAB (10 lab hrs/wk) 3 Units
These courses give background information and practical laboratory experience in the use of machines and tools common to construction practices. Special emphasis will be placed on proper operation of the many hand tools, portable power tools, and production machines. The proper maintenance of these tools and machines will be taught.

4.052 CONSTRUCTION PRACTICES II (5 class hrs/wk) 5 Units

4.053 CONSTRUCTION PRACTICES II LAB (10 lab hrs/wk) 3 Units
These courses will involve the use and methods of use of the many materials common to structural form. Testing of these many materials will be stressed. Included in the study will be such materials as aggregate, stone, steel, glass, plastic, gypsum, and wood.

4.054 CONSTRUCTION PRACTICES III (5 class hrs/wk) 5 Units

4.055 CONSTRUCTION PRACTICES III LAB (10 lab hrs/wk) 3 Units
These courses will involve a study of supplementary materials and the methods of their use in the construction industries. Examples would include insulative, accoustical, finishes, protective, and decorative materials. The use and application of hardware would also be studied.

4.112 INTRODUCTION TO CONSTRUCTION PRACTICES
(2 class - 3 lab hrs/wk) 3 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.

CIVIL AND STRUCTURAL ENGINEERING TECHNICIAN
(Two 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	1st Term hrs/wk	1st Term units	2nd Term hrs/wk	2nd Term units	3rd Term hrs/wk	3rd Term units
Plane Surveying I, II	5	3	5	3		
Engineering Problems I, II	2	1	5	3		
Technical Mathematics I, II, III	4	4	4	4	4	4
Applied Physics I, II	5	4	5	4		
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 TERM	**4th Term**		**5th Term**		**6th Term**	
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
	23	15	24	16	23	16

6.109 APPLIED MECHANICS I (2 class - 3 lab hrs/wk) 3 Units
A study of energy in motion. The course covers the principle 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 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 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. Laboratory work will consist of problem-solving.
Prerequisite: Sixth-term standing or approval of department head.

6.122 CONSTRUCTION CODES (2 class hrs/wk) 2 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 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 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 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.

6.112 HYDRAULICS I (3 class hrs/wk) 3 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 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 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 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 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 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 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 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.

6.107T STRENGTH OF MATERIALS I (2 class hrs/wk) 2 Units

6.107 STRENGTH OF MATERIALS I LAB (3 lab hrs/wk) 1 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 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.
Prerequisite: Strength of Materials I or equivalent.

6.130 STRUCTURAL ANALYSIS & DESIGN
(1 class - 3 lab hrs/wk) 2 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.
Prerequisite: Applied Mechanics I; Strength of Materials I.

6.500 SURVEYING COMPUTATIONS (1 class - 4 lab hrs/wk) 3 Units
A study of trigonometric and geometric formulas, logarithms, mechanical computers and integrating instruments, 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 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
(Two Year Program)

This curriculum provides education and training to qualify a person as a Forest Technician. A Forest Technician is competent to handle intermediate responsibilities between those appropriate to the skilled worker and those of the professional forester. He directs the former under the supervision of the latter; in other words, he sees that plans prepared by professional foresters are efficiently executed.

Students completing the 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 Forestry Aid. The salaries for other employers would be comparable. The graduate will be eligible for a technician rating after additional experience. Previous forestry experience and completion of the 2-year technician program would qualify the graduate for a higher rating.

Applicants must have completed high school or the equivalent, and should have successfully completed a course in algebra. The applicant should have demonstrated an interest in outdoor camping or woods experience.

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Communications I, II	3	3	3	3		
Technical Mathematics I, II	4	4	4	4		
Phychology of Human Relations	3	3				
General Forestry	3	3				
Drafting I	4	2				
Fire Control	4	3				
Power Tools and Pumps			6	3		
Silvicultural Practices			6	3		
Plane Surveying I			5	3		
Technical Report Writing					3	3
Applied Economics					3	3
Engineering Problems I					2	1
Plane Surveying II					5	3
Tree Identification					5	2
Recreational Structures					6	3
Health Education					2	1
	21	18	24	16	26	16

Forest Job Experience: 4th Term Minimum 30 hrs/wk.

	5th Term		6th Term		7th Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Forestry Mensuration I, II	6	3	6	3		
Forest Protection	3	3				
Forest Products	4	2				
Introduction to Machine Records	4	2				
Elective (General Education)	3	3				
Elective—Technical Course	6	3				
Elements of Supervision			3	3		
Forestry Records and Reports			3	3		
Forest Contracts			6	3		
Elective (General Education)			3	3		
Forest Surveying					6	3
Logging Planning					6	3
Mapping and Computing I					4	2
Forestry Practice (on-job training)					10	5
Elective—Technician Course					3	3
	26	16	21	15	29	16

Required credits for the Associate of Science degree in Forest Technician is 100 units.

9.500 ELEMENTS OF SUPERVISION (3 class hrs/wk) 3 Units
To give the student a basic understanding of leadership from he crew-boss level up.
Prerequisite: Approval of department head.

6.640 FIRE CONTROL (2 class - 2 lab hrs/wk) 3 Units
A course covering forest fire behavior, ignition; spread of forest fires and factors by which they are influenced; methods of fire prevention and suppression; forest fire control organizations and equnipment, Transportation, communications, and the operation of forest fire equipment are covered.

6.635 FOREST CONTRACTS (2 class - 4 lab hrs/wk) 3 Units
The basic principles of a forest contract are studied in the class room, and field trips are held to various types of forest jobs to show how the contracts are enforced through regular on-the-ground inspection. Both sellers' and purchasers' problems will be covered. The basic forest operating laws will also be studied in detail.
Prerequisite: Second year standing; Forestry Records and Reports (6.603) to be taken concurrently.

6.660 FOREST JOB EXPERIENCE (Min. 30 hrs/wk) 5 Units
This course will include on-the-job training and experience, under supervision of the College and employer.
Prerequisite: Consent of instructor.

6.625 FOREST MENSURATION I,. II (2 class - 4 lab hrs/wk) 3 Units each
6.626
A general course in forest measurements starting with log scaling, going into log grading, and finaly cruising methods. The necessary theory will be presented along with practical work in each field.
Prerequisite: Technical Mathematics I and II, and second-year standing.

6.636 FORESTRY PRACTICE (On Job Training)
(2 class - 8 lab hrs/wk) 5 Units
This elective is designed to provide training in whatever specialty the student is interested in. It may be any subject in forestry, and the student will spend two hours a week with the instructor and one full eight-hour day in field work. This may be on a project in company with other students on the same specialty; or, where possible, it will be working for the Forest Service or others in the specialty field, one day a week.
Prerequisite: To be arranged with Forestry instructor.

6.605 FOREST PRODUCTS (1 class - 3 lab hrs/wk)2 Units
The study of forest products and how they are produced. Visits will be made to major wood-using industries, and their materials and methods will be studied in class.

6.641 FOREST PROTECTION (3 class hrs/wk) 3 Units
This is a course in elementary forest diseases, natural weather damage, and animal damage. The systems are discussed for identification purposes, and the prevention or cures that are known are studied.
Prerequisite: Second-year standing.

6.633 FORESTRY RECORDS AND REPORTS (3 class hrs/wk) 3 Units
This course covers the information regarding business reports that are needed for appraisal, 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 billings, inventory control, and other administrative details.
Prerequisite: Second-year standing; Forest Contracts (6.635) to be taken concurrently.

6.656 FOREST RECREATION (2 class - 4 lab hrs/wk) 3 Units
"This course will introduce the student to the aesthetic appreciation of the forest and how it serves mankind's growing need for recreation. Development, construction, and maintenance of recreational facilities will be included.

6.628 FOREST SURVEYING (2 class - 4 lab hrs/wk) 3 Units
Forest surveying, with emphasis on serial photos and topographic surveying; and covering the public land surveys.
Prerequisite: Surveying I and II, second-year standing.

6.601 GENERAL FORESTRY (3 class hrs/wk) 3 Units
This course introduces the student to the whole field of forestry — a survey of the jobs involved and the resources worked with.

6.632 INTRODUCTION TO MACHINE RECORDS
(1 class - 3 lab hrs/wk) 2 Units
This course is an introduction to the use of computers in the business world. The preparing of raw data, the methods of reporting computed data, and the general uses of machine records are covered. The application will be to forestry records.
Prerequisite: Second-year standing.

6.631 LOGGING PLANNING (2 class - 4 lab hrs/wk) 3 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. (This course will include road engineering practices in some detail.)
Prerequisite: General Forestry, Forest Surveying, Surveying I, II, concurrently.

6.621 POWER TOOLS AND PUMPS (2 class - 4 lab hrs/wk) 3 Units
The study of First Aid and Safety; 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" are included.
Prerequisite: General Forestry.

6.615 SILVICULTURAL PRACTICES (2 class - 4 lab hrs/wk) 3 Units
A course designed to introduce students to the theory and practice of silviculture, giving them a general understanding of the growth principles and cutting methods for our commercial forest species. The laboratory time will be used in studying and practicing in the field.

6.645 TREE IDENTIFICATION .... (1 class - 4 lab hrs/wk) 2 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.

TECHNICAL DRAFTING
(Two 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	1st Term		2nd Term		3rd Term	
	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	4th Term		5th Term		6th Term	
	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			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	28	19	28	17

4.115 ADVANCED DRAFTING PROBLEMS (2 class - 3 lab hrs/wk) 3 Units

Survey of practical descriptive geometry. Theory of auxiliary views, true length, shape, and angles developed from point-line-plane through use of revolution. Elements of simple vector problems. Emphasis on application of principles to problems commonly encountered by draftsmen.
Prerequisite: Drafting II (4.105) and Mathematics (4.204) or approval of instructor.

4.117 ADVANCED MACHINE DRAFTING I (5 lab hrs/wk) 2 Units

This course extends background in the area of machine drafting. It will include technical sketching and shape description, multi-view projections, sectional views, and revolutions.
Prerequisite: Second-year standing or approval of instructor.

4.123 ADVANCED MACHINE DRAFTING II (5 lab hrs/wk) 2 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.

4.125 ADVANCED MACHINE DRAFTING III (5 lab hrs/wk) 2 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.

4.107 ARCHITECTURAL DRAFTING (5 lab hrs/wk) 2 Units
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 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 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 II (4.202) may be taken concurrently.

4.105 DRAFTING II (4 lab hrs/wk) 2 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 I 4.101) or equivalent.

4.140 DRAFTING FUNDAMENTALS (5 lab hrs/wk) 2 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 freehand work as well as instrument work. Information about blueprint 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, freehand sketching, the alphabet of lines, geometric construction, three view drawings, isometric drawings, intersections and developments, and blueprint reading.

4.103 ELECTRICAL DRAFTING (4 lab hrs/wk) 2 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 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 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 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 department head.

4.130 INTRODUCTION TO FABRICATION PRACTICES III
(2 class - 3 lab hrs/wk) 3 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: Fabrication Practices I and II.

4.102 INTRODUCTION TO SPECIFICATIONS (3 class hrs/wk) 3 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 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 Units
An advanced course emphasizing mechanical design. It includes sketching, cam and gear layout, isometric drawings, welding drawings, tolerances and allowances, and tool jib drawings. Simplified drawing technique will be covered and general shop procedures will be discussed. Emphasis will be placed on the industrial requirements of drawing.
Prerequisite: Third-term standing or approval of department head.

4.106 METALS APPLICATION TREATMENT AND TESTING
(2 class - 3 lab hrs/wk) 3 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.

4.104 PRODUCTION PLANNING AND PRACTICES (3 class - 2 lab hrs/wk) 4 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.

4.119 PROJECT DRAFTING (1 class - 9 lab hrs/wk) 4 Units
Working conditions similar to industrial drafting room. Students assigned projects that include one or more drawings requiring skills previously acquired. Instruction will include the methods for detail layout, reading specifications, common materials of fabribation, checking and back-checking drawings, and material take-offs. Discussion will cover the administration of the drafting room, issuing drawings, and revision. Speed and accuracy will be considered of paramount importance.
Prerequisite: Drafting II which may be taken concurrently.

4.111 STRUCTURAL DRAFTING (5 lab hrs/wk) 2 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.

4.127 TECHNICAL ILLUSTRATION (4 lab hrs/wk) 2 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 shador are discussed.
Prerequisite: Second-year standing or approval of department head.

COLLEGE TRANSFER COURSES

GENERAL ENGINEERING

GE 101, 102, 103 ENGINEERING ORIENTATION 2 Units each
Departmental engineering orientation.
Prerequisite: Math 101, 102 previously or concurrently.

GE 115 GRAPHICS 3 Units
Fundamental principles of the language. Three 2 hour laboratory periods.

Communication Skills

English and American Literature

English Composition and Writing

French

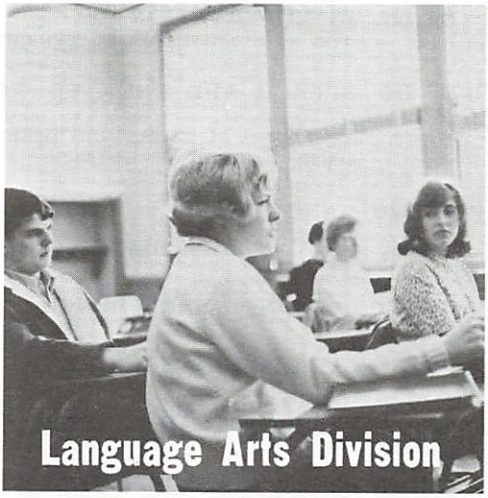
German

Spanish

Newswriting and Journalism

Speech

JOHN HOWARD
Division Chairman



COLLEGE TRANSFER COURSES

ENGLISH COURSES

WR 110 CORRECTIVE ENGLISH — Non-Credit
A review of the fundamentals of English Composition, with special emphasis on such areas as diagnostic tests indicate. Preparation for credit writing courses.

WR 111, 112, 113 ENGLISH COMPOSITION — 3 Units each
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 Units
Practice in various forms of expository writing.

Eng. 101, 102, 103 SURVEY OF ENGLISH LITERATURE — 3 Units each
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, 202, 203 SHAKESPEARE — 3 Units each
Study of important plays — comedies, histories, and tragedies.

Eng. 253, 254, 255 SURVEY OF AMERICAN LITERATURE — 3 Units each
American literature from its beginning to present day.

SPEECH COURSES

Sp 111, 112, 113 FUNDAMENTALS OF SPEECH — 3 Units each
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 Units
The application of the principles of oral reading to literature.

Sp 250 SPEECH AND THEATER WORKSHOP
1-3 Units each term—maximum 3 units
Principles of acting and dramatic production; laboratory experience. Consent of instructor required.

FOREIGN LANGUAGES

RL 50, 51, 52 FIRST-YEAR FRENCH 4 Units each

RL 101, 102, 103 SECOND-YEAR FRENCH 4 Units each

RL 60, 61, 62 FIRST-YEAR SPANISH 4 Units each

RL 107, 108, 109 SECOND-YEAR SPANISH 4 Units each

GL 50, 51, 52 FIRST-YEAR GERMAN 4 Units each

GL 101, 102, 103 SECOND-YEAR GERMAN 4 Units each

JOURNALISM COURSES

J 215 JOURNALISM LABORATORY 1 Unit
Work on student publications. Offered only in coordination with J 216, 217, 218.

J 216 REPORTING I 2 Units
Basics of gathering and reporting news, with emphasis on accuracy and clarity of writing.
Prerequisite: (J 215) Journalism Laboratory of writing to be taken concurrently.

J 217 REPORTING II 2 Units
Continuation of J 216. Reader appeal in writing.
Prerequisite: Reporting I, (J 215) Journalism Laboratory appeal in writing to be taken concurrently.

J 218 COPY EDITING AND MAKEUP 2 Units
Basic instruction in copy reading, headline writing, and makeup.
Prerequisite: Reporting II. (J 215) Journalism Laboratory, Reading, writing and make-up, to be taken concurrently.

OCCUPATIONAL COURSES

1.100 COMMUNICATION SKILLS I (3 class hrs/wk) 3 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 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 I or equivalent.

1.610 PUBLIC SPEAKING (2 class - 1 lab hrs/wk) 2 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.

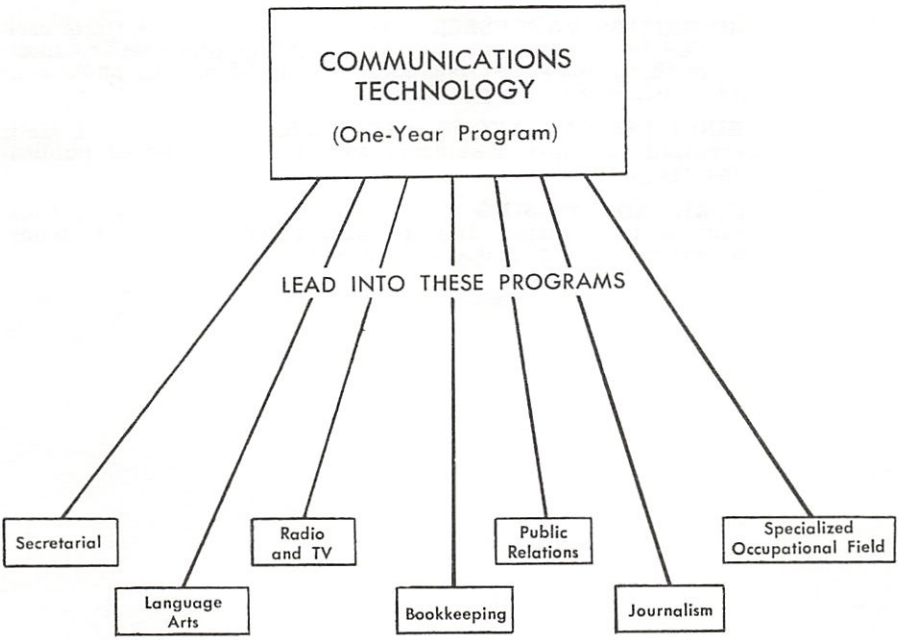
6.126 TECHNNCAL REPORT WRITING (3 class hrs/wk) 3 Units

Principles of composition, gathering data, and basic forms of writing reports are covered.
Prerequisite: Communication Skills I or equivalent.

COMMUNICATION TECHNICIAN
(One Year Program)

Planned to give students the background needed to secure job-entry positions dealing with the production of printed publications.

Instruction is given in writing, editing, photography, layout, and production processes to enable the student to create or assist in the creation of printed communications. The student may do some specializing in a given area by selecting electives appropriate to his or her particular career goal.



Course Sequences

	1st Term Units	2nd Term Units	3rd Term Units
Reporting I, II	2	2	
Production Processes I, II	2	2	
Photography I, II	3	3	
Journalism Lab I, II, III	1	1	1
English Composition	3	3	3
Elective or Typing*	3 or 4		
Publications Layout and Design		2	
Elective		2 or 3	
Copy Editing and Makeup			2
Retail Advertising			3
Electives			3 or 4
Salesmanship			3

Choose electives from: Design, Drawing, Graphics, General Sociology, General Psychology, Expository Writing, Speech, American Government, Broadcasting, Business, and Secretarial Science.

* Typing required of those who do not enter the program with reasonable proficiency.

COMMUNICATION TECHNICIAN COURSE DESCRIPTIONS

PHOTOGRAPHY I, II 3 Units each
Designed to acquaint student with techniques of photo craftsmanship and graphic techniques, cameras, lenses, exposure, focus, film development, printing, and lighting.

PRODUCTION PROCESSES I, II 2 Units each
Intended to acquaint students with printing processes, composition methods, pasteup, typography, scaling of photos, photo content, paper, and color printing.

PRINCIPLES OF LAYOUT AND DESIGN 2 Units
Developed to acquaint students with the principles of publications design.

RETAIL ADVERTISING 3 Units
Designed to acquaint students with objectives of advertising, copywriting, layout, and classified ads.

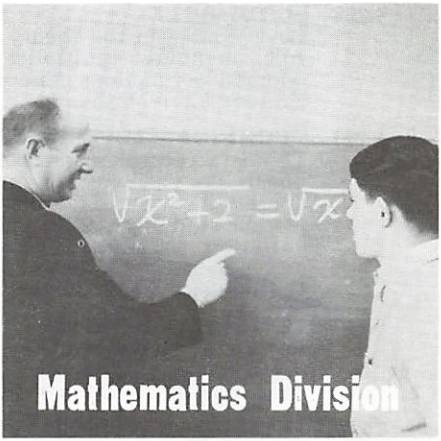
Algebra

Calculus

Geometry

Technical Mathematics

Trigonometry



OCCUPATIONAL COURSES

6.115 ELECTRICAL MATHEMATICS (4 class hrs/wk) 4 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 III (6.266) or equivalent.

6.135 ENGINEERING PROBLEMS I (2 lab hrs/wk) 1 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 Unit
This course aims to develop the skill of gathering 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 Units
This course gives a brief review of advanced drafting problems and takes the student further into the field of descriptive geometric principles.
Prerequisite: Third-term standing or approval of department head.

4.200 MATHEMATICS I (3 class hrs/wk) Non 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 Units
This is a course in practical mathematics, geometry, and beginning algebra, with applications peculiar to technical-vocational fields.
Prerequisite: High school level general mathematics.

4.204 MATHEMATICS III (3 class hrs/wk) 3 Units
This is a course in trigonometry, elementary algebra through quadratics, logarithms, related practical mathematics, with applications peculiar to technical-vocational fields. This is the second term of a sequence that includes practical mathematics, beginning algebra, and topics from geometry.
Prerequisite: Mathematics II, or the equivalent.

4.208 SLIDE RULE (2 lab hrs/wk) 1 Unit
Basic course in the theory, operation, and applications of the slide rule, including multiplication, division, powers and roots, trigonometric functions, and logarithms.
Prerequisite: Mathematics III or the equivalent.

6.261 TECHNICAL MATHEMATICS I (4 class hrs/wk) 4 Units
This is a course in mathematics on the technician level with emphasis on problem solving. A review of basic algebra includes operations with algebraic expressions and first degree equations in one unknown. More advanced work continues with functions, variation, systems of linear equations, exponents and radicals, and quadratic equations in one unknown.
Prerequisite: High school algebra or equivalent.

6.262 TECHNICAL MATHEMATICS II (4 class hrs/wk) 4 Units
Review of plane geometry and its application, and analytical trigonometry on the technician level. Emphasis on problem solving.
Prerequisite: Technical Mathematics I or equivalent.

6.266 TECHNICAL MATHEMATICS III (4 class hrs/wk) 4 Units
Mathematics on the technician level covering simultaneous quadratic equations, bonomial theorem, arithmetic and geometric progressions, logarithms, exponential functions, complex numbers, and vector algebra.
Prerequisite: Technical Mathematics II or equivalent.

COLLEGE TRANSFER COURSES

Mth 200, 201, 202, 203 CALCULUS WITH ANALYTIC GEOMETRY 4 Units each
Standard sequence for students in science and engineering.

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

Mth 10 ELEMENTARY ALGEBRA Non-Credit
A study of the fundamental operations of algebra designed for students who need remedial work to enable them to qualify for Mth. 100. Placement may also result from the cooperative test given in Math 101. 4 class hours per week.

Mth 100 INTERMEDIATE ALGEBRA 4 Units
Prerequisite: One year of high school algebra or Mth 10. 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, 192, 193 MATHEMATICS FOR ELEMENTARY TEACHERS 3 Units each
Basic concepts of mathematics; for prospective elementary teachers.

Mth 102 TRIGONOMETRY 4 Units
Prerequisite: Mth 101.

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

MELVIN GASKILL
Division Chairman

OCCUPATIONAL COURSES AND PROGRAMS

AIRFRAME AND POWERPLANT MECHANICS
(Two Year Program)

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

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

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/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

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

	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
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 Units

3.221 AIRFRAME I LAB (15 lab hrs/wk) 5 Units
Woodwork

FAA 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, FAA repair procedures and limitations, machine-sewed seams, hand sewing, rib stitching, aircraft dopes, brush aplication, 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, de-icing systems, pneumatic systems, fuel systems.

3.222 AIRFRAME II (5 class hrs/wk) 5 Units

3.223 AIRFRAME II LAB (19 lab hrs/wk) 6 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, FAA 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, FAA requirements for weight control, weight and balance graphs, weighing live aircraft for airworthiness certification.
Prerequisite: Airframe I and Airframe Laboratory I.

3.224 AIRFRAME III (5 class hrs/wk) 5 Units

3.225 AIRFRAME III LAB (10 lab hrs/wk) 3 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, FAA 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 certification.
Prerequisite: Airframe II and Airframe Laboratory II.

POWERPLANT MECHANICS, MAJOR COURSE DESCRIPTIONS

3.226 AIRCRAFT POWERPLANT I (10 class hrs/wk) 10 Units

3.227 AIRCRAFT POWERPLANT I LAB (10 lab hrs/wk) 3 Units
Powerplant Electrical

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. FAA 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, FAA oil system requirements.

Powerplant Basic
Elementary shop mathematics, 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 Units

3.229 AIRCRAFT POWERPLANT II LAB (20 lab hrs/wk) 7 Units
Propellers

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

Laboratory 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, econratios, 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, intercoolers, after-coolers, FAA 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, magnaflux, 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, FAA forms.

Prerequisite: Aircraft Powerplant I and Aircraft Powerplant Laboratory II.

3.230 AIRCRAFT POWERPLANT III (5 class hrs/wk) 5 Units

3.231 AIRCRAFT POWERPLANT III LAB (15 lab hrs/wk) 6 Units
Engine Overhaul II

This course is a 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 Aircraft Powerplant Laboratory III.

AUTO BODY AND FENDER
(Two Year Program)

Training in this program is given in all basic phases of auto body and fender repair 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 ser-

vice 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	1st Term		2nd Term		3rd Term	
	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	4th Term		5th Term		6th Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Automotive Painting III	8	4				
Gen. Body Repair I, II & Painting	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) 2 Units
(See Automotive Mechanics course descriptions.)

3.336 AUTOMOTIVE MATERIALS (2 class hrs/wk) 2 Units
(See Automotive Mechanics course descriptions.)

3.397 AUTOMOTIVE METAL WORK I (5 class hrs/wk) 5 Units

3.398 AUTOMOTIVE METAL WORK I LAB (10 lab hrs/wk) 3 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 Units

3.328 AUTOMOTIVE METAL WORK II LAB (6 lab hrs/wk) 2 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: Automotive Metal Work I.

3.337 AUTOMOTIVE METAL WORK III (2 class hrs/wk) 2 Units

3.315 AUTOMOTIVE METAL WORK III LAB (4 lab hrs/wk) 2 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: Automotive Metal Work II.

3.238 **AUTOMOTIVE PAINTING I** (2 class hrs/wk) 2 Units

4.239 **AUTOMOTIVE PAINTING I LAB** (4 lab hrs/wk) 2 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 Automotive Metal Work II.

3.240 **AUTOMOTIVE PAINTING II** (3 class hrs/wk) 3 Units

3.241 **AUTOMOTIVE PAINTING II LAB** (6 lab hrs/wk) 2 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: Automotive Painting I.

3.244 **AUTOMOTIVE PAINTING III** (2 class - 6 lab hrs/wk) 4 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 Automotive Painting II.

3.332 **AUTOMOTIVE SERVICE MANAGEMENT**
(2 class hrs/wk) 2 Units
(See Automotive Mechanics course descriptions.)

3.246 **COLLISION ESTIMATING** (2 class - 3 lab hrs/wk) 3 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 Units
Instruction in repair of body structure members, including practice in shop.
Prerequisite: Automotive Metal Work III.

3.243 **GENERAL BODY REPAIR II & PAINTING**
(3 class - 12 lab hrs/wk) 7 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 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
(Two Year Program)

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.

FIRST YEAR	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Auto Chassis	3	3				
Auto Chassis Lab	6	2				
Internal Combustion Engine I, II	2	2	2	2		
Internal Combustion Eng. I, II Lab	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		
Practical Physics I, II, III	5	4	5	4	5	4
Mathematics II	3	3				
Employer-Employee Relations					2	2
Applied Fluid Mechanics					29	18
	27	17	30	17	29	18

SECOND YEAR	4th Term		5th Term		6th Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Automotive Repair II, III	9	3	9	3		
Automotive Electricity II	3	3				
Automotive Electricity II Lab	3	1				
Tune-up and Diagnosis			2	2		
Tune-up and Diagnosis Lab			5	2		
Automotive Overhaul					9	3
Automatic Transmissions	3	3				
Automatic Transmissions Lab	3	1				
Communications Skills I, II			3	3	3	3
Machine Shop Orientation	5	3				
Machine Tool Operation			5	3		
Power Steering			4	2		
Automotive Materials			2	2		
Automotive Fuels and Lubricants					2	2
Automotive Repair Estimating					2	2
Automotive Service Management					2	2
Health					2	2
Blueprint Reading					3	1
	26	14	29	17	21	15

AUTOMOTIVE MECHANICS, MAJOR COURSE DESCRIPTIONS

3.320 APPLIED FLUID MECHANICS (2 class hrs/wk) 2 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 Physical I and II.

3.300 AUTOMOTIVE CHASSIS I (3 class hrs/wk 3 Units

3.301 AUTOMOTIVE CHASSIS LAB I (6 lab hrs/wk) 2 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 Units

3.309 AUTOMOTIVE ELECTRICITY LAB I (3 lab hrs/wk) 1 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 Units

3.323 AUTOMOTIVE ELECTRICITY LAB II (3 lab hrs/wk) 1 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 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 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 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 Units
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 alalyzing 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 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 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 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 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 Units

3.327 AUTOMATIC TRANSMISSIONS LAB (3 lab hrs/wk) 1 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 Units
3.311 FUEL SYSTEMS AND CARB. LAB I (3 lab hrs/wk) 1 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 Units

3.313 FUEL SYS. AND CARBURETION LAB II (3 lab hrs/wk) 1 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 Units

3.305 INTERNAL COMB. ENGINES LAB I (3 lab hrs/wk) 1 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 Units

3.307 INTERNAL COMB. ENGINES LAB II (6 lab hrs/wk) 2 Units
Instruction in overhaul methods, trouble-shooting, general engine performance and testing, and service techniques covering valve, cylinder, and bearing systems.
Prerequisite: Internal Combusion Engines I. Practical Physics II Concurrently.

3.314 POWER STEERING (1 class - 3 lab hrs/wk) 2 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 Units

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

3.325 TUNE-UP AND DIAGNOSIS LAB (5 lab hrs/wk) 2 Units
Instruction in diagnosing malfunctions in the automotive engine and its accessory systems. Advanced methods of testing electrical and carburetion systems. Developing the ability to analyze the operation of all engine accessories directly related to engine performance.
Prerequisite: Second-year standing and Automotive Electricity II or equivalent.

FARM EQUIPMENT SERVICE
(Two Year Program)

This program will provide training essential to prepare a mechanic to service farm equipment. It is designed to 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.

FIRST YEAR	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Farm Implement I, II, III	5	5	5	5	2	2
Farm Implement I, II, III Lab	10	3	10	3	6	2
Mathematics II	3	3				
Machine Shop Orientation	5	3				
Welding IA	5	2				
Practical Physics I, III			5	4	5	4
Machine Tool Operation			5	3		
Internal Combustion Engines I			2	2		
Internal Combustion Engines I Lab			3	1		
Applied Fluid Mechanics					2	2
Power Trains					2	2
Power Trains Lab					6	2
Fuel Systems, Farm Equipment					6	4
	28	16	30	18	29	18

Farm Equipment Service Work Experience (4th Term)
(30 class/lab hrs) 10 Units

SECOND YEAR	5th Term		6th Term		7th Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Farm Equipment Electrical System	6	4				
Farm Equipment Engines	5	5				
Farm Equipment Engines Lab	10	3				
Communication Skills I, II	3	3	3	3		
Hydraulics, Heavy Equipment	5	3				
Farm Equipment Hydraulics I, II			5	3	5	3
Farm Equipment Power Trains			5	3		
Crawler Tractors			5	5		
Crawler Tractors Lab			10	3		
Farm Equipment Service Management					3	3
Farm Equipment Painting					5	2
Tractor, Major Overhaul					15	7
	29	18	28	17	28	15

8.121 CRAWLER TRACTORS (5 class hrs/wk) 5 Units
Instruction in the understanding and use of the Operator's Manual for Crawler tractors; also, study of the various kinds and types of Crawler tractors.
Prerequisite: Completion, first year of Farm Equipment Service Curriculum.

8.122 CRAWLER TRACTORS LAB (10 lab hrs/wk) 3 Units
Instruction in assembling, adjusting, and repairing tracks and steering clutches of the Crawler tractor. To be taken concurrently with Crawler Tractors (8.121).

8.109 FARM EQUIPMENT ELECTRICAL SYSTEM
(3 class - 3 lab hrs/wk) 4 Units
This course provides basic information to enable trainee to (1) understand the principles of the tractor electrical system and (2) be able to locate and correct troubles in the electrical system.
Prerequisite: Practical Physics III (4.304).

8.111 FARM EQUIPMENT ENGINES (5 class hrs/wk) 5 Units
This course is designed to aid the trainee to understand the different kinds of farm motors other than tractors.
Prerequisite: Internal Combustion Engines I (3.304).

8.112 FARM EQUIPMENT ENGINES LAB (10 lab hrs/wk) 3 Units
To develop the ability to adjust, maintain, and repair small engines effectively. To be taken concurrently with Farm Equipment Engines (8.111).

8.113 FARM EQUIPMENT HYDRAULICS I
(2 class - 3 lab hrs/wk) 3 Units
This course provides understanding of basic hydraulics and its application to agricultural machinery.
Prerequisite: Hydraulic Heavy Equipment (3.353E).

8.115 FARM EQUIPMENT HYDRAULICS II
(2 class - 3 lab hrs/wk) 3 Units
This course is planned to equip the student to assemble, service, and repair hydraulic units.
Prerequisite: Farm Equipment Hydraulics I (8.113).

8.131 FARM EQUIPMENT PAINTING (1 class - 4 lab hrs/wk) 2 Units
This course is designed to develop skills in equipment cleaning and painting.

8.117 FARM EQUIPMENT POWER TRAINS
(2 class - 3 lab hrs/wk) 3 Units
Instruction in assembling, disassembling, and repairing of different types of power trains in tractors.

8.143 FARM EQUIPMENT SERVICE MANAGEMENT
(3 class hrs/wk) 3 Units
Develops (1) an understanding of the operating procedures of an agriculture machinery service department; and (2) the ability to carry out the functions of a service employee.
Prerequisite: Final term standing in Farm Equipment Service curriculum.

8.101 FARM IMPLEMENT I (5 hrs/wk) 5 Units
This course develops introductory information regarding the farm equipment industry, namely: history, development of the industry, and job requirements in this field. Basic information is provided on tillage equipment such as plows, harrows, cultivators, rollers, and tool carriers.

8.102 FARM IMPLEMENT I LAB (10 hrs/wk) 3 Units
This course provides instruction in the development of skill in adjusting, maintaining, repairing, and in-the-field operation of tillage equipment; also, instruction and practice in the use of operator and service manuals.

8.103 FARM IMPLEMENT II (5 class hrs/wk) 5 Units
Instruction in the use of Operator's Manual when assembling, adjusting, maintaining, and repairing of seeding, fertilizing, and spraying equipment.
Prerequisite: Farm Implement I (8.101).

8.104 FARM IMPLEMENT II LAB (10 lab hrs/wk) 3 Units
Practice in assembling, adjusting, lubricating, and repairing of seeding, fertilizing, and spray equipment. To be taken concurrently with Farm Implement II.

8.105 FARM IMPLEMENT III (2 class hrs/wk) 2 Units
Instruction in the use of the Operator's Manual when adjusting, maintaining, assembling, and repairing harvest equipment.
Prerequisite: Farm Implement II (8.103).

8.106 FARM IMPLEMENT III LAB (6 lab hrs/wk) 2 Units
Practice in adjusting, maintaining, assembling, and repairing harvesting equipment. To be taken concurrently with Farm Implement III (8.105).

8.107 FUEL SYSTEMS, FARM EQUIPMENT
(3 class - 3 lab hrs/wk) 4 Units
Instruction in the kinds, repairing, assembling of fuel systems in agricultural machinery.
Prerequisite: Internal Combustion Engines I (3.304).

8.123 TRACTOR, MAJOR OVERHAUL (3 class - 12 lab hrs/wk) 7 Units
Course designed to develop (1) an understanding of the procedures to follow in overhauling a tractor and (2) the ability to disassemble, repair, reassemble, and tune the tractor for field conditions.
Prerequisite: Final term standing in Farm Equipment Service curriculum.

FLIGHT TECHNOLOGY
(Two Year Program)

Training given through this program prepares a person for employment as business aircraft pilot, airline pilot, or flight instructor. Also, with the business major, other avenues of employment are open.

The exacting nature of the course is such that applicants must comply with all Federal Aviation Agency (FAA) requirements for each rating sought. Applicants must be counseled prior to acceptance and only those who can reasonably be expected to succeed will be accepted.

FIRST YEAR	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Flight Orientation	3	3				
Aircraft Development	3	3				
*Introductory & Basic Flight	8	4				
Flight Theory, Private Pilot	3	3				
Aerophysics	3	3				
Air Navigation			3	3		
Aviation Meteorology			3	3		
Aerodynamics			3	3		
*Flight Intermediate I, II			7	3	7	3
Communication Skills I (or English Composition)			3	3		
Aircraft & Engines Structures					3	3
Radio Aids & Communications					3	3
Technical Mathematics I (or Intermediate Algebra)					3	3
American Institutions					3	3
Personal Health (1.605) (or HE250)					2	2
	20	16	19	15	21	17

* Make up flight training as needed during summer months (4th Term-Hours as required.)

SECOND YEAR	5th Term hrs/wk	5th Term units	6th Term hrs/wk	6th Term units	7th Term hrs/wk	7th Term units
Air Transportation	3	3				
General Aviation Safety	3	3				
*Flight Intermediate III, IV	7	3	7	3		
Aircraft Systems	3	3				
Technical Mathematics II (or Trigonometry)	3	3				
Communication Skills II (or English Composition)	3	3				
Advanced Commercial Pilot Ground School			3	3		
Airline Management			3	3		
Introduction to Business			4	4		
Electives			3	3		
Flight Advanced I					6	3
Survey of Data Processing					3	3
Introduction to Business Law					3	3
Public Speaking (or Fundamentals of Speech)					3	3
Salesmanship					3	3
	22	18	20	16	18	15

* These courses comprise a total of 382 clock hours in which students must complete 200 flight hours, the remainder consisting of ground instruction, pre-flight preparation and post-flight de-briefing.

FLIGHT TECHNOLOGY COURSE DESCRIPTIONS

6.401 FLIGHT ORIENTATION (3 class hrs/wk) 3 Units
An introductory course in aviation technology, including basic applications of aerophysics, theory of flight, aircraft standards and specifications, use of technical manuals, basic airframe construction, hydraulic systems, and weight and balance fundamentals.

6.403 AIRCRAFT DEVELOPMENT (3 class hrs/wk) 3 Units
An informative, historical survey of the effect of manned flight. The development of aircraft, milestones in aviation, noted pioneers, and the socio-economic impact of flight upon modern civilization is included.

6.431 INTRODUCTORY AND BASIC FLIGHT
(3 class - 5 lab hrs/wk) 4 Units
25 Dual and 25 Solo hours.
An introduction to flight through actual flying experience in modern, safe, fully-equipped aircraft. 25 hours dual flight instruction and 25 hours solo flight with 30 hours in oral instruction and de-briefing. This program exceeds the FAA minimum to qualify for Private Pilot rating.
This course is designed for students who wish to obtain a private pilot rating; and also as required first phase for students in the two-year associate degree program terminating with Commercial Pilot and Instrument Pilot with multi-engine or flight instructor.

6.405 FLIGHT THEORY, PRIVATE PILOT (3 class hrs/wk) 3 Units
The principles of flight, basics of air traffic control, weather facts, navigational procedures, and airplane operation pertinent for the private pilot. Upon completion of this course, the student has sufficient knowledge to take the Federal Aviation Agency Written Examination for the Private Pilot Certificate. This constitutes the final examination.

6.407 AEROPHYSICS (3 class hrs/wk) 3 Units
Introduction to physics, physical terms, the basis for physical laws in practical application to aeronautics. Course of study includes laws of motion, gas laws, electromagnetism, basic principles of electrical circuits, hydraulics, and pneumatics.

6.409 AIR NAVIGATION (3 class hrs/wk) 3 Units
The basic elements of air navigation; fundamentals and practical application of pilotage and dead reckoning, including the use of plotter, computer, aerial charts, and Federal Aviation Agency publications pertinent to flying.
Prerequisite: Flight Theory, Private Pilot.

6.411 AVIATION METEOROLOGY (3 class hrs/wk) 3 Units
The interpretation of meteorological phenomena affecting aircraft flight. A study of the basic concepts of aviation meteorology; temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, fog. Analysis and use of weather data for flight planning and safe flying; interpretation of U. S. Weather Bureau maps, reports, and forecasts.
Prerequisite: To be concurrent with Air Navigation.

6.413 AERODYNAMICS (3 class hrs/wk) 3 Units
Analysis of the physics of flight, including the application of basic aerodynamics to the wing and airfoil; and the analysis of lift and dray components relative to the wing planform and airplane performance. The application of aerodynamic effect of turbo-jet engines involving principles of propulsion.

6.433 FLIGHT INTERMEDIATE I (2 class - 5 lab hrs/wk) 3 Units
10 Dual - 25 Solo hours.
This course is the first phase of four phases of flight training in preparation for the Federal Aviation Agency Commercial Pilot Certificate. A total of 70 hours of instruction is given, including 10 hours dual flight, 25 hours solo flight, and 35 hours of oral instruction and de-briefing.
Prerequisite: Introductory and Basic Flight or Private Pilot certificate, and permission of Flight Technology Screening Committee.

6.415 AIRCRAFT AND ENGINE STRUCTURES
(3 class hrs/wk) 3 Units
Fundamental principles of aircraft engines, including engine theory, materials and methods of construction, lubricants and lubrication systems, induction systems, and superchargers. General engine operating on airframe structures, purpose, types and construction of airframe.

6.417 RADIO AIDS AND COMMUNICATION (3 class hrs/wk) 3 Units
Basic radio fundamentals as used by the pilot. A description and practical use of various radio aids to safe aerial navigation, including Very High Frequency Omni Directional Range (VOR), Instrument Landing System (ILS), Direction Finding (DF), and others. Charts and approach plates as adapted to radio navigation, including the use of the Flight Information Manual and the Airman's Guide.
Prerequisite: Air Navigation.

6.435 FLIGHT INTERMEDIATE II (2 class - 5 lab hrs/wk) 3 Units
10 Dual and 30 Solo hours.
This course is the second phase of flight training and is a continuation of Flight Intermediate I. A total of 70 hours of instruction is given, including 10 hours dual flight, 30 hours solo flight, and 30 hours of oral instruction and de-briefing. Instrument flight training is emphasized.
Prerequisite: Flight Intermediate I or equivalent flight experience as determined by the Flight Technology Screening Committee.

6.439 FLIGHT INTERMEDIATE III (2 class - 5 lab hrs/wk) 3 Units
10 Dual and 25 Solo hours.
Continuation of training for Commercial Pilot Certificate.
Prerequisite: Flight Intermediate II or equivalent flight experience as determined by the Flight Technology Screening Committee.

6.441 FLIGHT INTERMEDIATE IV (2 class - 5 lab hrs/wk) 3 Units
10 Dual and 30 Solo hours.
Final phase of Flight Training in preparation for Commercial Pilot with Instrument Ratings.
Prerequisite: Flight Intermediate III.

6.443 FLIGHT ADVANCED I (2 class - 4 lab hrs/wk) 3 Units
10 Dual hours.

Students have the option of selecting: Multi-engine, Flight Instructor, or Instrument Flight Instructor training to complete the flight program. Each course provides 60 hours instruction, 10 dual flight hours, and 50 hours oral preparation and de-briefing.

Prerequisite: Valid Commercial Pilot with Instrument Rating Certificate.

6.419 AIR TRANSPORTATION (3 class hrs/wk) 3 Units

The development and present status of air transportation, federal legislation, characteristics, and classification of air carriers; the organization and functions of the Federal Aviation Agency and the Civil Aeronautics Board are reviewed.

6.421 GENERAL AVIATION SAFETY (3 class hrs/wk) 3 Units

A study of the fundamentals essential to safe flight; instruments used and the evaluation and interpretation of their indications. Weight and balance problems are given consideration; also the Federal Aviation Regulations appertaining to safe flight.

Prerequisite: Flight Theory, Private Pilot.

6.423 AIRCRAFT SYSTEMS (3 class hrs/wk) 3 Units

A detailed study of the theory of the operation of aircraft hydraulic, electrical, fuel, oil, pressurization, anti-icing, and instrument systems. This course of study includes the various sources of basic power for the operation of aircraft systems as well as the functional application of mechanisms operated by these systems.

Prerequisite: Aircraft and Engine Structures.

6.427 AIRLINE MANAGEMENT (3 class hrs/wk) 3 Units

The functions of management in airline operation; air carrier familiarization, effects of federal regulation, organization, uniform system of accounts, rules of practice in economic proceedings; industrial, financial, and economic implications relative to decision making.

Prerequisite: Air Transportation.

6.425 ADVANCED COMMERCIAL PILOT GROUND SCHOOL
(3 class hrs/wk) 3 Units

This course prepares the student for the FAA Commercial Pilot examination and Instrument Rating examination by bringing into focus all the previous areas of instruction emphasizing the newest methods and procedures in all the aspects of flight.

Prerequisites: All the Flight theory classes offered in Terms I through V or approval of the Flight Technology Screening Committee.

DIESEL MECHANICS
(Two 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	1st Term hrs/wk	1st Term units	2nd Term hrs/wk	2nd Term units	3rd Term hrs/wk	3rd Term units
Automotive Chassis I	3	3				
Automotive Chassis I Lab (Heavy Equipment)	6	2				
Internal Combustion Engines I, II	2	2	2	2		
Internal Comb. Engines I, II Lab	3	1	6	2		
Power Trains			2	2		
Power Trains Lab, Hvy. Equip.			5	2		
Fuel Systems & Carb., Hvy. Equip.			2	2		
Fuel Systems & Carb. Lab (Heavy Equipment)			3	1		
Diesel Engines I					2	2
Diesel Engines I Lab					6	2
Fuel Injection Systems I					2	2
Fuel Injection Systems I Lab					4	1
Automotive Electricity					3	3
Automotive Electricity Lab (Heavy Equipment)					3	1
Machine Shop Orientation	5	3				
Machine Tool Operations			5	3		
Employer-Employee Relations					2	2
Practical Physics I, II, III	5	4	5	4	5	4
Mathematics II	3	3				
	27	18	30	18	27	17

SECOND YEAR	4th Term hrs/wk	4th Term units	5th Term hrs/wk	5th Term units	6th Term hrs/wk	6th Term units
Fuel Injection Systems II	2	2				
Fuel Injection Systems II Lab	6	2				
Diesel Engines II	2	2				
Diesel Engines II Lab	6	2				
Diesel Tune-Up & Diagnosis			2	2		
Diesel Tune-Up & Diagnosis Lab			5	2		
Diesel Engine Repair I, II			9	3	9	3
Heavy Equipment Hydraulics					5	3
Auxiliary Systems					2	2
Auxiliary Systems Lab					3	1
Applied Fluid Mechanics	2	2				
Welding IA	5	2				
Welding IB			5	2		
Welding IIB					5	2
Communication Skills I, II	3	3	3	3		
Power Steering			4	2		
Automotive Service Management					2	2
Health			2	2		
	26	15	30	16	26	13

DIESEL MECHANICS, MAJOR COURSE DESCRIPTIONS

3.320 APPLIED FLUID MECHANICS (See Auto Mechanics)

3.300 AUTO CHASSIS (See Auto Mechanics)

3.346 AUTO CHASSIS LAB I, HEAVY EQUIP. (6 lab hrs/wk) 2 Units
Laboratory 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 (See Auto Mechanics

3.352 AUTO ELEC. LAB I, HEAVY EQUIP. (3 lab hrs/wk) 1 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 Units

3.813 AUXILIARY SYSTEMS LAB (3 lab hrs/wk) 1 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 I and II or equivalent.

3.800 DIESEL ENGINES I (2 class hrs/wk) 2 Units

3.801 DIESEL ENGINES I LAB (6 lab hrs/wk) 2 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 in Diesel Mechanics Curriculum.

3.802 DIESEL ENGINES II (2 class hrs/wk) 2 Units

3.803 DIESEL ENGINES II LAB (6 lab hrs/wk) 2 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 Units
Shop and/or laboratory 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: Fifth-term standing.

3.816 DIESEL ENGINE REPAIR II .... (9 lab hrs/wk) 3 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 Units

3.809 DIESEL TUNE-UP & DIAGNOSIS LAB (5 lab hrs/wk) 2 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 Systems I and II or equivalent.

3.804 FUEL INJECTION SYSTEMS I (2 class hrs/wk) 2 Units

3.805 FUEL INJECTION SYSTEMS I LAB (4 lab hrs/wk) 1 Unit
This course covers diesel fuel systems, fuel-oil transfer pumps, injection systems, fuel injection pumps, and nozzles.
Prerequisite: Second-year standing or Diesel Engines I or Lab I or equivalent.

3.806 FUEL INJECTION SYSTEMS II (2 class hrs/wk) 2 Units

3.807 FUEL INJECTION SYSTEMS II LAB (6 lab hrs/wk) 2 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 Units

3.350 FUEL SYST. CARB., HVY EQUIP. LAB (3 lab hrs/wk) 1 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 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 I LAB (See Auto Mechanics)

3.306 INTERNAL COMBUSTION ENGINES II (See Auto Mechanics)

3.348 INTERNAL COMBUSTION ENGINES II LAB, HEAVY EQUIP. (6 lab hrs/wk) 2 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 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.
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	1st Term		2nd Term		3rd Term	
	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 and IB			5	2	5	2
Applied Economics					3	3
	27	16	29	15	28	16

SECOND YEAR	4th Term		5th Term		6th Term	
	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 Units

3.381 MACHINE SHOP I LAB (12 lab hrs/wk) 4 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 Units

3.383 MACHINE SHOP II LAB (12 class hrs/wk) 4 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 Units

3.385 MACHINE SHOP III LAB (12 lab hrs/wk) 4 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 Units

3.387 MACHINE SHOP IV LAB (12 lab hrs/wk) 4 Units
Instruction and demonstration in the use and setup of machine shop shapers and planers; calculation of cutting speeds and feed rate for different metals; use of hand devices, fixtures, and vises. Instruction in making angular cuts, vertical cuts, horizontal cuts, contour cuts, key way cuts, and slotting. Instruction in machining single and double tongue groove, cast iron blocks, dovetail, and sliding joints. Contoured sawing.
Prerequisite: Machine Shop III.

3.388 MACHINE SHOP V (3 class hrs/wk) 3 Units

3.389 MACHINE SHOP V LAB (12 lab hrs/wk) 4 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 class hrs/wk) 3 Units

3.391 MACHINE SHOP VI LAB (12 lab hrs/wk) 4 Units
Theory of spur gears, center-to-center distance of gears, chain sprockets, chain drivers, bearings, bronze anti-friction and babbit, 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

3.392 MACHINE SHOP ORIENTATION (2 class - 3 lab hrs/wk) 3 Units
This course will acquaint the student with the various machine shop tools and their use. Instruction will be provided in the setup and operation of machine shop.

3.393 MACHINE TOOL OPERATION (2 class - 3 lab hrs/wk) 3 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 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 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 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 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

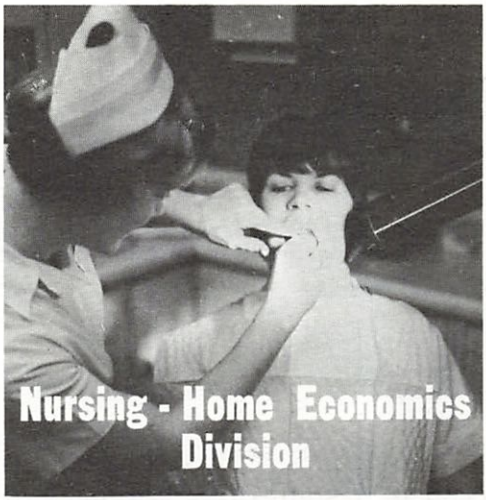
R.N. Nursing

Management in Family Living

Marriage and Family

Nutrition

ELLENE GOLDSMITH
Division Chairman



OCCUPATIONAL COURSES AND PROGRAMS

PRACTICAL NURSING
(One-Year Program)

The purpose of this 4-term program 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. 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, above 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 equivalent 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 ocupation. For admission a personal interview will be required and a pre-test given. The final selection of class membership will be made by the counseling services.

Applications to the course may be made at any time during the year, but only those which are on file two months prior to beginning of a class will be considered. Special admissions will be evaluated on an individual basis.

The curriculum is made up to include classroom instruction and supervised practice in community health facilities. Sacred Heart General Hospital cooperates with the school in giving the students the major portion of their clinical practice.

	1st Term Units	2nd Term Units	3rd Term Units	4th Term 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 Units	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 Hrs.	Units
Medical	360	7
Surgical	360	7
Orthopedics	90	2
Obstetrics	270	6
Pediatrics	150	3
*Total Hours and Units	1,230	25

COURSE DESCRIPTIONS FOR PRACTICAL NURSING

5.500 NURSING SKILLS (100 class - 90 lab hrs) 11 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 hrs) 10 Units*
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 Units*
A study of professional ethics teaches correct manners in dealing with patients, their friends and relatives, as well as with co-worker. 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 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 clinic hours) 8 Units*
Includes medication for women and men. Practice in diet kitchen.

5.542 SURGICAL CLINICAL PRACTICE (390 clinic hours) 8 Units*
Includes experience on women's gynecology, men's genito-urinary and neuro-surgery services.

5.550 ORTHOPEDICS (90 clinic hours) 2 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 Units*
Care of mother in labor, during postpartum, and the care of the new-born infant.

5.556 PEDIATRICS (150 clinic hours) 3 Units*
Care of infants and children includes all illnesses of infants, and children up to 16 years of age, including isolation.

* The assigned clock hours and units are being reviewed for possible change to comply more closely with college patterns.

PROGRAMS IN DEVELOPMENTAL STAGE

Nurses Aides — A one-term program for aides will be designed for the 1967-68 college year. This will prepare students for employment by nursing homes, hospitals, and Home Health agencies.
Associate Degree Nursing — This two-year program prepares a student to become a registered nurse. It will be prepared during 1967-68 with an anticipated starting date by the fall of 1968.

Dental Hygiene — A two-year program for dental hygienists will be studied and prepared during 1967-68, with a tentative plan to introduce the program the fall term of 1968.

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 September 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 programs of study.

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.

COLLEGE TRANSFER COURSES

FL 222 MARRIAGE — 2 Units
Open to men and women. Historical, sociological, and psychological aspects of love, dating, courtship, mate selection, and engagement.

FL 223 FAMILY LIVING — 2 Units
Open to men and women. Historical, sociological, and psychological aspects of early marital adjustment, child rearing, bereavement and divorce.

FN 225 NUTRITION — 3 Units
Scientific study of foods; maintenance of health through choice of food; nutritional problems, evaluation of food advertising, packaging, and labeling.

DENTAL ASSISTANT

The purpose of this program is to prepare female applicants, 18 years of age and over, for certification in this vocation.

The Dental Assistant course is a three-term, one-academic-year program. It consists of basic science, communication, radiology, the use of dental equipment, and the techniques of chair-side assisting; as well as actual experience under professional supervision. Integrated into the program are the concepts of oral health service, understanding of good personal relationships, and professional conduct appropriate to dental practice.

	1st Term			2nd Term			3rd Term		
	hrs/wk		units	hrs/wk		units	hrs/wk		units
Introduction to Practice	5	2	6						
History, Ethics, and Jurisprudence	2		2						
Orientation: Equipment, Materials, Supplies	3	1	4						
Patient Education	1		1						
Dental Sciences: Bacteriology, Hygiene, Nutrition, Pharmacology, Gross Anatomy	4	1	5						
Dental Anatomy	2		2						
X-Ray, Part I	2	2	2						
Typing II	2	3	3						
Communication for Dental Assistants				3		3			
Practices and Procedures				6	6	8			
First Aid				3		3			
Dental Pathology				1	1	2			
Bookkeeping and Accounting for Dental Assistants				2	3	3			
X-Ray, Clinical, Part II				1	3	2			
Patient Management and Applied Psychology							15 (3 wks)		4
X-Ray, Part III							15 (3 wks)		2
Clinical Practice							40 (6 wks)		6
Review and Practice							10	20 (2 wks)	3
	21	9	26	16	13	21	25	75	15

COURSE DESCRIPTION FOR DENTAL ASSISTANT

5.401 INTRODUCTION TO PRACTICE (5 class - 2 lab hrs/wk) 6 Units
The purpose of dentistry, the roles of the dentist, and all auxiliary personnel. The requirements, education, need and demand, general description, and characteristics of the position; areas of service and duties pertaining to the profession of dental assisting. An introduction into all phases of dentistry.

5.403 HISTORY, ETHICS, AND JURISPRUDENCE
(2 class hrs/wk) 2 Units
A study of the history of dentistry, the ethics of the profession, and the laws governing the profession.

5.405 ORIENTATION: EQUIPMENT, MATERIALS, SUPPLIES
(3 class - 1 lab hrs/wk) 4 Units
A complete breakdown and study of equipment, instruments, and their care. The study of dental materials: their structure, properties, and manipulation. The responsibilities and procedures for ordering various supplies; the care and storage of dental supplies.

5.407 PATIENT EDUCATION (1 class hr/wk) 1 Unit
The study of dental health education objectives, including preventive dentistry, technique of prophlaxis, operative, corrective, and restorative procedures related to prevention.

5.410 DENTAL SCIENCES: BACTERIOLOGY, HYGIENE, NUTRITION, PHARMACOLOGY, GROSS ANATOMY
(4 class - 1 lab hrs/wk) 5 Units
A basic study of structure and function of cells, tissues, organs, and systems of the human body. A study of nutrition, hygiene, bacteriology, microbiology; and the importance of these as related to dentistry. A study of pharmacology and the general aspects, sources, types, purposes, and compositions of the drugs; and the method of prescribing and administration.

5.415 DENTAL ANATOMY (2 class - 2 lab hrs/wk) 2 Units
The study of the oral cavity, joints, supporting structures, functions, classifications, and the nerves relating to the oral cavity.

5.416 **X-RAY, PART I** (2 class - 2 lab hrs/wk) 3 Units
The complete theory background of X-ray, terminology, safety factors, biological effects of radiation, dark room procedures; operation of the dental X-ray machine, including the breakdown of the functions and the legal aspects pertaining to X-ray films.

5.419 **COMMUNICATION FOR DENTAL ASSISTANTS**
(3 class hrs/wk) 3 Units
The course is designed to develop the basic skills in communication; reading, writing, listening, and speaking. Principles of composition, gathering data, and basic forms of writing reports are covered. The importance of these skills in dental professional field is stressed.

5.431 **PRACTICES AND PROCEDURES** (6 class - 6 lab hrs/wk) 8 Units
Oral diagnosis and treatment planning, assisting in operative procedures, endodontic therapy, oral surgery and anesthesia, pedodontics, orthodontics, inlay investments and casting procedures, crown and bridge, and prosthodontics are all thoroughly covered.

5.435 **DENTAL PATHOLOGY** (1 class - 1 lab hrs/wk) 2 Units
The study of oral pathology. The normal tissues, diseased or injured tissues, developmental anomalies, dental caries, abcesses and cysts are a few of the areas studied.

5.439 **BOOKKEEPING AND ACCOUNTING FOR DENTAL ASSISTANTS** (2 class - 3 lab hrs/wk) 3 Units
The basic principles of bookkeeping and accounting applied to the dental field, including the bookkeeping cycle, journals, and ledgers, special journals and subsidiary ledgers, and financial statements.

5.417 **X-RAY, CLINICAL, PART II** (1 class - 3 lab hrs/wk) 2 Units
Continuation of X-ray I.
Prerequisite: X-ray, Part I.

5.433 **PATIENT MANAGEMENT AND APPLIED PSYCHOLOGY**
(Total 45 class hours) 4 Units
Public relations, maturation of patients, development of the office personnel's contact with the public, and personality improvement are stressed; as well as the basics of applied psychology with patients, particularly with children.

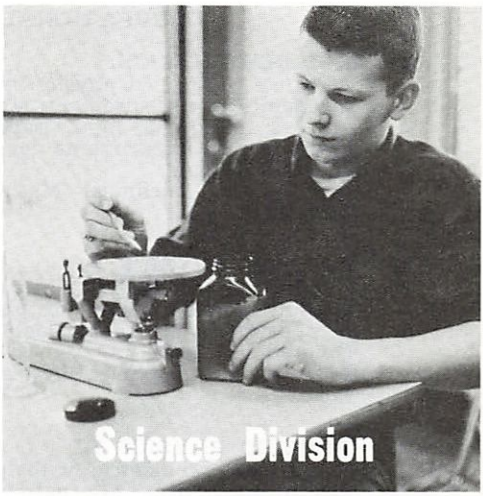
5.418 **X-RAY, PART III** (15 lab hrs/wk for 3 weeks) 2 Units

5.457 **CLINICAL PRACTICE** (40 hrs/wk for 6 weeks) 6 Units
Students will be assigned to actual clinical practice in three dental offices. The duration of each experience will be two weeks. Upon completion, the students will be evaluated by the dentist and the report sent to Lane Community College.
Prerequisite: Completion of second term of Dental Assisting curriculum.

5.461 **REVIEW AND PRACTICE** (10 Theory hrs. and 20 lab hrs) 3 Units
Final review of course content and practice.
Prerequisite: Completion of all courses in curriculum.

Anatomy
Bacteriology
Biology
Botany
Chemistry
Physics
Physical Science
Physiology
Zoology

JOHN JACOBS
Division Chairman



COLLEGE TRANSFER COURSES

GS 101, GENERAL BIOLOGY (3 class - 3 lab hrs/wk) 4 Units

102, 103 Biological principles applied to both plants and animals. Student may enter any term.

Bot. 201, GENERAL BOTANY (2 class - 3 lab hrs/wk) 3 Units

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. Students may enter first or second term. Bot. 201, or 202 prerequisite to Bot. 203.

Ch. 101, GENERAL CHEMISTRY (2 class - 3 lab hrs/wk) 3 Units

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.

Ch. 201, GENERAL CHEMISTRY (2 class - 3 lab hrs/wk) 4 Units

202, 203 Service course covering basic principles of general chemistry. Prerequisite: One year of high school chemistry and acceptable college-aptitude scores.

Ph. 201, GENERAL PHYSICS (4 class - 3 lab hrs/wk) 4 Units

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. Prerequisite: Math 102 or equivalent high school trigonometry.

Z 201, GENERAL ZOOLOGY (3 class - 3 lab hrs/wk) 3 Units

202, 203 For zoology majors and premedical, predental, prenursing, prepharmacy students and others. Students may enter any term.

GS 104, PHYSICAL SCIENCE (3 class - 2 lab hrs/wk) 4 Units

105, 106 Fundamental principles of physics, chemistry, astronomy, and geology; development and application of the scientific method. Students are advised to complete one year of high school algebra, or equivalent, as prerequisite to the course. Students may enter any term.

OCCUPATIONAL COURSES

6.370 APPLIED PHYSICS I (3 class - 2 lab hrs/wk) 4 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. Laboratory 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 Units
Covers the principles of vectors, kinematics, work-power-energy machines, and angular vectors. Laboratory time is provided for demonstrations and experiments covering principles and procedures covered in class.
Prerequisite: Applied Physics 6.362 or approval of department head.

6.366 APPLIED PHYSICS III (3 class - 2 lab hrs/wk) 4 Units
Magnetism and electricity, including basic electric currents, sources, electro-magnetism, alternating current, generators, and motors. Laboratory time is provided for demonstrations and experiments to clarify principles and procedures covered in class.
Prerequisite: Technical Mathematics 6.262 or equivalent.

5.601 HUMAN ANATOMY AND PHYSIOLOGY I
(2 class hrs/wk) 2 Units

5.603 HUMAN ANATOMY AND PHYSIOLOGY I LAB
(3 lab hrs/wk) 1 Unit
A medically-oriented study of the human body, beginning with the single cell and continuing through histology to the skeletal, muscular, and nervous systems. Emphasis on the body as a complex, carefully integrated group of systems functioning as a whole.
Prerequisite: Nursing student or consent of instructor.

5.602 HUMAN ANATOMY AND PHYSIOLOGY II
(2 class hrs/wk) 2 Units

5.604 HUMAN ANATOMY AND PHYSIOLOGICAL II LAB
(3 lab hrs/wk) 1 Unit
A continuation of Human Anatomy and Physiology I (5.601). Circulatory, respiratory, alimentary, endocrine, and reproductive systems are treated. Emphasis on integrative control mechanisms. Concurrent enrollment in Human Anatomy and Physiology Laboratory II.
Prerequisite: Human Anatomy and Physiology I.

5.606 MICROBIOLOGY (BACTERIOLOGY)
(1 class - 4 lab hrs/wk) 3 Units
A medically-oriented study of bacteria and other micro-organisms concerned with normal and pathogenic bahavior. Emphasis on sterile techniques, and application of the course content to diagnosis, prevention, and treatment of hospital patients.
One one-hour lecture and two two-hour laboratory discussion periods.
Prerequisite: Human Anatomy and Physiology II (5.602).

4.300 PRACTICAL PHYSICS I (Mechanics)
(3 class - 2 lab hrs/wk) 4 Units
An introductory course in practical physics covering matter, measurements, mechanics, and machines. Laboratory 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 (Heat, Sound, Light)

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

An introductory course in practical physics covering heat, light, and sound. Laboratory 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 (Electricity)

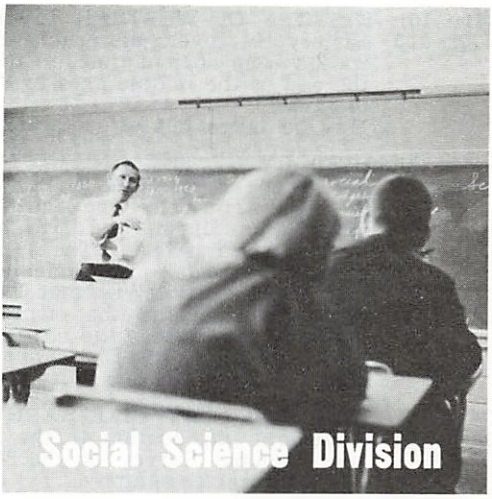
(3 class - 2 lab hrs/wk) 4 Units

This is an introductory course in practical physics covering magnetism and electricity. Laboratory time is provided for demonstrations and experiments to clarify the principles and procedures covered in class.

Prerequisite: Mathematics 4.202 or equivalent.

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

Gerald Rasmussen
Division Chairman



COLLEGE TRANSFER COURSES

PS 201, 202, 203 **AMERICAN GOVERNMENTS** 3 Units each
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.

LE 113 **ELEMENTS OF LAW FOR POLICE OFFICERS** 3 Units
Overview of the salient principles of law which have special application to police work, including criminal law, law of arrests, law of search, seizure, and evidence, automobile law. Discussion of court procedures.

Geog 221 **FIELD METHODS IN GEOGRAPHY** 3 Units
A study in depth of a limited area near Eugene providing a basis for introductory training in the interpretation of interrelated physical and cultural constituents of a total environment within Lane County, and the compilation of data and the construction of maps.

Anth. 101, 102, 103 **GENERAL ANTHROPOLOGY** 3 Units each
101: Man as a living organism; biological evolution; fossil man. 102: Prehistoric cultures. 103: Organization and functioning of culture. 2 lectures - 1 discussion period per week.
May be taken out of sequence.

Psy 201, 202, 203 **GENERAL PSYCHOLOGY** 3 Units each
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, 205, 206 **GENERAL SOCIOLOGY** 3 Units each
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 OF WESTERN CIVILIZATION** 3 Units each
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.
May be taken out of sequence.

Hst 201, 202, 203 **HISTORY OF THE UNITED STATES** 3 Units each
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.
May be taken out of sequence.

Geog 105, 106, 107 **INTRODUCTORY GEOGRAPHY** 3 Units each
A general introduction to the field of geography. 105: Physical and Regional Survey of the World; 106: Economic Geography; 107: Cultural Geography.

PS 205 **INTERNATIONAL RELATIONS** 3 Units
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.

LE 112 **ORGANIZATION AND ADMINISTRATION OF LAW ENFORCEMENT AGENCIES** 3 Units
Application of the principles of organization and administration to law enforcement agencies at the federal, state, and municipal levels.

LE 111 **POLICE AND SOCIETY** 3 Units
A study of the purpose, function, and brief history of the agencies dealing with the administration of justice. Survey of requirements for entering police service. Origin and evolution of law enforcement agencies. Discussion of crime; the criminal, traffic, and vice as social and police problems; functions of the courts; prosecuting and defense attorneys; correctional and penal institutions; probation and parole; American and foreign police systems.

Phl 201, 202, 203 **PROBLEMS OF PHILOSOPHY** 3 Units each
An introduction to philosophical problems through the study of philosophical classics.

OCCUPATIONAL COURSES

1.600 **AMERICAN INSTITUTIONS** (3 class hrs/wk) 3 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 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, man-

agement association, labor-management relations, labor legislation, and social and private security.

4.500 EMPLOYER-EMPLOYEE RELATIONS (2 class hrs/wk) 2 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 covered.

1.606 INTRODUCTION TO PSYCHOLOGY (3 class hrs/wk) 3 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.

9.508 LABOR, MANAGEMENT RELATIONS (3 class hrs/wk) 3 Units

The course covers the history and development of the Labor movement. Labor acts, the union contract, and grievance procedures are presented.

1.608 PSYCHOLOGY OF HUMAN RELATIONS (3 class hrs/wk) 3 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.

FIRE SCIENCE
(2 Year Program)

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

Demand for qualified fire fighters is greater than the supply of trained personnel. Persons interested in entering this field should be in good physical health and have proven stamina under physical strain.

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

	1st Term			2nd Term			3rd Term		
	Class hrs/wk	Lab	units	Class hrs/wk	Lab	units	Class hrs/wk	Lab	units
Communication Skills I, II	3		3	3		3			
Fire Apparatus & Equipment	2	3	3						
Mathematics	3		3						
Introduction to Fire Protection	3		3						
Practical Physics I, II	3	2	4	3	2	4			
Introduction to Psychology				3		3			
Drafting I, II					4	2		4	2
Physical Science of Fire*				3	3	3			
Fire Fighting Skills I								9	3
Fire Department Hydraulics*							3	3	3
Report Writing*							3		
Company Organization and Station Assignments							3		3
General Education Elective							3		3
	14	5	16	12	9	15	12	16	18

123

	4th Term Class-Lab hrs/wk		units	5th Term Class-Lab hrs/wk		units	6th Term Class-Lab hrs/wk		units
American Institutions	3		3						
Hazardous Material I*, II*	2	3	3	2	3	3			
Fundamentals of Fire Prevention*	3		3						
Fire Fighting Skills II, III	1	6	3	2	3	3			
Pump Operation and Practical Hydraulics*	2	3	3						
Psychology of Human Relations				3		3			
Building Construction for Fire Prevention*				2	3	3			
Fire Department Communications and Alerting System*				2		2			
First Aid				1	3	2			
Rescue Practices								6	2
Water Distribution Systems*							3		3
Fixed Systems and Extinguishers*							2	3	3
Fire Investigation*							3	3	4
Fire Fighting Tactics and Strategy							3		3
	11	12	15	12	12	16	11	12	15

*Recommended in-service core program

FIRE SCIENCE COURSE DESCRIPTIONS

5.264 BUILDING CONSTRUCTION FOR FIRE PREVENTION (2 class - 3 lab hrs/wk) 3 Units

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

5.258 COMPANY ORGANIZATION AND STATION ASSIGNMENT (3 class hrs/wk) 3 Units

Fire company organization and operation; company responsibilities in station, including record keeping, state communications; and watch, housekeeping and house privileges, tours and public relations, company organization for response to alarms, company morale.

5.253 FIRE APPARATUS AND EQUIPMENT (2 class - 3 lab hrs/wk) 3 Units

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

5.267 FIRE DEPARTMENT COMMUNICATIONS AND ALERTING SYSTEMS (2 class hrs/wk) 2 Units

Dispatching, receiving, and radio communication procedures; FCC regulations; municipal box alarm; telephone and tone-activated alarm; recording messages; tap-out procedures, running cards, etc.

5.257 FIRE DEPARTMENT HYDRAULICS (3 class - 3 lab hrs/wk) 4 Units

Review of basic mathematics; hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculations to hydraulic problems; fire ground water-supply problems; Underwriters' requirements for pumps and accessories.

5.250 FIRE FIGHTING SKILLS I (9 lab hrs/wk) 3 Units

Individual skills using small tools and minor equipment, practice in forcible entry, use of masks, and other activities generally performed by the individual.

5.251 FIRE FIGHTING SKILLS II (1 class - 6 lab hrs/wk) 3 Units

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

5.252 FIRE FIGHTING SKILLS III (2 class - 3 lab hrs/wk) 2 Units
Practice in skills involving multi-company operations, including simultaneous activities of ladder, engine, and salvage companies; manning large stream appliances, coordinating communications, etc.

5.274 FIRE FIGHTING TACTICS AND STRATEGY
(3 class hrs/wk) 3 Units
Response and size-up; fire ground tactics; analysis and post-mortem; pre-fire survey and planning.

5.273 FIRE INVESTIGATION (3 class - 3 lab hrs/wk) 4 Units
Effect on fire prevention by isolating cause of fire; interpreting clues and burn patterns leading to point of origin; identifying sources of ignition and materials ignited; preservation of the fire scene.

5.272 FIXED SYSTEMS AND EXTINGUISHERS
(2 class - 3 lab hrs/wk) 2 Units
Portable extinguisher equipment; sprinkler system; protection systems for special hazards; fire alarm and detection systems; ventilating systems.

5.262 FUNDAMENTALS OF FIRE PREVENTION
(3 class hrs/wk) 3 Units
Organization and function of a fire prevention bureau; fire prevention codes; state and local laws and ordinances; familiarization with principles of fire prevention; the inspector's job; public relations.

5.260 HAZARDOUS MATERIALS I (2 class - 3 lab hrs/wk) 3 Units
Review of basic chemistry; identification of hazardous materials by color, symbol, and marking; recommended safe practices for storage and handling of solids, liquids, and gases; methods for fire control of these materials.

5.261 HAZARDOUS MATERIALS II (2 class - 3 lab hrs/wk) 3 Units
Methods for combating fires involving hazardous chemicals and other materials; radiation hazards of the fire service; space age fuel; highway transportation explosives, etc.

5.254 INTRODUCTION TO FIRE PROTECTION
(3 class hrs/wk) 3 Units
Philosophy and history of fire protection, history of loss of life and property by fire; role and responsibility of the fire department in the community; organization and function of local, county, state, federal, and private fire protection agencies and allied organizations; sources of professional literature; survey of professional career opportunities.

5.256 PHYSICAL SCIENCE OF FIRE (3 class - 3 lab hrs/wk) 3 Units
Characteristics and behavior of fire; fundamentals of physical laws and chemical reactions occurring in fire and fire suppression; analysis of factors contributing to fire — its cause, rate of burning, heat generation and travel, by-products of combustion— and to its confinement, control, and extinguishment.

5.263 PUMP OPERATION AND PRACTICAL HYDRAULICS
(2 class - 3 lab hrs/wk) 3 Units
Principles of fire apparatus pumping operations; fire ground water supply; construction and operation of fire service pumps and accessories; pump operation under emergency conditions; rule-of-thumb hydraulics.

5.268 RESCUE PRACTICES (6 lab hrs/wk) 2 Units
Electrical; use of rescue tools; common rescue carries; search and rescue procedures; handling nets; care of victim, excavation emergencies; evacuations.

5.269 WATER DISTRIBUTION SYSTEMS (3 class hrs/wk) 3 Units
Main systems; hydrants: size, gridding, valving, distribution; residential and commercial districts; fire flow requirements; pumping stations; high pressure systems; storage tanks and cisterns; mobile supplies.

LAW ENFORCEMENT CURRICULUM
(Two 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, sheriffs' offices, and various other law enforcement related agencies. It also provides opportunities for those persons already engaged in law enforcement occupations to obtain further training for additional competency, or retraining that will help them qualify for higher-level positions.

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

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-time and also attends school part-time.

FIRST YEAR	1st Term		2nd Term		3rd Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
Administration of Justice	3	3				
Communication Skills I, II	3	3	3	3		
Criminal Law I, II			3	3	3	3
Emergency Care and Rescue (First Aid III)					2	1
First Aid I, II	2	1	2	1		
Introduction to Law Enforcement	3	3				
Introduction to Psychology			3	3		
Police Report Writing					3	3
Psychology of Human Relations					3	3
Public Speaking					4	2
Traffic Control					5	3
Typing I, II	6	2	6	2		
Electives	3	3	3	3	3	3
	20	15	20	15	23	18

SECOND YEAR	4th Term		5th Term		6th Term	
	hrs/wk	units	hrs/wk	units	hrs/wk	units
American Institutions					3	3
Criminal Evidence	5	3				
Criminal Investigation I, II, III	5	3	5	3	5	3
Defense Tactics I, II			2	1	2	1
Field Work I, II			2	1	2	1
Firearms I, II	2	1	2	1		
Jail Procedures					2	1
Juvenile Procedures			5	3		
Patrol Procedures	5	3				
Photographic Evidence	2	1				
Problems of Physical Evidence I, II, III	5	3	5	3	5	3
Electives	3	3	3	3	3	3
	27	17	24	15	22	15

LAW ENFORCEMENT COURSE DESCRIPTIONS

5.202 ADMINISTRATION OF JUSTICE (3 class hrs/wk) 3 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 Units
The kinds and degrees of evidence and the rules governing the admissibility of evidence in court.

5.216 CRIMINAL INVESTIGATION I (2 class - 3 lab hrs/wk) 3 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 II (2 class - 3 lab hrs/wk) 3 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 III (2 class - 3 lab hrs/wk) 3 Units
A continuation of Criminal Investigation 5.217. Description to be developed.

5.208 CRIMINAL LAW I (3 class hrs/wk) 3 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 Units
A continuation of Criminal Law 5.208. Description to be developed.

5.204 DEFENSIVE TACTICS I (2 lab hrs/wk) 1 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 Unit
A continuation of Defensive Tactics 5.204. Description to be developed.

5.230 FIELD WORK I (2 lab hrs/wk) 1 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 II (2 lab hrs/wk) 1 Unit
A continuation of Field Work II. Description to be developed.

5.226 FIREARMS I (2 lab hrs/wk) 1 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 Unit
A study of law enforcement uses of rifles, shotguns, Thompson submachine guns; and the legal and moral aspects involved. The use of rifles and shotguns in sports and the laws pertaining to such.

5.200 INTRODUCTION TO LAW ENFORCEMENT
(3 class hrs/wk) 3 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 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 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 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 PHOTOGRAPHIC EVIDENCE (2 lab hrs/wk) 1 Unit
The study and practice of the various uses of photography in police work, including the identification of persons and things; use in storing of information, evidence, and proof; uses in crime solving, surveillances, and other offender action; court exhibits; training, and public relations.

5.241, 5.242, 5.243 PROBLEMS OF PHYSICAL EVIDENCE I, II, III
(2 class - 3 lab hrs/wk) 3 Units each
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 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 reports, effectiveness of writing styles, gathering of facts for a typing of a report, and visual aids in a report.

5.210 TRAFFIC CONTROL (2 class - 3 lab hrs/wk) 3 Units
Traffic law enforcement, regulation and control; fundamentals of traffic accident investigation; Oregon Motor Vehicle Code.

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 begins the middle of June and lasts until about September 1. Terms are sometimes referred to as quarters.

A **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 unit 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 unit 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 identified with letters and 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.

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.

ADMINISTRATIVE AND INSTRUCTIONAL STAFF

(1966-67 Academic Year)

ALFORD, EVAN C., Communication Skills—B.S., Education, University of Oregon.

ALLEN, ROBERT T., Civil Engineering — B.S., Civil Engineering, Iowa State University.

AMES, MERLIN S., Food Services—Oregon Vocational Certificate.

ARMSTRONG, MABEL, Chemistry —B.S., Chemistry, Oregon State University; M.S., Biochemistry, Oregon State University.

ARMSTRONG, PAUL, English — B.A., Chico State College, California; M.A., English, University of Oregon.

BAILEY, WILBERT G., Counselor — B.A., Vocational Agriculture; M.Ed., Counseling, Pennsylvania State.

BEALS, WILLIAM J., JR., History —B.A., History, Franklin and Marshall College, Lancaster, Pa.; M.A., University of Southern California.

BERNHAM, JOHN A., Counselor — B.A., English, Cascade College, Portland; M.Ed., Counseling, University of Oregon.

BERNHARDT, NORMA, English — B.A., English and Piano, Salem College, N. C.; M.Ed., Ph.D., Education, University of North Carolina.

BIRD, HOWARD F., Director of Study Skills — B.S., Elementary Education, Brigham Young University; M.Ed., Special Education, Wayne State University; Ph.D., University of Minnesota.

BLOOD, CARL A., Industrial Technology Division Chairman — B.S., M.Ed., Industrial Arts, Oregon State University.

BLOOMQUIST, GILBERT R., Assistant Dean of Instruction — B.S., University of Oregon; M.Ed., Oregon State University.

BOETTCHER, ROBERT J., Biology —B.A., Biology, Jamestown College; M.A., Biology, University of Oregon.

BURNS, RALPH E., Counselor — B.S., B.S., M.Agriculture, Oregon State University.

CASE, LEWIS E., Speech — B.S., Public Address, Syracuse University; M.A., Rhetoric, University of Pittsburgh; Honorary Doctor of Laws, Harding College, Searcy, Arkansas.

COUCHMAN, BETTY ANN, French —B.A., San Francisco State.

COWLEY, HUGH F. R., Business—B.B.A., M.B.A., Marketing, University of Oregon.

COX, WILLIAM W., Dean of Administration—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., Physical Education, University of Oregon.

deBROEKERT, CARROL M., History — B.A., M.A., Political Science and History, University of Oregon.

DELLINGER, WILLIAM, Physical Education—B.S., Physical Education, M.Ed., University of Oregon.

DICKINSON, DONALD, Airframe and Powerplant Mechanics—A & P Certificate, Oregon Vocational Certificate.

DIXON, PAULINE, Counselor—B.A., Journalism; M.Ed., Counseling, University of Oregon.

DOTSON, BERT J., College-Community Relations, Assistant to the President—B.S., Education, M.Ed., University of Oregon.

ELLSWORTH, GERMAN C. M., Aircraft — B.S., Aeronautics, Utah State University, A & P Certificate.

EYMANN, RICHARD, Assistant to the President for Funding and Development — M.A., Business Administration, Dartmouth College.

FAVIER, VICTOR E., Biology — B.A., Zoology, University of Colorado; M.S., Biology, University of Oregon.

FRAGA, RICHARD T., Botany — B.S., Botany, Oregon State University; M.S., Biology, University of Oregon.

FRIEDT, DOLORES M., Nursing — R.N., University of Oregon.

GASKILL, MELVIN C., Division Chairman, Mechanics—Oregon Vocational Certificate, Curtiss Wright Tech., FAA Certificate, A & P Mechanics.

GOLDSMITH, ELLENE M., Division Chairman, Nursing and Home Economics — B.S., University of Minnesota; R.N., L.P.N., M.S., Health Education, University of Oregon.

GOULDING, FLORENCE W., Health and Physical Education—B.S., University of Utah; M.S., UCLA; Ph.D., Physical Education, University of Oregon.

GRANT, PATRICK, Small and Major Appliance Repair—Oregon Vocational Certificate.

GUBRUD ALLAN, Physical Science and 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., Mathematics and Physics—B.S., Education, Wisconsin State College; M.S., Physics, University of Oregon.

HARKER, KEITH H., Director of the Library, LRC—B.S., Library Science, University of Utah; M.S., Librarianship, University of Oregon.

HARTSTROM, MILDRED E., Business Education—B.S., Finance and Business Environment; Vocational Certificate.

HEIN, WILLIAM J., Dean of Instruction — B.A., Education, M.A., Education Administration, San Francisco State College; Advanced graduate work, Stanford University.

HEISERMAN, GLENN R., Biology —B.S., M.S., Biology, University of Michigan.

HILLS, KENNETH D., Counselor — B.A., Northwest Nazarene College; M.A., Ph.D., University of Wyoming.

HODGES, CECIL M., Division Chairman Physical Education and Health—B.Ed., M.S., Health and Physical Education, University of Oregon.

HODGES, MARCIA J., English — 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; M.Ed., Guidance, University of Oregon.

HOWARD, JOHN E., Division Chairman Language Arts—B.A., Education and English; M.A., English, University of North Dakota.

HUNTINGTON, JAMES R., Electronics—Radio Announcer and Engineering, Vocational Certificate.

ISAACSON, DONALD W., Welding —Vocational Certificate.

JACOBS, JOHN W., Division Chairman Mathematics and Science— B.S., M.S., Biological Science, Oregon State University.

JOHNSON, JORIS O., Adult Education Coordinator of Occupational Education — Oregon Vocational Certificate.

JONES, EDITH A., Business Education—B.S., Education, Nebraska Wesleyan University.

JOSSART, DARYL A., Diesel—Oregon Vocational Certificate.

JUBA, SHEILA B., English — B.A., M.A., English, University of Oregon.

KLEMKE, LLOYD, Sociology—B.A., M.A., in Sociology, San Fernando State.

KROEGER, MARIE, Librarian — B. Music, University of Louisville; M.A., Library Science, University of Oregon.

LANSDOWNE, KAREN, English — B.A., M.A., English and Language, University of Oregon.

LEMKE, CARL, Airframe and Power Plant—Oregon Vocational Certificate, FAA certified A & P Mechanic, FAA Mechanic Examiner and ground school instructor.

LUCK, GEORGE, Body and Fender Repair—Oregon Vocational Certificate.

MALM, PAUL M., History — B.A., History, Southern California College; M.A., History, Claremont University, California.

MANLEY, WILLIAM D., Physical Science—B.A., Physics, Northwest Nazarene College; M.S., Physics, Oregon State University.

MANSELL, WILLIAM E., Clerk-Controller—B.S., Business Administration, University of Oregon.

MARSHALL, ROBERT B., Director of M.D.T.A.—B.S., M.A., Industrial Vocational Education, Pennsylvania State University.

MAST, GEORGE L., Diesel Mechanics—Oregon Vocational Certificate.

MAXWELL, ROBERT D., Auto Mechanics—Oregon Vocational Certificate.

McCARROLL, DARWIN, Radio and TV Repair — Oregon Vocational Certificate, FCC Radiotelephone First Class License.

MERRILL, O. JED., Civil and Structural Engineering—Oregon Vocational Certificate; B.S., University of Oregon.

MITCHELL, RONALD F., Psychology — B.A., Psychology, Fresno State College; M.S., University of Oregon.

MORRIS, WILLIAM R., Assistant Dean of Adult Education — B.S., Agriculture Education; M.Ed., Education, University of Oregon.

NEWTON, E. ANN, Nursing—B.S., R.N. Nursing, University of Oregon.

NOTT, RAY JR., Major Appliance Repair—Oregon Vocational Certificate.

PARENT, IRENE, Counselor—B.S., Pacific University; M.Ed., Oregon State University.

PARNELL, DALE P., President — B.A., Willamette University; M. Ed., D.Ed., University of Oregon.

PARRO, EUGENE Z., Carpentry and Cabinetmaking—Oregon Vocational Certificate.

PATRICK, PAUL C., Farm Mechanics — B.S., M.Agriculture, Oregon State University; Oregon Vocational Certificate.

PETERSON, MURIEL A., Dental Assistant—Graduate Dental Hygienist, University of Oregon.

PHILLIPS, JOHN M., Forestry — B.S. Forestry, University of California.

PORTER, GILBERT M., English — B.A. English, North Texas State College; M.A., English, North Texas State University.

PRUETT, HERBERT, Auto Mechanics—B.E., M.Ed., Trade and Industrial Education, Oregon State University.

RASMUSSEN, GERALD, Division Chairman Social Science — B.S., M.A., History, University of Oregon.

REID, BRUCE A., English — B.A., English, Whitworth College; M.A., English, University of Washington.

RHOLL, GARY O., Business Education—B.A., Business Education, University of Iowa; M.B.A. Finance, University of Oregon.

ROBINSON, ANTOINETTE, English —B.A., College of Notre Dame, Belmont, Calif., M.A. English, University of Nevada.

ROMINE, LAURENCE A., Journalism—B.A., Sociology, Midland College, M.S. Journalism, University of Oregon.

RUITER, WILLIAM W., Electrical Drafting—B.S., Speech Education, University of Oregon; M.S., Technical Education, Oregon State University.

RUSHING, ROY D., Welding—Oregon Vocational Certificate.

RYAN, BOYD A., Chemistry—B.S., Chemistry, Pasadena College; M.S. Chemistry, University of Washington.

SCALES, JACK D., Physics — B.S. Technical Education, Oklahoma State University.

SCHLAADT, RICHARD G., Physical Education and Health—B.S., Lewis and Clark College; M.S., University of Illinois; D.Ed. in Health, Oregon State University.

SMITH, HAZEL, Mathematics and Science—B.A., Education, University of Alberta; M.S., Mathematics, Michigan State University.

SNOW, JAMES W., Mathematics — B.A., Mathematics and Chemistry; M.A., Mathematics, Colorado State University.

SPETH, EDWARD W., Psychology — B.S., M.S., Ph.D., Psychology, University of Pittsburgh.

THYGESEN, RUTH, Business Education — Oregon Vocational and Adult Education Certificate.

UNDERHILL, ARLENE, Nursing — R.N. Sacramento City College; B.S., University of Oregon.

VAALER, ADRIAN W., Civil and Structural Engineering—B.S., Civil Engineering, University of North Dakota; Oregon Vocational Certificate.

WEHNER, GORDON, Social Science —B.A., Accounting, Economics and Humanities, Lewis and Clark College; M.S. University of Oregon.

WEITZEL, FLOYD E., Biology — B.A., George Fox College; M.A., Zoology, University of Colorado.

WILLIAMS, NILE, Adult Education Coordinator of General Education —B.A., Social Science, College of Idaho; M.Ed., University of Oregon.

WINGER, MARVIN, Auto Mechanics—Oregon Vocational Certificate.

WRIGHT, WILLIAM A., Director of Admissions—B.A., Science Education; M.Guidance and Counseling, Oregon State University.

ZINK, HOWARD E., Mathematics— B.A., Northwest Nazarene College; M.S. Mathematics, University of Colorado.

REGULAR PART-TIME INSTRUCTIONAL STAFF

BACHMAN, ALFRED, Mathematics —B.S., Mathematics, Oregon College of Education; M.S., Mathematics, University of Oregon; M. Ed., Secondary Education, University of Oregon.

BAYES, MAURINE, Business Education—Oregon State Vocational Certificate.

BROCK, JAMES L., Electronics — B.S., Sociology, University of Oregon; Oregon Vocational Certificate.

DeCHAINE, VIRGINIA, Speech — B.S., Speech, University of Oregon.

ELLISON, JAMES, Study Skills — B.S., Biology, Oregon State University; M.S., Biological Science, Oregon State University.

FERGUSON, ELIZABETH W., Nursing—R.N., St. Anthony's Hospital School of Nursing; Oregon State Vocational Certificate.

FLEMMING, BERNICE, American Government — B.A., English, University of Maryland; M.A., Political Science, American University.

FULLERTON, EARL RALPH, Physics—B.S., Science, University of Oregon.

GLENN, OAKLY, Law Enforcement —Certificate, Institute of Applied Science; Certificate, University of Washington; Oregon Vocational Certificate.

GRANT, ROSEMARY, Business Education — Oregon State Vocational Certificate.

HILDAHL, RICHARD N., Business Education—B.A., Business Administration, Pacific Lutheran University; M.A., Accounting, University of Oregon.

JANSON, RONALD TORE, Art — B.A., Painting, University of Oregon; M.F.A., Painting, University of Oregon.

KIENLEN, THOMAS D., Physical Education—B.S., Physical Education, University of Illinois; M.S., Physical Education, University of Illinois.

MERRILL, MARY, Business Education — Oregon State Vocational Certificate.

NORMAN, ROBERT D., Music — B.A., Music, University of Puget Sound; M.A., Music, University of Southern California.

RAMIREZ, WALTER, Psychology — B.A., Education, Eastern Washington College of Education.

RESCHKE, CLAUS, German—Oregon State Vocational Certificate; Diploma, Business College, Germany.

SCHAEFER, ARTHUR C., Economics—Oregon State Vocational Certificate; Certificate in Finance and Banking, University of Washington.

SCHWIN, VERNON D., Mathematics —B.A., Mathematics, Olivet Nazarene College; M.S., Interdisciplinary Studies, University of Oregon.

STINNETT, RAY D., Psychology — B.A., Psychology, Central Washington State College; M.Ed., School Psychology, Central Washington State College; D.Ed., Educational Psychology, University of Oregon.

TAYLOR, CHERRY, English—B.A., English, University of Oregon; M.A., Education, University of Southern California.

UNA, EVA MAE, Nursing — R.N., Nursing, Sacred Heart School of Nursing; Oregon Vocational Certificate.

VAN RYSSELBERGHE, PIERRE L., Law Enforcement—B.A., Economics, Stanford University; L.L.B., Law, University of Washington.

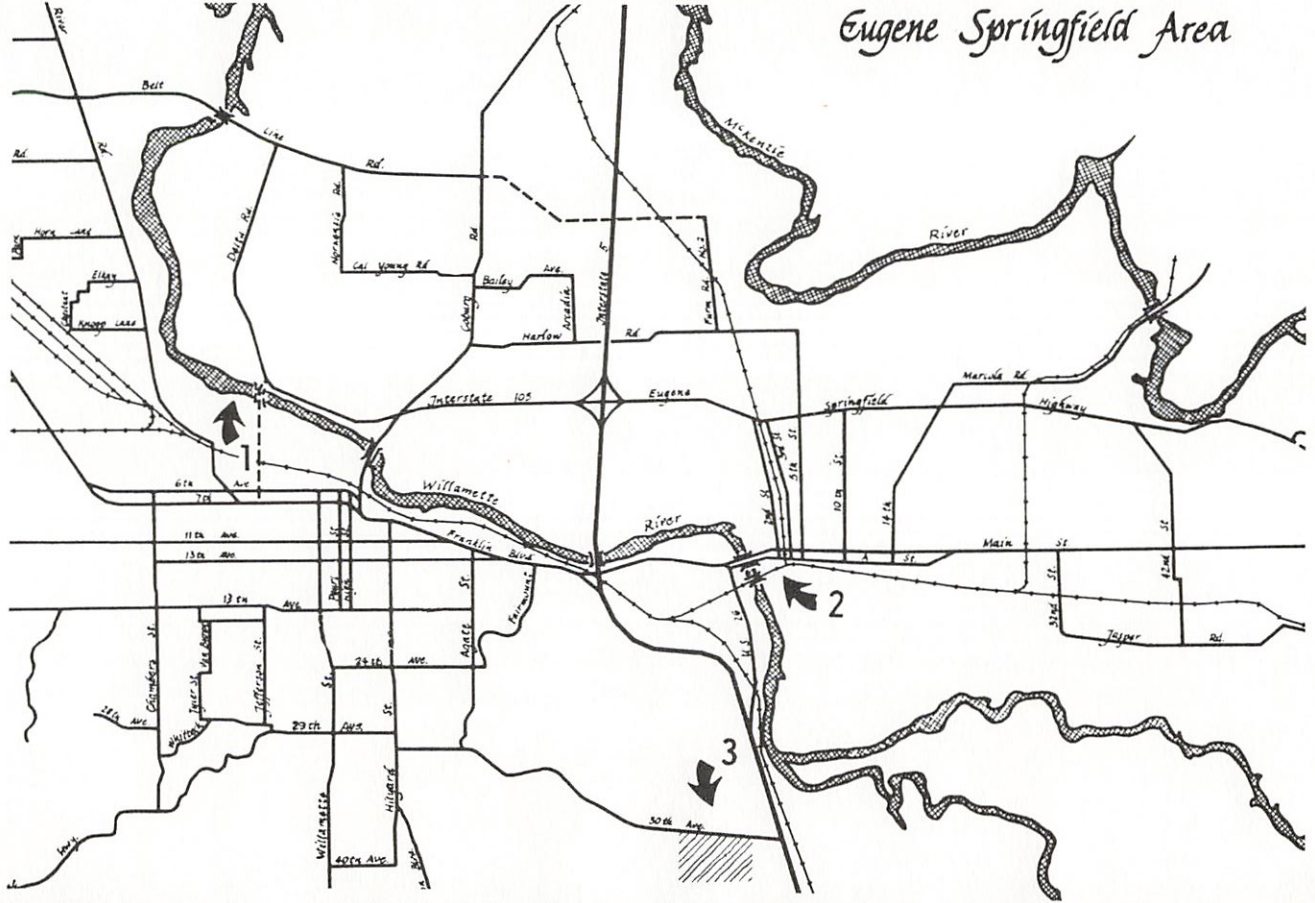
WAGNER, WILLIAM C., Forestry—B.S., Forest Management, Michigan State University.

WOODS, ARDEN PARKER, Spanish—B.A., Spanish, University of Oregon; M.A., Spanish, University of Oregon.

YOUNG, JOHN O., Math—B.S., Business Administration, Oregon State University; Oregon Vocational Certificate.

Table of Contents

LANE COMMUNITY COLLEGE MAIN CAMPUS LOCATIONS

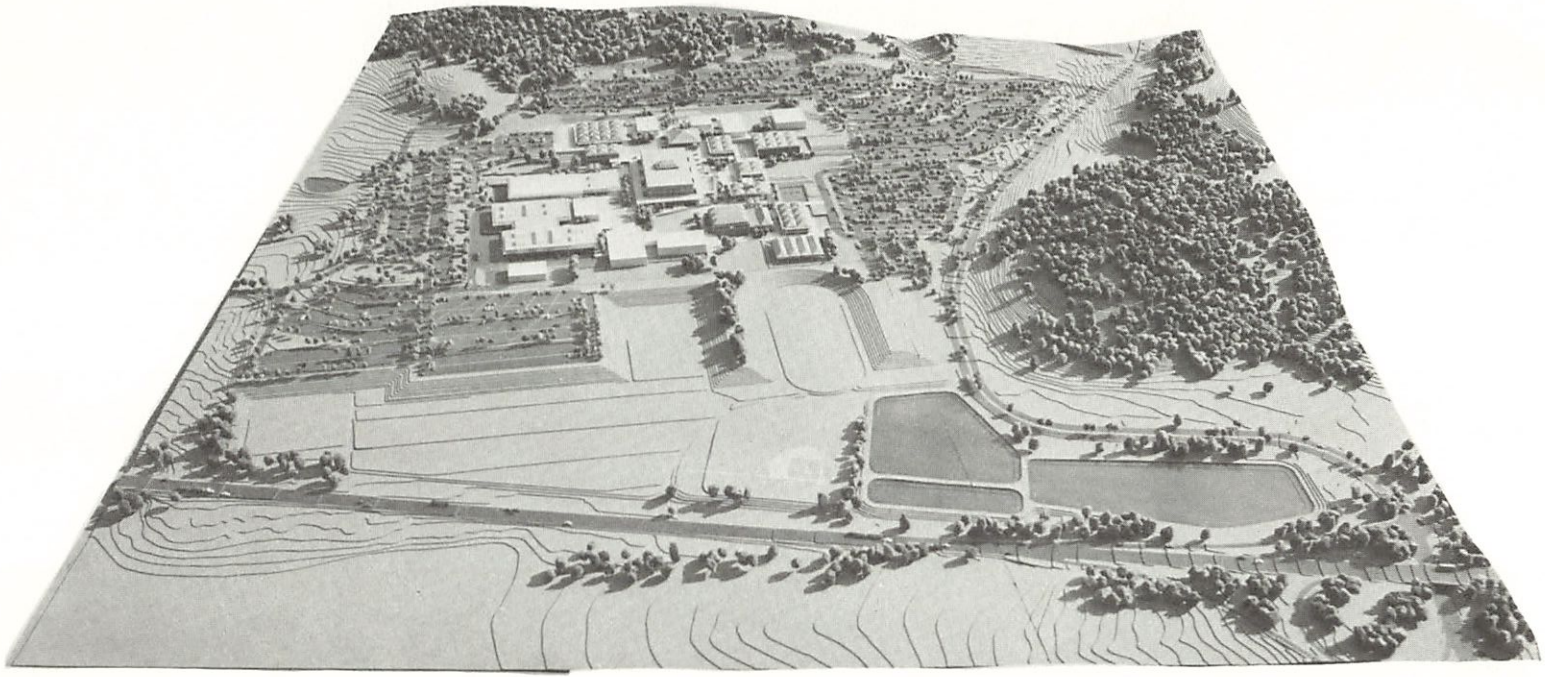


1. **EUGENE CAMPUS**
   200 North Monroe Street
   Eugene, Oregon

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

3. **BETHEL CAMPUS**
   1000 Bethel Drive
   Eugene, Oregon

4. **NEW CAMPUS SITE**
   E. 30th Ave. & U.S. 5 Freeway
   Eugene, Oregon



Lane Community College — New Campus Site

SHELTON-TURNBULL INC. EUGENE, OREGON