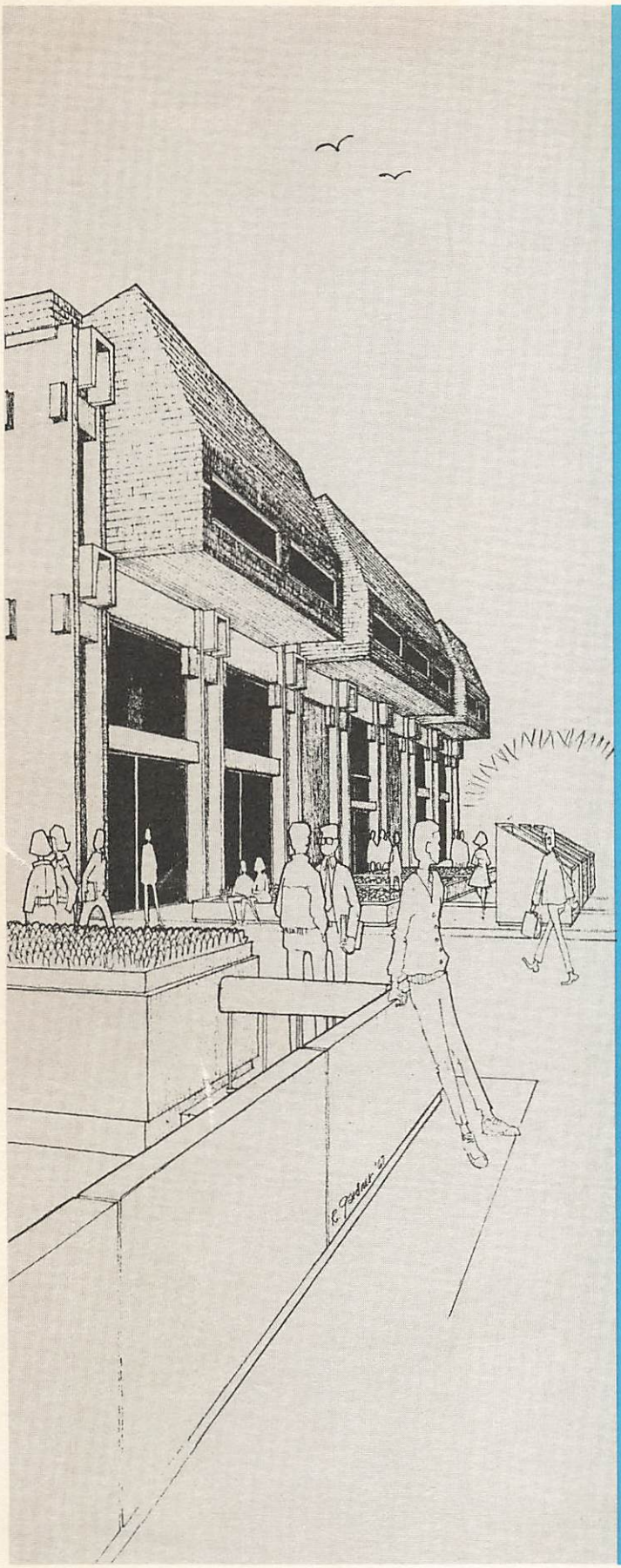

# LANE COMMUNITY COLLEGE

## Catalog 1968-69

**Lane Community College**

UNTIL JULY 1:
200 N. Monroe St.,
Eugene, Oregon 97402

AFTER JULY 1, 1968:
4000 E. 30th Ave.,
Eugene, Oregon 97405

Catalog
No. 4
May 1968



## HOW TO . . .

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## GENERAL INFORMATION



## PROGRAMS OF STUDY

## DEPARTMENTAL OFFERINGS

These programs and courses are offered for credit toward LCC degrees, diplomas, and certificates. Courses equivalent to lower division collegiate work may be transferred to four-year institutions of higher education.

# ACADEMIC CALENDAR
# 1968-69

## Fall Term

July 15, Monday-
September 27, Friday ..Fall Term registration

September 30, Monday ....Classes begin

November 11, Monday ....Veterans Day holiday

November 28, Thursday-
December 1, Sunday ....Thanksgiving holiday

December 20, Friday .....Fall Term ends

## Winter Term

December 16, Monday-
January 3, Friday .....Winter Term registration

January 6, Monday .....Classes begin

March 21, Friday .....Winter Term ends

## Spring Term

March 17, Monday-
March 28, Friday .....Spring Term registration

March 31, Monday .....Classes begin

May 30, Friday .....Memorial Day holiday

June 13, Friday .....Spring Term ends

## Summer Term

June 9, Monday-
June 20, Friday .....Summer Term registration

June 23, Monday .....Classes begin

July 4, Friday .....Independence Day holiday

July 18, Friday .....Four week session ends

August 15, Friday .....Eight week session ends

September 8, Monday ....Labor Day holiday

September 12, Friday .....Twelve week session ends

## Fall Term 1969

July 14, Monday-
September 26, Friday ..Fall Term registration

September 29, Monday ....Classes begin

November 11, Tuesday ..Veterans Day holiday

November 27, Thursday-
November 30, Sunday Thanksgiving holiday

December 19, Friday..... Fall Term ends

### 1968

| MAY | | | | | | | JUNE | | | | | | |
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| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 26 | 27 | 28 | 29 | 30 | 31 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | | | | | | 30 | | | | | | |

| JULY | | | | | | | AUGUST | | | | | | | SEPTEMBER | | | | | | |
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| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 28 | 29 | 30 | 31 | | | | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 29 | 30 | | | | | |

| OCTOBER | | | | | | | NOVEMBER | | | | | | | DECEMBER | | | | | | |
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### 1969

| JANUARY | | | | | | | FEBRUARY | | | | | | | MARCH | | | | | | |
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| 27 | 28 | 29 | 30 | | | | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 29 | 30 | | | | | |

| JULY | | | | | | | AUGUST | | | | | | | SEPTEMBER | | | | | | |
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| 27 | 28 | 29 | 30 | 31 | | | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 28 | 29 | 30 | | | | |
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| OCTOBER | | | | | | | NOVEMBER | | | | | | | DECEMBER | | | | | | |
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| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 26 | 27 | 28 | 29 | 30 | 31 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 28 | 29 | 30 | 31 | | | |
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# GENERAL INFORMATION

## THE COLLEGE

Lane Community College is an open door institution which strives to offer some kind of post high school educational opportunity for all who apply. Programs vary from single courses to two-year sequences of courses leading to Associate of Arts and Associate of Science degrees.

LCC was voted into existence October 19, 1964, by residents of Lane County, the Harrisburg Union High School District, and the Monroe Elementary School District. It began operating as a legally constituted tax-supported institution on July 1, 1965.

## PURPOSES

LCC has been developed primarily to serve those for whom no other post-high school educational opportunities are readily available, either geographically, financially, vocationally or academically. It is committed to a comprehensive program providing:

1. Occupational education programs with prestige and status equal to that of other disciplines.
2. General liberal arts education for: (a) those with undefined goals, in order to allow them to explore alternatives in a physical and cultural atmosphere designed particularly for the undecided, and (b) those who aspire to transfer to colleges and universities.
3. Credit and non-credit opportunities in general and remedial education for citizens, young and old, who have special interests and needs.
4. A center to meet the cultural desires of district patrons.
5. Adult continuing education opportunities based on requests of patrons. Special emphasis is placed on developing adult programs to meet the needs of occupations which require less than a bachelor's degree.
6. Counseling and guidance in vocational and educational planning..

## FINANCIAL SUPPORT

Four-fifths of the college's operating expenses (about $3.5 million in 1968-69) are met by tuition, state and federal funds. The other one-fifth of the operating expense is met through local property taxes, which amount annually to about 55 cents-per-thousand true cash value. Three-fourths of the operating expense is expended for instruction, the remainder paying for administration, business, utilities and maintenance.

Nearly two-thirds of the college's recent expenditures toward construction of a campus have come from state and federal sources. The other third, about 65 cents annually per thousand true cash value in 1968-69, is contributed by local property tax payers.

## BOARD OF EDUCATION


Dean Webb


Albert Brauer


Robert Ackerman


Wm. Bristow, Jr.


Clifford Matson


Lyle Swetland


Richard Williams

Supervising the college at the policy-making level is a seven-member elected Board of Education. Its members are:

Dean Webb, chairman. He represents Zone 4, which includes the Creswell, Pleasant Hill, South Lane, Lowell, Westfir and Oakridge School Districts. A Cottage Grove dentist, his term expires in 1972.

Albert Brauer, vice-chairman. He represents Zone 1, which includes the Florence, Mapleton, Blachly, Fern Ridge and Crow-Applegate School Districts. A Florence physician, his term expires in 1972.

Robert Ackerman. He represents Zone 3, which includes the Marcola, Sprinfield and McKenzie School Districts. A Springfield attorney, his term expires in 1969.

William Bristow, Jr. He represents Zone 5, the Eugene School District. A Eugene jeweler, his term expires in 1970.

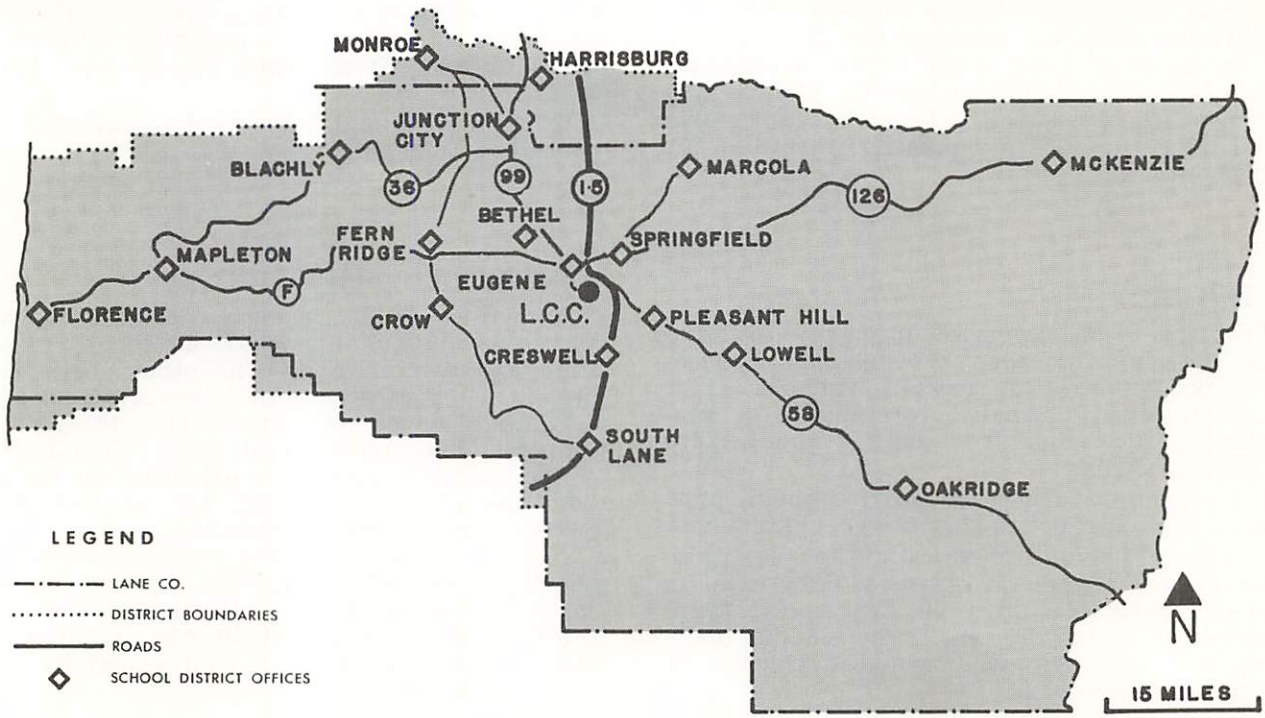
Clifford Matson. He represents Zone 2, which includes the Junction City, Bethel, Harrisburg, Harris, Wyatt and Monroe Elementary School Districts. A Junction City dentist, his term expires in 1971.

Lyle Swetland, who represents the district at-large. A Eugene printer, his term expires in 1970.

Richard Williams, who represents the district at-large. A Eugene hospital administrator, his term expires in 1971.

## THE COLLEGE DISTRICT

More than 200,000 residents are served in an area which includes Lane County and small portions of Linn, Benton, and Douglas Counties. The district encompasses 5,000 square miles, an area larger than some of the country's states.



## ADMINISTRATION


Dale Parnell


Lewis Case

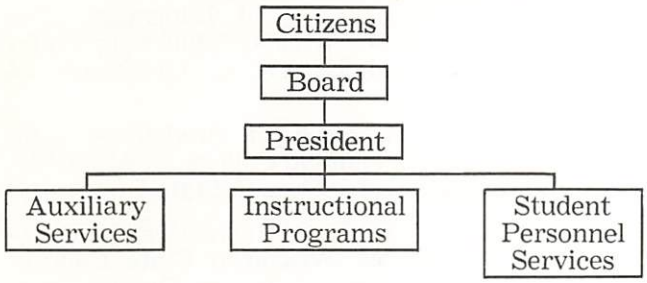

William Cox


I. S. Hakanson


William Mansell

The Board of Education delegates to President Parnell its authority for implementing the statutes and policies governing college operations. His administrative team includes: Dean of Instruction Lewis Case, Dean of College Services William Cox, Dean of Students I. S. Hakanson, and Clerk- Controller William Mansell.

Relationship Chart




## ADVISORY COMMITTEES

Nearly 250 citizens from throughout the college district serve as volunteer members of 21 advisory committees appointed by the Board of Education. The committee members evaluate proposed instructional programs and keep the college informed of community needs and suggestions for courses and programs.

The committees include:

Data Processing, College-Community Relations, Para-Dental, Nursing, Health and PE, Electronics, Radio and TV, Labor-Industry-Business-Education, Fire Prevention Technology, Food Services, Library-Learning Resource Center, Mechanics, Industrial Technology, Funding, Family Life, Student Personnel Services, Home Economics, Forestry, Law Enforcement, Business, Inventors Council.

## STAFF

More than 500 full-time and part-time individuals pool their talents in the service of students in both credit and non-credit programs. The total includes 19 administrators, 162.5 full-time equivalent instructors (more than 200 persons are represented, since many of these are part-time employees), two librarians, a dozen counselors, more than 100 classified staff members such as secretaries and custodians, and about 150 part-time instructors of adult education courses.

Full-time administrative, faculty and regular part-time faculty members include:

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

ALLEN, ROBERT T., Civil Engineering—B.S., Civil Engineering, Iowa State University; Oregon Vocational Approval.

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., English, Chico State College, California; M.A., English, University of Oregon.

BAILEY, WILBERT G., Director of Placement —B.A., Vocational Agriculture; M.Ed., Counseling, Pennsylvania State University.

BAYES, MAURINE, Business Education—C.P.S. Rating; Oregon Vocational Approval.

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

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

BIRD, HOWARD F., Director of Developmental Education—B.S., Elementary Education, Brigham Young University; M.Ed., Special Education, Wayne State University; Ph.D., Education Psychology, University of Minnestota.

BLOOD, CARL A., Department Chairman Industrial Technology—B.S., M.Ed., Industrial Arts, Oregon State University; Oregon Vocational Certificate.

BOETTCHER, ROBERT J., Biology—B.A., Biology, Jamestown College, Jamestown, North Dakota; M.A., Biology, University of Oregon.

BRUBAKER, CAROLE, Physical Education — B.S., Physical Education, Ball State University; M.S., Physical Education, University of Oregon.

BURNS, RALPH E., Counselor—B.S., Industrial Education, B.S., Agricultural Education, M. Agriculture, Oregon State University.

CARTER, JOHN E., Counselor—B.S., Education, Southern Oregon College; M.Ed., University of Oregon.

CASE, LEWIS E., Dean of Instruction—B.S., Public Address, Syracuse University; M.A., Rhetoric, University of Pittsburgh; Honorary Doctor of Laws, Harding College, Searcy, Arkansas.

COHEN, JOANNA, Psychology—A.A., Psychology, Phoenix Junior College; B.A., Psychology, Arizona State; M.A., Psychology, California State College, Long Beach, California.

COOK, ROBERT E., Counselor—B.S., Physical Education, M.Ed., University of Oregon.

COX, WILLIAM W., Dean of College Services—A.B., M.A., Colorado State College of Education; Oregon Vocational Certificate.

DAGGETT, DELPHA, Physical Education—B.S., Physical Education, Oregon State University; M.A., Physical Education, University of Oregon.

DAVIS, LAWRENCE L., Aircraft Mechanics—A.P. Certificate; I.A. Rating; Oregon Vocational Approval.

DEAN, BRUCE, Art—B.F.A., Drawing, Painting & Illustrating, Art Institute of Chicago; B.F.A., Drawing, Painting & Illustrating, M.F.A., Painting and Print Making, University of Illinois.

deBROEKERT, CARROL M., Department Chairman of Social Science—B.A., M.A., Political Science and History, University of Oregon.

DE CHAINE, VIRGINIA, Speech, B.S., M.A., Speech and Theatre, University of Oregon.

DELF, GREGORY, History—A.A., Social Science, Blackhawk College, Moline, Illiniois; B.A., M.A., History, University of Iowa.

DICKINSON, DONALD, Aircraft Mechanics—A.P. Certificate, Oregon Vocational Approval.

DICKSON, JOHN P., Coordinator of Paradental Programs—D.M.D., University of Oregon Dental School; Fellow, International College of Dentists.

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.

EKSTROM, BETTY COE, Counselor—B.A., Journalism, University of Oregon.

ELLISON, JAMES, Developmental Education—B.S., Biology, M.S., Biological Science, Oregon State University.

ELLSWORTH, GERMAN C. M., Aircraft Mechanics—B.S., Aeronautics, Utah State University; FAA Certified A.P. Certificate; Oregon Vocational Approval.

ENO, RICHARD H., Business—B.A., Business Education, Colorado State; M.Ed., Business Education, Oregon State University.

EYMANN, RICHARD, Assistant to the President for Funding and Development—A.B., M.C.S., Business Administration, Dartmouth College.

FAST, CASEY, Mathematics—B.S., Education, Portland State University; M.A., Mathematics, University of Oregon.

FAVIER, VICTOR E., Biology—B.A., Zoology, University of Colorado; M.S., Biology, University of Oregon; Oregon Vocational Approval.

FIORENTINO, MARY C., Director of Nursing—B.S., Nursing, Seattle University; M. of Nursing, Medical-Surgical Nursing, University of Washington.

FRAGA, RICHARD T., Botany—B.S., Botany, Oregon State University; M.S., Biology, University of Oregon.

GASKILL, MELVIN C., Department Chairman, Mechanics Transportation—Curtiss Wright Technological Institute of Aeronautics; FAA ground school certificate; FAA A.P. Mechanics Certificate; FAA Parachute Technician Certificate; Oregon Vocational Certificate.

GAULT, ROBERT L., Drafting—Oregon Vocational Approval.

GOLDSMITH, ELLENE M., Nursing—B.S., Nursing Education, University of Minnesota; R.N., L.P.N., M.S., Health Education, University of Oregon; Oregon Vocational Certificate.

GOULDING, FLORENCE W., Health and Physical Education—B.S., Physical Education, University of Utah; M.S., UCLA: Ph.D., Physical Education, University of Oregon.

GUBRUD, ALLAN, Physical Science and Physics—B.A., Economics, Pacific University, Forest Grove, Oregon; M.S., Science, Syracuse University. (on leave)

GYORGYFALVY, GEORGE, Health and Physical Education—B.S., Physical Education, The Hungarian College of Physical Education, Budapest; M.S., Physical Education, University of Colorado.

HAKANSON, I. S. Dean of Students — B.A., Physical Education, Linfield College, McMinnville, Oregon; M.Ed., Guidance, Oregon State University.

HALBERG, LELAND R., Mathematics and Physics — B.S., Education, Wisconsin State College; M.S., Physics, University of Oregon; Oregon Vocational Approval.

HAMILL, ROBERT, Institutional Research—B.A., Speech, University of Redlands, Redlands, California; M.S., General Studies, D.Ed., Administration, University of Oregon.

HARKER, KEITH H., Director of Library-Learning Resource Center—B.S., Library Science, University of Utah; M.S., Librarianship, University of Oregon.

HARTSTROM, MILDRED E., Business Education —B.S., Finance and Business Environment; M.S., Business Administration, University of Oregon .

HAUGAN, MARILYN, Business—B.S., Business, Oregon State University; Oregon Vocational Approval.

HAVERLAND, DALLAS K., Counselor, Instructor—B.S., Special Education, M.Ed., Secondary Education, University of Oregon; M.S., Guidance and Counseling, Purdue University.

HEISERMAN, GLENN R., Biology—B.S., M.S., Biology, University of Michigan.

HILLS, KENNETH D., Director of Counseling—A.B., History, Northwest Nazarene College, Nampa, Idaho; M.A., PhD. Guidance, University of Wyoming.

HODGES, CECIL M., Department Chairman Physical Education and Health—B.Ed., M.S., Health and Physical Education, University of Oregon.

HODGES, HAYDEN, Physics—B.S., Industrial Arts, M.A.T., Physics, Colorado State University, Ft. Collins, Colorado.

HOUGLUM, ROGER J., Department Chairman Electronics—B.S., M.Ed., University of Oregon; FCC Radiotelephone First Class License; Oregon Vocational Certificate.

HOVLAND, MARVIN J., Flight—FAA Gold Seal Certificate; S.M.E.L. Rating; Instrument Instructors Certificate; Advanced Ground Certificate; Oregon Vocational Approval.

HOWARD, FRANCES, Counselor—B.S., Business, M.Ed., Guidance, University of Oregon.

HOWARD, JOHN E., Department Chairman English and Foreign Languages—B.A., Education and English; M.A., English, University of North Dakota.

HUNTINGTON, JAMES R., Electronics—Radio Announcer and Engineering Vocational Certificate; Oregon Vocational Certificate.

JACOBS, JOHN W., Department Chairman Science—B.S., M.S., Biological Science, Oregon State University.

JAEGERS, MARVIN, History—B.S. with Distinction, Education, M.S., Education, Indiana University, Bloomington, Indiana.

JAY, ROGER, Mathematics—B.A., M.A., Mathematics, Texas Technological College, Lubbock, Texas.

JOHNSON, JORIS O., Adult Education Coordinator of Occupational Education—Oregon Vocational Certificate.

JOHNSON, ROBERT, Business—B.A., Social Science, Moorhead State College, Moorhead, Minnesota; M.B.A., Personnel and Industrial Management, Advanced Graduate Work, University of Oregon.

JONES, EDITH A., Business Education—B.S., Education, Nebraska Wesleyan University; Oregon Vocational Certificate.

JOSSART, DARYL A., Diesel—Oregon Vocational Approval.

JUBA, SHEILA B., English—B.A., M.A., English, University of Oregon.

KLEMKE, LLOYD, Sociology—B.A., M.A., Sociology, San Fernando State College.

KLOBAS, JOHN R., Sociology—B.S., Science, Oregon State University; M.A., Sociology, University of Oregon.

KRAUSE, MELVIN A., Health and Physical Education—B.S., M.S., Health and Physical ESducation, University of Oregon.

KREITZ, JOHN, Department Chairman Business—B.B.A. with distinction, Merchandising and Selling, University of Minnesota; M.S., Management, University of Colorado; FAA Certificate, S.M.E.L., Commercial, Instrument, Flight Instructor.

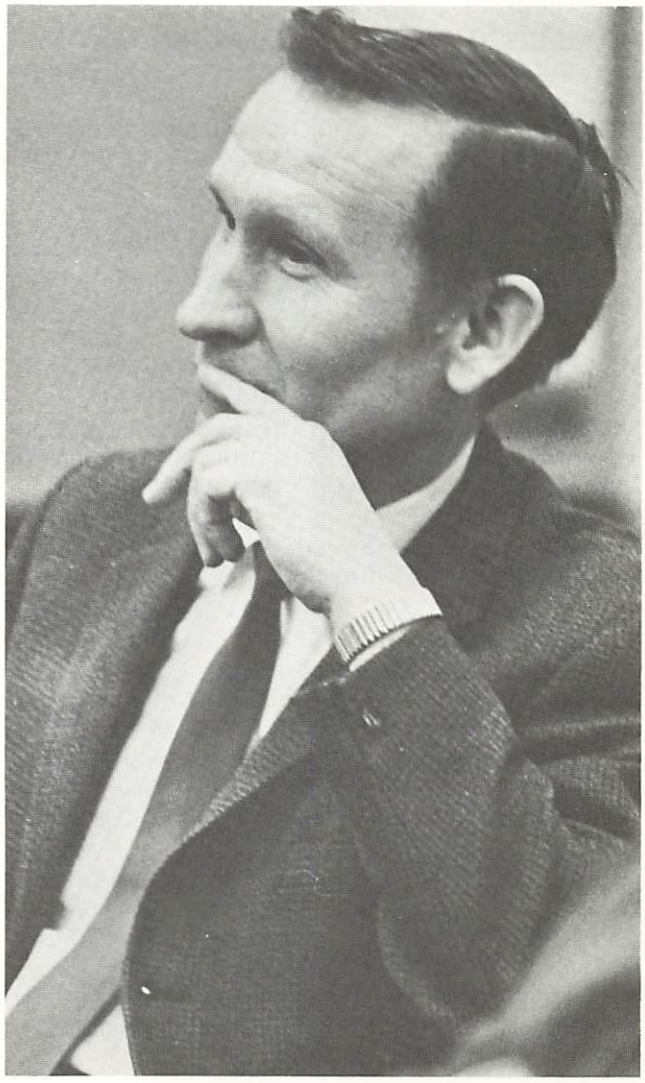
LA GRANDEUR, RAMON F., Associate Dean of Instruction—B.S., Zoology, University of Washington; M.Ed., Administration, D. Ed., Educational Administration, University of Oregon.

LANSDOWNE, KAREN, English—B.A., M.A. with Honors, English and Language, M.Ed., University of Oregon.

LEMKE, CARL, Aircraft Mechanics—FAA Certified A.P. Mechanic; FAA Mechanic Examiner and Ground School Instructor; Oregon Vocational Certificate.

LUCK, GEORGE, Body and Fender Repair—Oregon Vocational Certificate.

LUTZ, PAULA, Anthropology—B.S., M.A., Anthropology, University of Oregon.



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, Nampa, Idaho; M.S., Physics, Oregon State University.

MANSELL, WILLIAM E., Clerk-Controller—B.S., Business Administration, University of Oregon.

MARSHALL, ROBERT B., Director of MDTA—B.S., M.A., Industrial Vocational Education, Pennsylvania State University; Oregon Vocational Certificate.

MAST, GEORGE L., Diesel Mechanics—Oregon Vocational Certificate.

MATHESON, DEL, Librarian—A.A., B.S., English, Mankato State College, Mankato, Minnesota.

MAXWELL, ROBERT D., Auto Mechanics—Oregon Vocational Approval.

McCARROLL, DARWIN, Radio and TV Repair—FCC Radio-Telephone First Class License; Oregon Vocational Certificate.

McCARTHY, ALICE J., Nursing—B.S., Nursing, Carrol College, Helena, Montana; M. Nursing, Montana State University.

McCULLOCH, JOHN R., Police Science—B.S., Law, L.L.B., Law, University of Oregon; Oregon Vocational Approval.

MERRILL, O. JED, Civil and Structural Engineering—B.S., University of Oregon; Oregon Vocational Certificate.

MITCHELL, MICHAEL H., Science—B.S., M.A.T., Physical Science, Washington State University.

MITCHELL, RONALD F., Psychology — B.A., Psychology, M.A., Psychology, Fresno State College.

MOLENKAMP, HAROLD, Psychology — B.A., M.A., Philosophy, University of Denver.

NEWELL, RICHARD, Health and Physical Education—B.S., Physical Education, University of Illinois; M.S., Health, University of Oregon.

NORMAN, ROBERT D., Music—B.A., Music, University of Puget Sound; M.A., Music, University of Southern California.

NOTT, RAY, Major Appliance Repair—Oregon Vocational Approval.

OWNBEY, DONALD, Librarian—B.A., History, M.Ed., Linfield College, McMinnville, Oregon; M.L.S., Library Science, University of Oregon.

PARENT, IRENE, Counselor, Instructor—B.S., Physical Education, Pacific University, Forest Grove, Oregon; 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 Vovational Certificate.

PETERSON, MURIEL A., Dental Assistant—Graduate Dental Hygienist, University of Oregon; Oregon Vocational Approval.

PHILIPS, JOHN M., Forestry—B.S., Forestry, University of California; M.Ed., Oregon State University; Oregon Vocational Certificate.

POND, JUDSON, Science—B.M.E., Mechanical Engineering, B.B.A., Business Administration, Ph.D., Inorganic Chemistry, University of Minnesota.

PRUETT, HERBERT, Auto Mechanics — B.E., M.Ed., Trade and Industrial Education, Oregon State University, Oregon Vocational Certificate.

RASMUSSEN, GERALD, Associate Dean of Instruction — B.S., M.A., History, University of Oregon.

REID, BRUCE A., English—B.A., English, Whitworth College, Spokane, Washington; 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, California; M.A., English, University of Nevada.

ROMINE, LARRY, Journalism—B.A., Sociology, Midland College; M.S., Journalism, University of Oregon.

ROTH, IRVIN J., Health—B.A., Physical Education, Willamette University; M.Ed., University of Oregon.

ROWE, FREEMAN, Biology—B.S., Biology, Pacific University, Forest Grove, Oregon; M.S., Science, Oregon State University.

RUSING, ROY D., Welding—Oregon Vocational Certificate.

SCALES, JACK D., Physics—B.S., Technical Education, Oklahoma State University; Oregon Vocational Certificate.

SCHAEFER, ARTHUR C., Counseling—Certificate in Finance and Banking, University of Washington; Oregon Vocational Approval.

SCHWIN, VERNON D., Mathematics — B.A., Mathematics, Olivet Nazarene College, Kankakee, Illinois; M.S., Interdisciplinary Studies, University of Oregon.

SEABLOOM, EDWARD, Mathematics—B.S., Science, Oregon State University; M.S., Interdisciplinary Studies, University of Oregon.

SEARL, GARY H., Geography—B.B.A., Business Administration, M.S., Interdisciplinary Studies, University of Oregon.

SHUSTER, JOHN W., Welding—Welding Certification Federal Department of Interior; Oregon Vocational Approval.

SIMPSON, PETER, History—B.A., M.A., History, University of Wyoming.

SMITH, HAZEL, Mathematics—B.A., Education, University of Alberta; M.S., Mathematics, Michigan State University.

SMITH, W. DONALD, English—B.A., History, M.A., Interdisciplinary Studies, University of Oregon.

SNOW, JAMES W., Mathematics—B.A., Mathematics and Chemistry, M.A., Mathematics, Colorado State University.

STADLER, HELENE, Counselor and Adult Education Coordinator—B.A., Sociology and Psychology, M.S.W., Social Work, University of Minnesota.

TARPENNING, ALLAN, Physical Education—B.S., Physical Education, Linfield College; M.Ed., Pacific University, Forest Grove, Oregon.

TAYLOR, CHERRY, English—B.S., Education, University of Oregon; M.S., Education, University of Southern California.

TEGGER, ARTHUR L., English—B.A., English, Westmont College, Santa Barbara, California; M.A., English, Pacific University, Forest Grove, Oregon.

THYGESEN, RUTH, Business Education—Oregon Vocational Certificate.

UNDERHILL, ARLENE, Nursing—R.N., Sacramento City College; B.S., University of Oregon; Oregon Vocational Approval.

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.A., Accounting and Business Statistics, University of Oregon.

WEITZEL, FLOYD E., Biology—B.A., George Fox College; M.A., Zoology, University of Colorado.

WILKES, FLOYD A., Data Processing—B.S., Accounting, Brigham Young University; Oregon Vocational Approval.

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 Approval.

WRIGHT, ROSCOE, Art—B.S., Education, M.S., General Studies (Art), University of Oregon.

WRIGHT, WILLIAM A., Counselor, Instructor—B.A., Science Education, M. Guidance and Counselling, Oregon State University.

YOUNG, THOMAS A., Physical Education—B.S., Physical Education, M.Ed., Teacher Education, Springfield College, Springfield, Massachusetts.

ZINK, HOWARD E., Department Chairman Mathematics—B.A., Northwest Nazarene College; M.S., Mathematics, University of Colorado.

## PART-TIME

ALLEN, DALE, Police Science—Oregon Vocational Approval.

ARNIS, GEORGE, Physical Education (Skiing)—B.A., Education, Western State College, Colorado.

AUBREY, CHESTER, Mechanics—Oregon Vocational Approval.

BACHMAN, ALFRED, Mathematics—B.S., Mathematics, Oregon College of Education; M.Ed., M.S., Mathematics, Advanced graduate work, University of Oregon.

BASCOM, JOHN, Health—B.S., M.S. with Honors, Zoology, Kansas State University; M.D., Northwestern University Medical School; Ph.D., Surgery, University of Minnesota.

BEN-ZION, BAROUCH, Economics—B.A., Economics, Sonoma State College, Rohnert Park, California; Advanced graduate work, University of Oregon.

BEPLAT, WILLY, Drafting—Graduate Engineer, Bremen, Germany; Oregon Vocational Approval.

BLODGETT, THOMAS, Fine Art — B.S., Art, Lewis and Clark College; M.F.A., Fine and Applied Arts, University of Oregon.

BELDEN, GLADYS, Home Economics — B.S., Home Economics, Oklahoma State University; M.S., Home Economics, Oregon State University.

BOWMAN, RUTH, Communication Skills—B.A., French; M.A., English, Colorado State University.

BROCK, JAMES L., Electronics—B.S., Sociology, University of Oregon; FCC Radio Telephone First Class License; Oregon Vocational Approval.

CARLEY, DORRANCE, Police Science—Oregon Vocational Approval.

CHASE, GARY, Physical Education—B.S., Pre-Medical, M.S., Physical Education, Washington State University.

CLIFTON, DARWIN, Physics — Oregon Vocational Certificate.

COMBS, MAXINE, English—B.A., Speech and Drama, Mills College, Oakland, California; M.A., English, Wayne State University, Michigan; Ph.D., English, University of Oregon.

COUCHMAN, BETTY ANN, French—B.A., Liberal Arts, San Francisco State College.

COWLEY, HUGH F., Business—B.B.A., M.B.A., Marketing, Insurance & Transportation, University of Oregon.

COY, HOWARD, Electronics—Oregon Vocational Approval.

DELUE, NORMAN, English—B.A., Speech, Western Michigan University; M.A., Theatre, St. Louis University.

DUDLEY, LARKIN, Sociology—A.B., Sociology, University of Georgia.

FERGUSON, ELIZABETH, Nursing—R.N., St. Anthony's Hospital; Oregon Vocational Approval.

FULLERTON, EARL R., Physics—B.S., Education, University of Oregon.

GLAEDE, WARREN C., Health and First Aid—B.S., Biology, Hamline University, St. Paul, Minnesota; M.D., University of Minnesota.

GLENN, OAKLEY U. Police Science—Oregon Vocational Approval; Institute of Applied Science, University of Washington.

GRANT, ROSEMARY, Business Education—Oregon Vocational Approval.

GREGOR, JOHN G., Physical Education and Health—B.A., Physical Education, Western Washington State College; M.Ed., Physical Education, Central Washington State College.

HAUGSE, JOHN, Fine Art—B.F.A., Painting and Drawing, San Francisco Art Institute; M.F.A., Painting, University of Oregon.

HEISERMAN, BARBARA, Mathematics — B.S., Mathematics, Hillsdale College, Hillsdale, Michigan; M.S., Mathematics, University of Michigan.

HOLST, JAMES, Electronics—B.S., Mathematics and Physics, California Polytechnic College; M.S., Science, Oregon State University.

HODGES, MARCIA, English — B.A., William Smith College, New York; M.A., Cornell University.

HUTCHESON, WILBURN C., Police Science—Oregon Vocational Approval.

INMAN, FRED W., Electronics—B.S., Education, Southwestern Missouri State College; Oregon Vocational Approval.

JACO, ORVILLE, Mechanics—Oregon Vocational Approval.

JANSON, RONALD TORE, Fine Art — B.A., Painting, M.F.A., Painting, University of Oregon.

KOCH, EDWIN R., Fine Art—B.S., Architecture and Allied Arts, M.F.A., Painting, University of Oregon.

KUBLER, HOWARD, Dental Hygiene — B.S., Zoology, San Diego State College; M.S., Biology, University of Oregon; D.M.D., Dentistry, University of Oregon Dental School.

LAMOREAUX, LUCILLE, Basic Education — B.A., German and Russian, University of Oregon.

LICHTY, THOMAS W., Electronics—FCC Radiotelephone License; Oregon Vocational Approval.

LOVE, RHODA, Biology—B.S., Biology, M.S., Botany, University of Washington.

LYNN, HELEN, Business Education—Oregon Vocational Approval.

MERRILL, MARY, Business Education—Oregon Vocational Approval.

MEYER, ROLAND, Machine Shop—Graduate, Tool and Die Making Trade School, Heidenheim, Germany; Oregon Vocational Approval.

MORGAN, BOYD E., Physical Education—B.S., M.S., Health and Physical Education, University of Oregon.

MORGAN, J. MARSTON, Fine Art—B. Architecture, University of Oregon.

NELSON, CEDRICK S., Police Science—Oregon Vocational Approval.

NOBLE, DONALD E., Mechanics—Oregon Vocational Approval.

PACKARD, EULALIA, English — B.A., M.A., English, Colorado State University; M.A., Librarianship, University of Denver.

RESCHKE, CLAUS, German—B.A., Germanic Languages, University of Oregon.

SANDERSON, DELTA, English — B.A., M.A., English, University of Oregon.

SHERMAN, PETER R., Mathematics—B.S., M.S., Mathematics, University of Oregon.

SMARTT, WESLEY D., Police Science—Oregon Vocational Approval.

SMITH, ELLSWORTH L., Fire Technology—Oregon Vocational Approval.

SMITH, NAN, Nursing—B.S., Nursing, Washington State College; Oregon Vocational Approval.

SORENSON, LLOYD R., History—B.A., University of North Dakota; M.A., Ph.D., University of Illinois.

VAN RYSSELBERGHE, PIERRE L., Law Enforcement—B.A., Economics, Stanford University; L.L.B., Law, University of Washington.

WEEKS, KENNETH R., Fine Art—B.A., English, University of Oregon.

WILD, BRUCE D., Fine Art—B.A., Art, Central Washington State College; M.F.A., Ceramics, University of Oregon.

WOODS, ARDEN, Spanish—B.A., Spanish, M.A., Spanish, University of Oregon.

WURSTER, AUSTIE, History — B.A., History, Cornell College, Mt. Vernon, Iowa; M.A., History, State University of Iowa.

YOUNG, JOHN O., Mathematics—B.S., Business Administration, Oregon State University; Oregon Vocational Approval.

## STUDENTS

Nearly 10,000 individuals attended LCC during the 1967-68 year. The vast majority (7,000) enrolled part-time in non-credit adult education courses. Of the remainder, those enrolled in credit programs, 92 per cent resided in the college district and 85 per cent of the in-district students lived in Eugene-Springfield. About six per cent resided in Oregon cities outside the college district and about two per cent came from outside the state. About 70 per cent of the credit students were men.

During the 1968-69 college year, about 13,000 individuals are expected to enroll. Mostly part-timers, they are expected to equal the equivalent of 4,135 full-time students.

## ACADEMIC ACCREDITATION

LCC is provisionally accredited by the Northwest Association of Secondary and Higher Education. A review for permanent accreditation will be conducted in October 1968.

The Oregon State Board of Education has accredited LCC as a community college and has approved its occupational programs and instructors. The Oregon State System of Higher Education has approved its lower division collegiate courses and permits the transfer of up to 93 credits to Oregon four-year institutions.

## TERMS

LCC maintains a year-round study program. Fall, Winter and Spring Terms are approximately 11 weeks long. Summer Term includes four, eight and 12-week sessions.

## DEGREES, CERTIFICATES AND DIPLOMAS

ASSOCIATE OF ARTS DEGREE

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

1. Complete a minimum of 93 term hours of college transfer courses with a cumulative grade point average of not less than 2.00.
2. Include in the program the following: English Composition, 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 LCC.
5. Meet any special departmental requirements.

ASSOCIATE OF SCIENCE DEGREE

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

1. Complete the required courses and credit hours prescribed for any structured occupational program of at least 93 term hours.
2. Attend at least two terms, including the last term, and earn at least 24 credit hours at LCC.
3. Earn a cumulative grade point average of not less than 2.00.
4. Receive approval of the Academic Council for minor deviations from specific course requirements.

CERTIFICATES AND DIPLOMAS

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

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

## ACADEMIC REGULATIONS

ADMISSION PROCEDURE:

1. Arrange a pre-registration counselor conference, preferably several weeks before classes begin.
2. Complete and submit an application for admission.
3. File with admissions office a copy of high school transcript and transcripts of all post high school work taken.
4. 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. File scores of college entrance tests, such as the College Entrance Examination Board test or the American Testing examination, with the admissions office.
6. At the time of registration, make a $10 nonrefundable tuition deposit. This fee is credited toward tuition if the student enrolls in school the ensuing term.

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

1. Those entering college transfer programs must be high school graduates or have a high school equivalency certificate. The latter may be earned by receiving a qualifying score on the General Educational Development Test.
2. Several programs in electronics and engineering require a significant background in mathematics. Those enrolling must be high school graduates and earn satsifactory scores on qualifying examinations.
3. Those entering occupational programs must be 18 years of age or older and must, in the judgment of the administration, be able to profit from the instruction offered. Since enrollment in all the occupation programs is limited by the facilities available, in-district students are admitted on a first-come, first-serve basis. Admission to all vocational programs is limited to students living in the college attendance area until June 1, 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 procedures may be granted. Requests are submitted in writing to the Dean of Students.

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.

## SPECIAL ADMISSION PROCEDURES FOR SELECTED PROGRAMS

The Dental Hygiene, Dental Assistant, Associate Degree Nursing, Practical Nursing, Electronic Engineering Technician, and Civil and Structural Engineering Technician programs have special procedures for admission.

As in all programs at LCC, the candidate must first meet the minimum requirements for admission as a regular student. (See above.)

A. In the Associate Degree Nursing, Licensed Practical Nursing, Dental Hygiene, and Dental Assistant programs, it is necessary to:

1. Make application on or before March 1 to be considered for the following year's class.
2. Submit high school and, if applicable, college or post high school transcripts.
3. Submit three letters of reference (Lane Community College forms to be used).
4. Submit a brief statement of your experience and education which may be of particular significance for this program.
5. Successfully complete the screening examination.
6. Be available for a personal interview.

In addition, applicants for the Dental Hygiene and Associate Degree Nursing programs should have successfully completed high school Chemistry, Algebra, and Biology, or the equivalent.

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

C. In the Radio Broadcasting I program, it is necessary to:

1. Have an interview and reading audition with the department chairman or a counselor.
2. Have a background in Speech, Drama, Music and Typing if planning to enter Radio Programming and Production.
3. Have a background in Math, Physical Science and Typing if planning to enter Radio Engineering.

D. In the Apprenticeship programs, it is necessary to:

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

GRADING SYSTEM:

A—Exceptional work.
B—Above-average.
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 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.

ADVANCED PLACEMENT: Students who complete college-level work in high school under the Advanced Placement Program sponsored by the College Entrance Examination Board, and who receive satisfactory grades in examinations administered by the Board may, on admission to LCC, be granted credit toward an Associate of Arts Degree in comparable courses. Amount of credit will be determined by the Department. Grades will be recorded as Pass Grades.

AUDITING CLASSES: Students regularly enrolled may request admittance to a class as an audit. Audits will be accepted only if space is available in the class. Charges for auditing will be $4 per credit hour.

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.

These procedures have been established by the Curriculum Committee for students who wish to receive credit in courses where they feel they have had adequate training or experience.

1. Student contacts the Dean of Student's Office through a counselor.
2. Student is referred to the appropriate Division Chairman for approval.
3. Student takes approval to the Business Office and pays $4 per credit hour.
4. Student is administered test, either by Division Chairman or instructor.
5. Instructor reports mark to the Registrar's Office.

This mark is recorded as a pass or fail mark.

ATTENDANCE: Regular attendance in a class is essential for a student's success. 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 through seven calendar days after classes begin. However, anyone making late additions should realize that he 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 are those offered by the Study Skills Center and Adult Education Department. These classes are included as part of a student's work load, but he does not receive credit toward a degree for such work.

TRANSFER CREDITS: Work satisfactorily completed at other Oregon public colleges is accepted for credit. Likewise, credit earned at Lane 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 determing 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.

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.

After a student has been disqualified from attendance at Lane, 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 submitted in writing.

SELECTIVE SERVICE CLASSIFICATION: Students enrolled in full-time programs are given special classifications by Selective Service Boards. A distinction is made between the occupational and college transfer students for this classification, which is continuous as long as a student makes satisfactory progress. Selective Service forms are available in the Counseling Offices for students who wish to apply for deferments.

HIGH SCHOOL STUDENT POLICY: Working in cooperation with local school districts, LCC accepts selected high school students on a part time basis in many programs. Application should be made through the local high school counselor.

## TUITION, FEES AND COSTS

Tuition and special fees must be paid in full at the time of registration unless special arrangements have been made. 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 4000 E. 30th Avenue, Eugene, telephone 747-4501.

All the programs offered by Lane are approved for reimbursement by the state and federal Veterans' Administrations, 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 | $3 per term |

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

| | |
|---|---|
| Tuition | $165 |
| Books | 60 |
| Fees and Miscellaneous | 25 |
| | $250 |

DETERMINATION OF RESIDENCE FOR TUITION PURPOSES

IN-DISTRICT: A student is an in-district student if at least one of the following conditions is met:

1. Married and residing in the district;
2. Over 21 and a resident of the district;
3. Has no other permanent address except a house or apartment in the district which he has been financing for over three months.

OUT-OF-DISTRICT: Any student whose home or permanent address is outside of Lane Area Education District, regardless of a temporary residence being established in the district, is classed as an out-of-district student.

OUT-OF-STATE: Any student whose permanent address is outside of the State of Oregon is classed as an out-of-state student.

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 $3 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. In addition, many vocational programs require tool kits. Information regarding cost 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 session.

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 receive no refund.

TRANSCRIPT 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.

## FINANCIAL ASSISTANCE

Financial assistance is available to LCC students in several forms:

1. The Board of Education awards every year a tuition scholarship to a graduating senior from each of the 23 high schools in the college area. In addition, it awards a limited number of scholarships to graduates of the LCC Adult Education program and to 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. In 1967-68 these included:

American Legion Auxiliary, Anonymous Donor —LCC Staff member, Beta Sigma Phi, Xi Alpha Alpha Chapter, Dr. Albert Brauer, Central Trator Co., Coca-Cola Bottling Co. of Eugene, Corvallis Elks Lodge, Cottage Grove High School Associated Student Body, Creswell Future Farmers of America, Creswell High School Scholarship Fund.

Drain P.T.A., Eugene Jaycees, Eugene Rotary Foundation, Florence Rotary Club, Georgia-Pacific Corp., Mickey Giles Memorial Scholarship, Lane County Labor Council—AFL-CIO, Mapleton High School M Club, Mapleton Lions Club, March of Dimes, McKenzie Education Ass'n, McKenzie River Girls' League.

John Austin McKy Memorial Fund, Mohawk High School Student Body, North Eugene High School, Northwest Christian College, Riverside Speedway, Thurston High School Usherettes, Tillamook Kiwanis Club, Timber Bowl, Frank Tou-Velle Trust Scholarship, Triangle Lake P.T.A., Veteran's of Foreign Wars—Post 3232, Dr. Dean Webb, Women in Construction.

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 groundskeepers. These assignments are known as work-study employment and include summer work as well as school-year employment. They usually pay $1.40 an hour and up.

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

5. The college participates with the federal government in administering NDEA and government-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, 4000 E. 30th Avenue, Eugene, Oregon; or call 747-4501.

## COUNSELING CENTER

### (Health Building)

COUNSELING AND GUIDANCE: One of the advantages offered by LCC is 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.

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.

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 available.

PLACEMENT AND FOLLOW UP: A counselor is available to assist students in finding full or part-time employment. Registration in person at the office of the Placement Director is required. For those desiring more than a temporary position, a file of credentials must be established. For more information, contact Placement Office, 4000 East 30th Avenue, Eugene, or telephone 747-4501.

FOREIGN STUDENTS: Foreign students are assigned a special counselor and all scheduling and special problems are handled through this foreign student counselor.

INFORMATION 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.

STUDENT HEALTH: A registered nurse is available to provide emergency first aid. Her office is located on the second floor of the Health Building. However, students needing medical treatment should contact their own physicians.

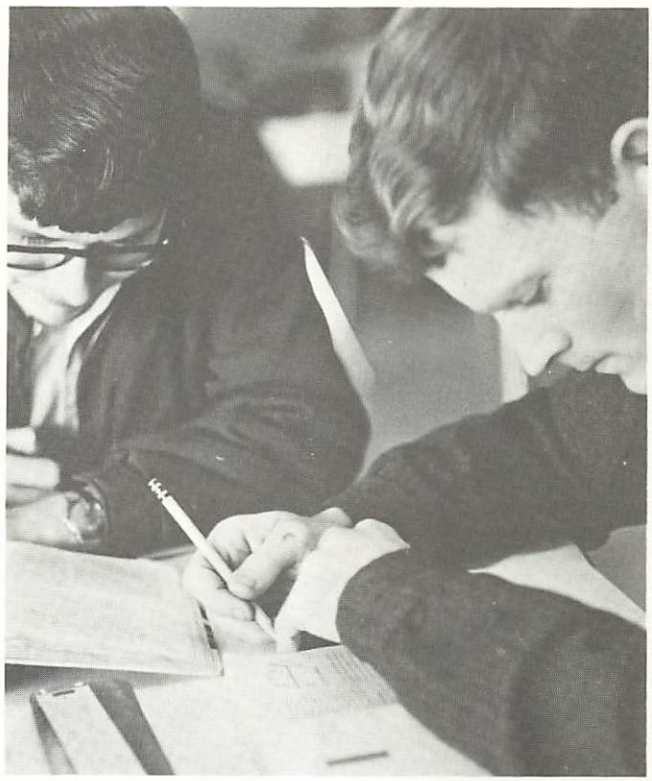
HOUSING: The college does not provide campus housing, although the counseling office will furnish information about living accommodations available to students. The college assumes no responsibility in negotiating housing agreements, since these arrangements are the responsibility of the student and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

For additional information, write or call the Dean of Student's Office, 4000 E. 30th Avenue, Eugene, Oregon, telephone 747-4501.

## LIBRARY-LEARNING RESOURCE CENTER

The Library-Learning Resource Center serves 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-Learning Resource Center is temporarily located in the Apprenticeship Building.



This center contains, 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.

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

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

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

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-Learning Resources Center facilities are explained to students in orientation in such classes as communications, social sciences, science and mathematics. Students in beginning English classes receive information on the use of a card catalog, reference books, and periodical indexes. In other classes they are given assistance in locating specific types of information. The reader and reference services in the library are designed to provide students with opportunities to explore in depth.

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

## STUDY SKILLS CENTER

The Study Skills Center (SSC) is temporarily located on the second floor of the Apprenticeship Building. The SSC is being developed as a programmed materials center that will supplement and reinforce the general curriculum of the college. It is a laboratory facility which provides students with specialized equipment, materials, tools, trained personnel for improving their proficiency in learning techniques and basic skills.

At the present time, programed instruction is combined with tutorial guidance in order to provide a balanced instructional program. Learning opportunities are offered in the following subject areas: reading, spelling, study skills, English, vocabulary development, music appreciation, electronics, physiology, chemistry, shorthand, typing, 10-key calculating, nursing, psychology, and foreign languages.

Attendance at the SSC is voluntary, and no credit or grade is given for participating in a skills improvement program. No tuition is charged LCC students; however, non-LCC enrollees are charged $15 per quarter. The facilities are available to all members of the community with priority being given LCC students using the Center. Students and adults are referred to the Center by counselors, instructors, members and agencies of the community, and other SSC students. The students use the Center for satisfying both long and short term goals.

The SSC is being used to accomplish many different goals: for the student whose education has been interrupted and is now returning to college, the Center allows him to get "back into the swing of things" before entering regular classes; for the adult who has never been to college, it affords him an opportunity to experience the learning process without classroom pressures or demands; for the non-reading adult, it is an opportunity to correct a handicap without exposing himself to embarrassment; and for the student with a specific learning problem, it presents him with an avenue of personal and immediate attention.

The Center is staffed by a Director of Developmental Education, three full-time instructors, and a math instructor who spends a portion of his full-time assignment in the Center. The Center has a wide variety of teaching machines, film strips, tapes, typewriters, record players, tape recorders, programed textbooks, and other printed materials. A large portion of these materials can be checked out for overnight for extended use by the student. This check-out procedure allows the student to broaden his educational background through independent study, and it also enables him to remediate certain educational deficiencies without being confined to a classroom situation.

During the student's initial visit to the Center, background data is collected by the secretary. The student's record folder is established and the student is assigned to an instructor. The instructor completes the interview and determines the student's current skills level. The diagnosis is accomplished by formal and informal testing devices. Diagnostic testing can be accomplished in mathematics, English, reading, spelling, and study skills area. Before the student's next appointment, the background information and diagnostic evidence is studied and a skills program constructed.

During his second appointment, the diagnostic evidence and the skills program are fully explained to the student. The student's performance is evaluated at the end of each lesson and his progress and performance determine the specific materials and techniques that will be employed on subsequent visits. The student's weekly lesson, diagnostic information, answer sheets, and anecdotal comments are kept in his record folder. The student is responsible for maintaining a majority of his records and recording the amount of time he spends working in each skill area.

In constructing a lesson, multi-level materials and several different modes of learning media are employed. This approach allows the student to attack his skill deficiency at the proper level and to utilize a number of learning avenues. This technique also allows the instructor a measure of flexibility in placing students, in that he is able to move a student from one level of difficulty to another without impediment. The student will normally work on several skills and utilize three or four different kinds of materials and media during a lesson. This gives him a variety of tasks to accomplish and helps make the lesson more interesting. The lessons generally last about one hour. During three-quarters of the time, the student is working independently after consulting with his instructor.

ADULT BASIC EDUCATION PROGRAM: Adult Basic Education is available throughout the county without cost to persons wanting assistance to raise their educational level to an eight grade equivalent. Students enroll in these classes for assistance in the basic skills of learning to read and write, up to the more advanced levels of study before entering the High School Completion Program. Classes are kept small and assisting teachers are utilized to provide one-to-one learning situa-

tions. Classes in English as a Second Language are also provided.

Classes are conducted both day and evening to accommodate as many students as possible. Open enrollment enables a student to enter the program any time. Further information is available through the Office of Developmental Education.

## STUDENT ACTIVITIES AND SERVICES

STUDENT GOVERNMENT: A Student Senate 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 Senate by an elected repesentative.

CLUBS: Several clubs 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 Titans. Affiliation with these groups broadens horizons for students and affords an opportunity for college life to be something more than classroom work.

SOCIAL EVENTS: Social Activity is an important part of college life. Each term a major dance, to which all students are invited, is planned and sponsored by the student body.

FORUM, PUBLIC EVENTS: Part of the function of the Adult Education Department 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 public 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. The breadth of participation is limited only by quality and good taste.

INTERCOLLEGIATE ATHLETICS: Athletics are an integral part of the physical education program. They provide an opportunity for development of individual skills, team play, leadership, socialization and recreation. LCC is a member of the Oregon Community College Athletic Conference.

TEAM NAME AND COLORS: Teams are named the Titans and appear in blue and white uniforms.

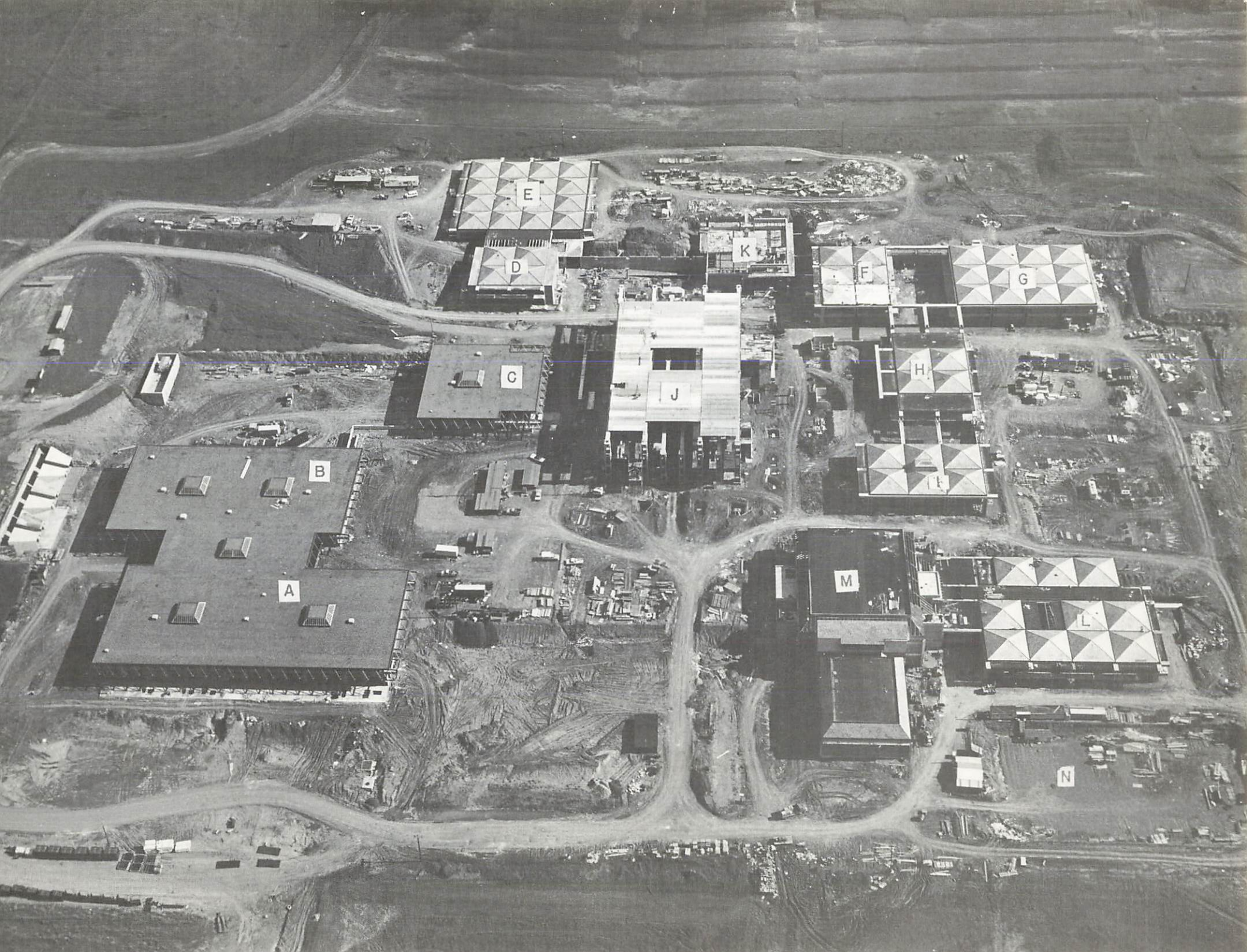
INTRAMURAL SPORTS: The Broad aim of the intramural program is to provide an opportunity for every student to participate in some type of competitive sports activity as frequently as his interests, ability and time will permit. The intramural program provides a full schedule of individual and team sports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

PUBLICATIONS: Students produce a weekly newspaper, The Torch, a yearbook, The Titan, and a handbook, Titan Code.

CAMPUS RADIO: The college operates FM radio station KLCC (90.3 mc), which daily provides students with information and notices pertinent to college life and activities.

BOOKSTORE: Texts for all classes, paperback books and a variety of school supplies and some notions are available at the bookstore.

FOOD SERVICE: Sandwiches, soups, beverages, and fruit are provided for students from coin-operated food dispensers which are serviced daily. A college-operated snack bar is available on the campus.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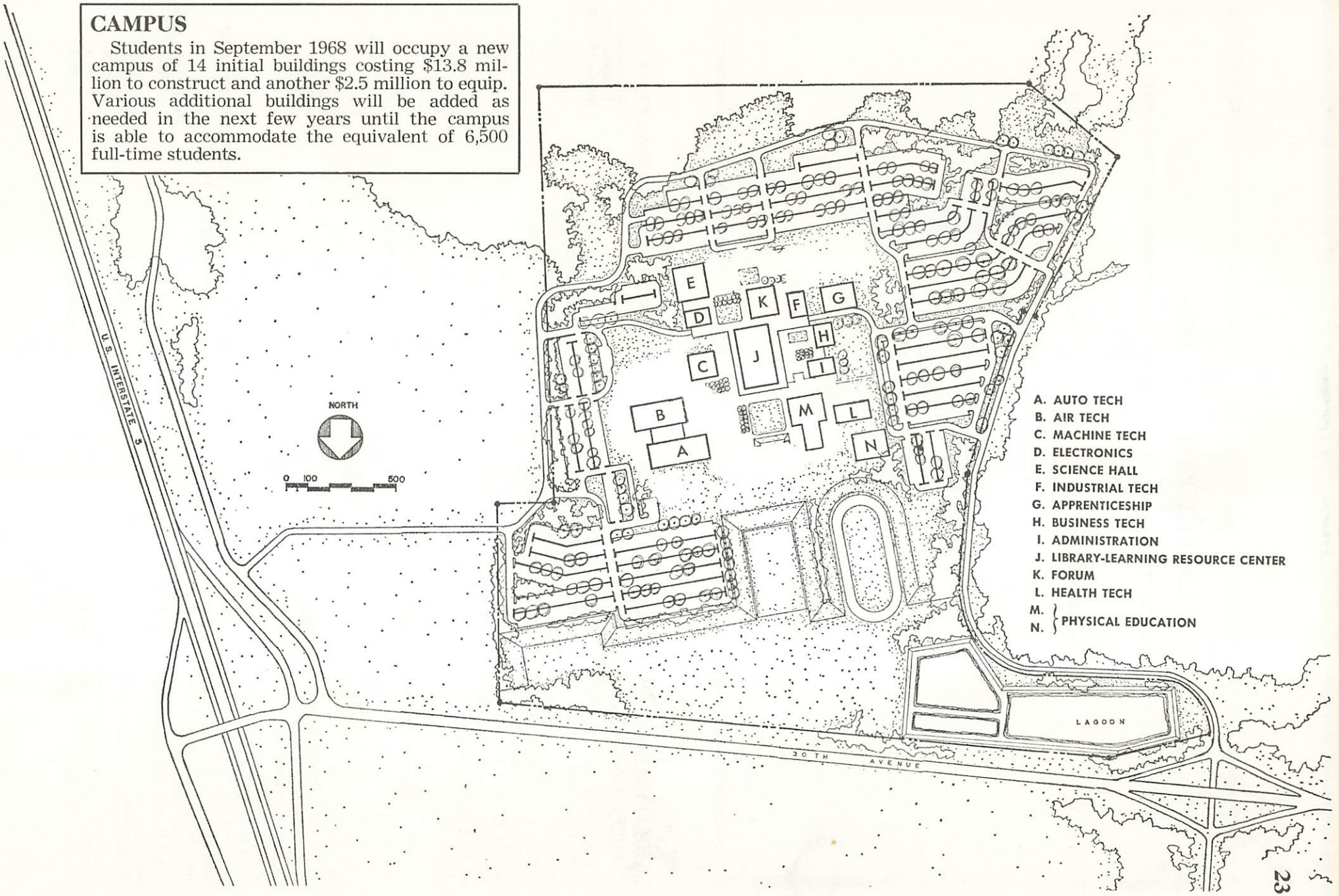
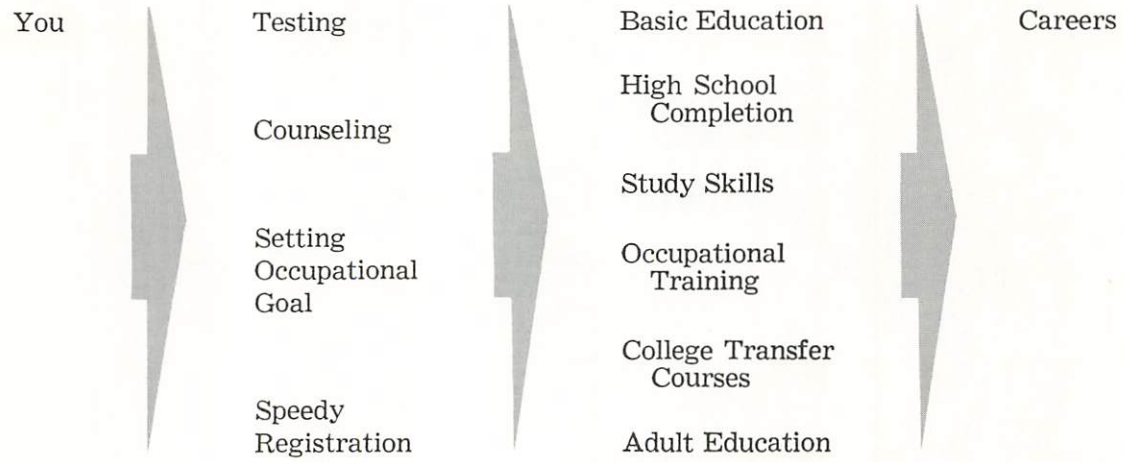
## CAMPUS

Students in September 1968 will occupy a new campus of 14 initial buildings costing $13.8 million to construct and another $2.5 million to equip. Various additional buildings will be added as needed in the next few years until the campus is able to accommodate the equivalent of 6,500 full-time students.



## CAREER PATHS AT LCC

**INDIVIDUAL + STUDENT SERVICES + COLLEGE PROGRAMS = INDIVIDUAL IMPROVEMENT**




## EMPLOYMENT OPPORTUNITIES IN OREGON AND LANE COUNTY

Oregon State Employment Department estimates of expansion and replacement needs in various occupations are reprinted here as an aid in career planning. The employment opportunities are grouped into related clusters. For the kind of high school background most helpful for preparing for jobs in a specific cluster, see the section, "Suggested Secondary School Preparation," which follows this one.

### OREGON OCCUPATIONAL NEEDS

| | 1966 Employment | Replacement and Expansion Needed to 1970 |
|---|---|---|
| Accounting Systems | 18,040 | 3,022 |
| Agricultural Occupations* | 47,824 | 8,143 |
| Basic Marketing Occupations | 47,153 | 12,634 |
| Clerical Occupations | 58,329 | 11,404 |
| Construction Occupations | 23,658 | 2,826 |
| Electrical Occupations | 12,106 | 1,750 |
| Food Service Occupations | 34,636 | 6,187 |
| Health Occupations | 14,554 | 3,587 |
| Mechanical (and Repair) Occupations | 62,848 | 8,895 |
| Metal Working Occupations | 18,708 | 3,643 |
| Stenographic Occupations | 21,282 | 4,891 |
| Wood Products Occupations | 21,924 | 2,218 |

*Based upon replacement needs in production agriculture. Employment needs for off-farm agriculture occupations are not available.

### LANE COUNTY OCCUPATIONAL NEEDS

| | Additional or Replacement Needs 1966-70 |
|---|---|
| Accounting Systems Occupations | 700 |
| Agricultural Occupations | 400 |
| Basic Marketing Occupations | 1,320 |
| Clerical Occupation | 828 |
| Construction Occupations | 880 |
| Electrical Occupations | 188 |
| Food Service Occupations | 1,008 |
| Health Occupations | 720 |
| Mechanical Occupations | 648 |
| Metal Working Occupations | 260 |
| Stenographic Occupations | 1,148 |
| Wood Products Occupations | 1,248 |
| Total Need | 9,348 |

### PROJECTED OCCUPATIONAL NEEDS BY AREA OF INSTRUCTION TO 1974

| Occupational Area | Percent of Labor Force |
|---|---|
| Agriculture | 7.4 |
| Distribution and Marketing | 19.3 |
| Office | 26.9 |
| Service | 14.0 |
| Trade and Industrial | 32.4 |

# SUGGESTED SECONDARY SCHOOL PREPARATION

Entry in a particular occupational cluster is facilitated by high school and community college training slanted specifically to job needs. Suggested course preparation for a number of job clusters from the ninth grade through the community college is offered below. This information is for guidance only. Course substitutions should be made as individual needs dictate.

Programs listed under the "community college" classification below are not necessarily offered at LCC. See list of "Vocational Curriculums Offered at Oregon Community Colleges," which follows this section.

## AGRICULTURE CLUSTER

### Agriculture and Related Occupations

- Farmers
- Farm Hands
- Grounds Keepers and Landscape Gardeners
- Agriculture Sales

### Suggested Preparation For This Job Cluster

**Grade 9**
- General Business
- Typing I
- Orientation to Careers
- Industrial Arts

**Grade 10**
- Welding
- Business Math
- Basic Electronics or
- Bookkeeping I

**Grade 11**
- Agriculture
- Drafting I
- Business Law
- Science

**Grade 12**
- Agriculture II or
- Power Mechanics
- Business English
- Speech 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

## CONSTRUCTION AND REPAIR CLUSTER

### Construction and Repair Occupations

- Carpenters
- Plumbers and Steamfitters
- Painters
- Electricians
- Brick and Stone Masons
- Plasterers
- Cement and Concrete Finishers
- Carpet and Linoleum Layers
- Roofers
- Cat Skinners
- Construction Formen
- Excavating and Grading Equipment Operators
- Construction Equipment Operators
- Construction Laborers
- Concrete Workers
- Utility Workers
- Municipal Services
- Household Appliance Servicemen
- Office Machine and Instrument Repair
- Electronics Technician

### Suggested Preparation For This Job Cluster

**Grade 9**
- General Business
- Typing I
- Orientation to Careers
- Industrial Arts

**Grade 10**
- Basic Electronics
- Business Math
- Construction Technology

**Grade 11**
- Business Law
- Drafting I
- Construction Technology II

**Grade 12**
- Welding
- Drafting II
- Shop Math or
- Power Mechanics

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

## DOMESTIC AND CUSTODIAL SERVICES CLUSTER

### Domestic and Custodial Occupations

- Building Maintenance Foremen
- Building Maintenance Men
- Janitors and Porters
- Charwomen and Cleaners
- Hotel Maids and Housemen
- Housekeepers and Dayworkers
- Park and Camp Attendants
- Transportation Equipment Cleaners

### 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 and 2 Year Programs**
- Custodial
- Maintenance
- Vocational Housekeeping
- Nurse Aid
- Child Care

## FOOD SERVICE CLUSTER

### Food Service Occupations

- Bus Boys
- Dish Washers
- Kitchen Helpers
- Cook Helpers
- Waiters and Waitresses
- Bartenders
- Cooks
- Dieticians and Other Food Service
- Grain Mill Workers
- Bakers and Helpers
- Butchers and Meatcutters
- Poultry Processing Workers
- Dairy Product Processors
- Canning and Other Food Processors

### 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 Technology

**Grade 12**
- Speech
- Retail Selling
- Foods Technology II
- On-the-Job Training for Job Entry

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

## GRAPHIC ARTS CLUSTER

### Graphic Arts Occupations

- Commercial Artists and Decorators
- Photographers
- Musicians and Other Artists
- Compositors and Typesetters
- Pressmen and Plate Printers
- Printing and Publishers Workers
- Photograph Developers and Finishers

**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 and 2 Year Programs**
Commercial Art
Teacher Aides
Publishing and Printing
Journalism Technician
Technical Illustration
Broadcasting and Telecasting
Photography

## HEALTH SERVICE CLUSTER

**Health Service Occupations**

Physicians and Surgeons
Dentists
Veterinarians
Pharmacists
Embalmers
Nurses
Practical Nurses
Nurses' Aides and Orderlies
Veterinary Hospital Attendant
Dental Assistants
Opticians
Barbers and Beauticians
Matrons
Medical Technician

**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
Mathematics (Algbera)

**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

## MANAGERIAL CLUSTER

**Managerial Occupations**

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

**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
Speech

**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

## MARKETING CLUSTER

**Sales Occupations**

Retail Supervisors
Apparel Salespersons
General Salespersons
Sales Clerks
Solicitors and Peddlers
Recreation Attendants
Ticket Agents
Appliance Salesmen
Auto Parts Salespersons
Insurance Salesmen
Real Estate Salesmen
Advertising Salesmen
Wholesale Food Stuffs Salesmen
Wholesale Dry Goods Salesmen
Wholesale Auto Accessories Salesmen
Wholesale Housefurnishings Salesmen
Wholesale Building Supplies Salesmen
Wholesale Machine and Equipment Salesmen

**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
Marketing I or II

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

## MECHANICS CLUSTER

**Mechanic Occupations**

Automobile Mechanics
Farm Mechanics
Truck and Bus Mechanics
Diesel Mechanics
Auto-Body Repairmen
Automobile Wreckers
Mechanics Helpers
Service Station Attendants
Auto Garage Foremen
Oilers
Millwrights
Maintenance Men and Maintenance Mechanics

**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

## METAL WORKING CLUSTER

### Metal Working Occupations

- Sheet Metal Workers
- Sheet Metal Laborers
- Boilermakers
- Machinists
- Welders
- Metal Working Machine Operators
- Metalworking and Machineshop Foremen
- Tool Sharpener and Dressers
- Machineshop Laborers
- Metal Working Laborers
- Foundry Workers

### 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

## OFFICE OPERATIONS CLUSTER I

### Bookkeeping Occupations

- Accountants and Auditors
- Escrow Officers
- Real Estate Appraisers
- Bookkeepers
- Librarian Assistants
- Tellers and Cashiers
- Credit Clerks
- Payroll Clerks and Timekeepers
- Meter Readers

### Suggested Preparation For This Job Cluster

**Grade 9**
- General Business
- Orientation 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 or Speech

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

## OFFICE OPERATIONS CLUSTER II

### Secretarial Occupations

- Employment Interviewers and Other Office Operators
- Secretaries
- Stenographers
- Typists
- Clerk Typists
- File Clerks
- Desk Clerks
- Bookkeeping Machine Operators
- Office Machine Operators
- Telephone and Telegraph Operators
- General Office Clerks
- Receptionists
- Cashiers

### 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 or Speech
- Business Machines

Principles of Data Processing or
On-The-Job Taining

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

## SOCIAL SERVICES CLUSTER

### Protective Service Occupations

- Law Enforcement Officers
- Firemen and Fire Chiefs
- Watchmen and Lot Attendants
- Inspectors, etc.

### Social Service Occupations

- Clergy
- Lawyers
- College Professors
- Social Scientists
- Primary, Secondary and Special Teachers
- Social Workers
- Housemothers
- Ushers, Bellhops and Elevator Operators
- Baby Sitters

### Suggested Preparation For This Job Cluster

**Grade 9**
- General Businses
- 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

## STOCK CONTROL CLUSTER

### Stock Control Occupations

- Traffic Managers
- Shipping and Receiving Clerk
- Tallyman
- Auto Parts Managers
- Stock Clerks
- Grocery Checkers
- Jitney Drivers
- Lumber Carrier Drivers
- Car Loaders
- Retail Laborers
- Warehouse Laborers
- Post Office Clerks
- Mail Carriers

### 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

## TEXTILE CLUSTER

### Textile and Upholstery Processing

- Seamstresses
- Sewing Machine Operators
- Laundry and Drycleaning Workers
- Markers and Packers
- Upholsterers and Furniture Repairmen
- Auto Upholsterers
- Tailors
- Paint and Chemical Workers

### 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

## TIMBER PRODUCTS CLUSTER

### Timber Products Occupations

- Fallers and Buckers
- Riggers and Climbers
- Donkey Puncher
- Logging Laborers
- Logging Foremen
- Log Scaler
- Green Chainmen
- Sorters and Stackers
- Sawmill and Planermill Off-bearers
- Kiln Operators
- Sawmill Laborers
- Sawmill Foremen
- Barker Operators
- Veneer Clippers
- Veneer Drier
- Patching Machine Operator
- Plywood Patcher
- Gluemen
- Plywood and Veneer Press Operators
- Veneer and Plywood Graders
- Veneer Laborers
- Veneer and Planingmill Foremen
- Log and Lumber Graders
- Pondmen
- Headsaw Operators
- Sawyers
- Resawyers and Trimmermen
- Woodworking Sawyers
- Woodworking Machine Operators
- Hand and Machine Sanders
- Woodworking Shapers and Assemblers
- Door and Frame Makers
- Furniture Assemblers
- Planer Mill Laborers
- Pulp Machine Tenders
- Paper Cutters
- Pulp and Paper Laborers
- Pulp and Paper Foremen
- Hoistmen
- Shingle Packers
- Tool Setters and Grinders
- Boiler Tenders
- Powder Monkeys
- Foresters and Forester Aides

### 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

## TRANSPORTATION CLUSTER

### Transportation Occupations

- Truck Drivers
- Bus Drivers
- Chauffeurs
- Routemen
- Delivery Boys
- Railroad Trainmen
- Truck Driver Helpers
- Transportation Foremen
- Transportation Equipment Workers
- Tire Recappers and Repairmen

### Suggested Preparation For This Job Cluster

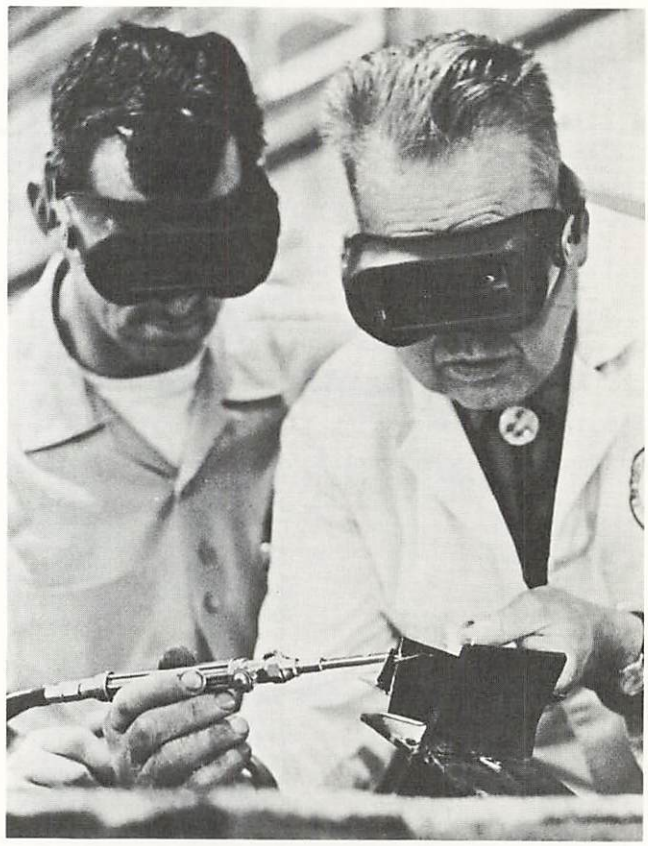
**Grade 9**
Typing I
General Business
Orientation to Careers
Industrial Arts

**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



# Vocational Curriculums Offered at Oregon Community Colleges

| CURRICULUMS OFFERED | Blue Mountain | Central Oregon | Clackamas | Clatsop | Lane | Mt. Hood | Portland | Salem | Southwestern | Treasure Valley | Umpqua |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AGRICULTURE | | | | | | | | | | | |
| Agriculture Equipment Repair | | | | | x | | | | | x | |
| Agriculture Technology | x | | | | | | | | | x | |
| *Forestry Aide | | x | | | x | | | | | | |
| Forestry Technology | | | | x | | | | | | | x |
| Landscaping-Grounds Maintenance | | | | | | x | | | | x | |
| Livestock Technology | | | | x | | | | | | | |
| Range-Ranch Management | | | | | | | | | | x | |
| Recreation-Conservation Technology | | | | | | | | | | x | |
| BUSINESS | | | | | | | | | | | |
| *Accounting | | | | | x | | x | | x | | |
| Business Management | x | x | | x | x | x | x | | x | x | |
| *Data Processing Machine Operation | | | | | x | | x | x | | | |
| Data Processing Technology | | | | | | | | x | | | |
| *General Office Practices | x | x | | x | x | | x | x | x | x | |
| Library Assisting | | | | | | | | | | x | |
| Marketing and Distribution | x | | | x | | | x | | | | |
| Real Estate Practices | | x | | | | | x | x | | x | |
| *Secretarial Practices | x | x | | x | x | x | x | | x | x | x |
| HEALTH | | | | | | | | | | | |
| *Dental Assisting | | | | | x | | x | x | | | |
| Dental Laboratory Technology | | | | | | | x | | | | |
| *Medical Assisting | | | | | | | | x | | | |
| *Practical Nursing | x | x | | | x | x | x | x | x | x | x |
| Nursing-Associate Degree | | | | | x | | x | | | | |
| HOME ECONOMICS | | | | | | | | | | | |
| *Child Care Assistant | | | | | | | x | | | | |
| *Homemaker Assistant | | | | | | | x | | | | |
| *Homemaking | | | | x | | | | | | | |
| TRADE AND INDUSTRIAL | | | | | | | | | | | |
| Aircraft Operation | | | | | x | | | | | x | |
| Airframe and Power Plant Mechanics | | | | | x | | | | | | |
| Appliance Repair | | | | | x | | | | | | |
| Automotive Body Repair | | x | x | | x | | | | | | |
| Automotive Mechanics | x | x | x | | x | x | x | | | | x |
| Civil Engineering Technology | x | | | x | x | | x | x | x | | |
| Diesel Mechanics | | | | | x | | | | | | |
| Electronic Engineering Technology | | x | | x | x | | x | x | x | | |
| Electronics Technology | x | | | | | x | | | | | |
| Fire Prevention Technology | | | | | x | | x | x | | | |
| *Food Preparation | | | | | x | | x | | | | |
| Forest Products Technology | | | | | | | | x | x | | |
| *General Drafting | x | | | | x | | | x | x | x | |
| General Engineering Technology | | x | | | | | | | | | |
| Highway Engineering Technology | | | | | | | x | x | | | |
| Industrial Electronics | | | | | | | x | x | | | |
| Industrial Mechanics | | | | x | | | | x | x | | |
| *Instructional Materials Technology | | | | | | | x | | | | |
| Law Enforcement | x | | | x | x | | x | | x | x | x |
| Log Scaling | | | | | | | | x | | | |
| *Machine Tool Technology | | | x | | x | | x | x | | | |
| Marine Technology | | | | x | | | | | | | |
| Mechanical Engineering Technology | | | | | | | | x | | | |
| Mechanical Technology | | | | | | | | | | x | |
| Radio Communications | | | | | x | | | | | | |
| Radio and Television Servicing | | | | | x | | | x | | | |
| Structural Engineering Technology | | | | | x | | x | x | x | | |
| Surveying | | | | | x | | | x | | | |
| Technical Drafting | | | | x | x | | x | x | | | x |
| *Welding | | | | | x | | x | x | | | |
| Well Drilling | | | | | | | | x | | | |

*Depending upon the institution, the curriculums will often vary in length or duration. Check with the specific institution.

# PROGRAMS OF STUDY

## ADULT EDUCATION

About 150 non-credit, non-graded courses are offered each year through the Adult Education Department. These range from vocational-technical to office skills, home arts, language arts, mathematics and avocational courses.

Besides this core, the college is willing and usually able to establish on request other courses in most demand areas. Establishment of courses hinges on location of an instructor and registration of at least 12 students.

All courses offered are held in geographical locations closest to the majority of enrollees. Likewise, they are taught at a time, day or evening, most convenient to the majority of students. Counseling and guidance are available both days and evenings on the main campus.

Enrollment in most courses is open to anyone interested, though a few have prerequisites. A list of class offerings is issued quarterly by the Adult Education Department. Students simply attend the first meeting of the class, where enrollment is effected.

Certificates are available on completion of any class or series of classes. Cards designating work completed in any one class also are available on request.

Classes usually meet for 30 hours of instruction at a tuition charge of $12. The cost may vary up or down in line with the number of instruction hours and type of course. In addition there may be an extra charge if a cooperating agency charges a rental for facilities. No refunds are made after the second meeting of a class.

Books are available on a rental basis in high school completion classes; other classes may require the purchase of textbooks. These are available at the College bookstore. Material fees also may be assessed in some classes.

TUITION SCHEDULE

State Aproved 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.

Typical courses offered by the Department include:

VOCATIONAL-TECHNICAL

Drafting, Drafting and Blueprint Reading for Plumbers and Pipefitters, Introduction to Water Works Field, Waitress Training, Retail Selling Fundamentals, Advanced Retailing, Commercial Art, Property Appraisal, Medical Terminology for Licensed Practical Nurses, Medications for Practical Nurses, Radio Theory II, Elements of Supervision, Basic Psychology for Supervisors, Human Relations, Labor-Management Relations, Industrial Economics, Methods of Improvement for Supervisors, Cost Control for Supervisors, Oral Communication for Supervisors, Written Communications for Supervisors, Developing the Em-

ployees Through Training, Refrigeration I, Automotive Electrical Tune-up, Front End Alignment, Basic Oil Burner Service, General Welding, Machine Shop I, Radio Operator's License, Radio Theory I, Agriculture, Fireman Training, Law Enforcement, Custodial Training.

OFFICE SKILLS

Accounting, Bookkeeping, Preparation of Income Tax for Professionals, Briefhand, Business Law, Business Machines, Combination Business, Credit Union Accounting, Secretarial—Educational, Secretarial Problems—Educational, Secretarial—Lumber, Secretarial—Basic Medical, Secretarial—Medical, Shorthand—Beginning, Shorthand—Advanced, Typing—Beginning, Typing—Advanced, Written Communications.

HOME ARTS

Bishop Sewing—Beginning & Advanced, Bishop Tailoring—Beginning & Advanced, Couture, Home Sewing, Home Tailoring, Sewing Children's Clothing, Interior Design I & II, Agriculture and Home Economics, Household Furnishings, Knit and Fashion Fabrics, Food Preparation for Special Occasions, Flower Arranging and Home Decorating, Accessories for the Home, The Family in the Money World, Draper, Curtain, Bedspread, Cushion and Pillow Construction.

LANGUAGE ARTS

Reading Improvement, English Essentials, Spanish, German, French, Russian, Arabic.

MATHEMATICS

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

AVOCATIONAL

Citizenship, Driver Education, Ornithology, Parliamentary Rules.

## 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.

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

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 Build-

ing, 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.

HIGH SCHOOL COMPLETION

The program offers the opportunity for people who have not completed high school to earn 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, the college will cooperate to advance the education of students under 19 years of age.

Normally, the 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 Thursday evenings from 7-10 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 at the main campus for all persons interested in this program.

# AGRICULTURE

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

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| Ch 201, 202, 203 General Chemistry[1] | 4 | 4 | 4 |
| Mth 101 College Algebra[2] | | 4 | |
| Mth 102 Trigonometry | | | 4 |
| Bot 201, 202 General Botany or Bi 101, 102, 103 General Biology[3] | 4 | 4 | 0-4 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| Electives[4] | 3-4 | | 0-3 |
| | 15-16 | 16 | 16-17 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Z 201, 202, 203 General Zoology[3] or electives[4] | 3 | 3 | 3 |
| Ph 201, (202) General Physics[2] | 4 | (4) | |
| Ec 201,202,203 Principles of Economics | 3 | 3 | 3 |
| Sp 111 Fundamentals of Speech | | | 3 |
| Physical Education | 1 | 1 | 1 |
| Mth 200 Calculus with Analytic Geometry[2] | 4 | | |
| Electives[4] | | 4-8 | 5 |
| | 15 | 15 | 15 |

TOTAL: 93 hours

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

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

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

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

# AGRICULTURAL & INDUSTRIAL EQUIPMENT TECHNOLOGY

## Two Year Associate Degree Program

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

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

**FIRST YEAR**

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

*H—Hours, C—Credits

Agriculture and industrial equipment technology work experience will fill the summer between the first and second years. It carries 30 class/lab hours and 10 credits.

**SECOND YEAR**

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

# AIRFRAME AND POWERPLANT MECHANICS

## Two Year Associate Degree 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. Airline mechanics get $3.72 an hour with increases to more than $4 in two years. Fixed base operators get $2 to $2.50 with top pay after six years about $4.

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. Special costs include: Books $75, tools $110, welding fee $10. Class size is limited to 90 students.

### AIRFRAME MECHANICS

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

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| 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 |

*H—Hours, C—Credits

### POWERPLANT MECHANICS

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

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Aircraft Powerplant I, II, III | 10-10 | 5-5 | 5-5 |
| Air Powerplant I, II, III | 10-3 | 20-7 | 19-6 |
| Practical Physics II | 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 |

# ANTHROPOLOGY

This program has been approved by the University of Oregon for students who plan to transfer to a major program in anthropology. Students may complete requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| Anth 101, 102, 103 General Anthropology[1] | 3 | 3 | 3 |
| GS 101, 102, 103 General Biology | 4 | 4 | 4 |
| First year foreign language[2] or Literature Sequence | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 14-15 | 15-16 | 14-15 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Second year foreign language[2] or electives | 4 | 4 | 4 |
| Second science sequence[3] | 3-4 | 3-4 | 3-4 |
| Social Science Sequence | 3 | 3 | 3 |
| Literature sequence (if not taken in freshman year) or Second humanities sequence | 3 | 3 | 3 |
| Physical education | 1 | 1 | 1 |
| Electives to bring total hours to 93 | 0-3 | 0-3 | 0-3 |
| | 14-17 | 14-17 | 14-17 |

TOTAL: 93 hours

[1]Students planning to transfer to UO may substitute Anth 207, 208, 209 Introduction to Cultural Anthropology. Students should **not** take both Anth 101, 102, 103 and 207, 208, 209.

[2]Students planning to do graduate study should complete two years of German, French, or Spanish.

[3]Students transferring to UO may use Psy 201, 202, 203 toward completing the science requirement provided laboratory work is completed after transfer.

# APPLIED SCIENCE

This program is recommended for students who plan to transfer to the major program in applied science offered at Portland State College. Upon

satisfactory completion of the two-year program, students may transfer to Portland State College ready to begin the *second year* of applied science.

**FRESHMAN YEAR—APPLIED SCIENCE PREPARATORY**

| | F | W | S |
|---|---|---|---|
| GE 101, 102, 103 Engineering Orientation | 2 | 2 | 2 |
| Mth 95 Intermediate Algebra[1] | 4 | | |
| Mth 101 College Algebra | | 4 | |
| Mth 102 Trigonometry | | | 4 |
| Ch 201, 202, 203 General Chemistry[2] | 4 | 4 | 4 |
| Wr 111, 112 English Composition | 3 | 3 | |
| Electives | 2 | 2 | 3 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| | 16 | 16 | 15 |

**SOPHOMORE YEAR—APPLIED SCIENCE, FIRST YEAR**

| | | | |
|---|---|---|---|
| Mth 200, 201, 202 Calculus with Analytic Geometry | 4 | 4 | 4 |
| Ph 207, 208, 209 Introductory Classical Physics | 4 | 4 | 4 |
| Ec 201, 202, 203 Principles of Economics | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Elective (social science or humanities sequence) | 3 | 3 | 3 |
| | 15 | 15 | 15 |

TOTAL: 92 hours

## One year transfer program in Applied Science

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

**APPLIED SCIENCE—FIRST YEAR**

| | F | W | S |
|---|---|---|---|
| Mth 200, 201, 202 Calculus with Analytic Geometry | 4 | 4 | 4 |
| Ph 207, 208, 209 Introductory Classical Physics | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Wr 111 English Composition | 3 | | |
| Electives | | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| | 16 | 16 | 16 |

TOTAL: 48 hours

[1]Students should begin work in mathematics at the level indicated in placement tests.
[2]Or Ch 101, 102, 103 and 241.

# ARCHITECTURE, INTERIOR ARCHITECTURE, AND LANDSCAPE ARCHITECTURE

This program is recommended for students who plan to transfer to major programs in architecture, interior architecture, and landscape architecture at the University of Oregon. Transfer students seeking admission to enter these professional programs must have a grade-point average of 2.50. Students successfully completing the program outlined, with the required GPA, will be prepared to enter programs in interior and landscape architecture at the sophomore level. Students transferring into the professional program in architecture will need to complete certain professional work (usually accomplished during the freshman year) after transfer, which may extend the time required to complete the professional program beyond the normal five-year period.

**FRESHMAN YEAR**

| | | | |
|---|---|---|---|
| Wr 111, 112, 113, English Composition | 3 | 3 | 3 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Mathematics[1] (all architecture students and landscape students who have not completed mathematics through Trigonometry in high school) or Science sequence (students not required to take mathematics) | 4 | 4 | 4 |
| AA 290 Painting or AA 291 Drawing | 2-3 | 2-3 | 2-3 |
| AA 201, 202, 203 Survey of the Visual Arts | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 16-17 | 17-18 | 16-17 |

TOTAL: 49-52 hours

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

# ART AND APPLIED DESIGN

This program is recommended for students who plan to transfer to a major program in art at the University of Oregon, Oregon State University, Portland State College, or a program in applied design at Southern Oregon College. Able students who satisfactorily complete the program will be able to complete requirements for a baccalaureate degree with two additional years of work. (Students transferring to the University of Oregon must have a 2.50 grade-point average for acceptance into the major program in fine and applied arts.)

**FRESHMAN YEAR**

| | | | |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Art Courses: | | | |
| AA 195, 196, 197 Basic Design (All students) | 2 | 2 | 2 |
| AA 201, 202, 203 Survey of Visual Arts (9 hours, PSC; AA201, 202, 6 hours, OSU) AA 291 Drawing (6 hours, PSC, SOC) AA 290 Painting, AA 255 Ceramics, or AA 293 Sculpture (6 hours, UO) | 2-7 | 2-7 | 2-7 |
| Science sequence or 12 hours of mathematics[2] | 3-4 | 3-4 | 3-4 |

| | | | |
|---|---|---|---|
| First year language (OSU) | 4 | 4 | 4 |
| Sp 111 Fundamentals of Speech, Mus 201 Introduction to Music and Its Literature, and elective (SOC) | 3 | 3 | 3 |
| Literature sequence (UO—courses numbered 100-110 or 200-210) | 3 | 3 | 3 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| | 15-16 | 15-16 | 15-17 |

**SOPHOMORE YEAR**

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

[1]UO and SOC: Wr 111, 112, 113. OSU and PSC: Wr 111, 112 and elective.
[2]SOC: GS 101, 102, 103 or GS 201, 202, 203.
[3]SOC students should complete Introduction to Literature or World Literature.
[4]SOC: History of the United States or American Governments. OSU: history or philosophy sequence.

# ART EDUCATION

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

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| AA 195, 196, 197 Basic design | 2 | 2 | 2 |
| AA 201, 202, 203 Survey of Visual Arts (UO, OCE, EOC) | 3 | 3 | 3 |
| GS 104, 105, 106 Physical Science (SOC) | 4 | 4 | 4 |
| Studio art electives (drawing, painting, sculpture, or ceramics—no more than 6 hours of each to be completed by the end of the sophomore year)[1] | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | 1 |
| | 15-16 | 15-16 | 15-16 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Psy 201, 202 General Psychology | 3 | 3 | |
| Sp 111 Fundamentals of Speech (SOC, OCE, EOC)[2] | | | 3 |
| Science sequence[3] | 4 | 4 | 4 |
| Social science sequence (Hst 201, 202, 203 History of the United States recommended)[4] | 3 | 3 | 3 |
| Studio art electives to bring total hours to 93 | 4-5 | 3-4 | 4-8 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Approved transfer courses in water color, printmaking, or lettering may be substituted for painting, sculpture, or ceramics, if available.
[2]UO students should take 3 hours of studio art.
[3]GS 101, 102, 103 General Biology, GS 104, 105, 106 Physical Science, mathematics according to recommended placement. OCE students should complete 12 hours of mathematics. SOC students should complete GS 101, 102, 103 General Biology or second science sequence.
[4]UO recommends Anth 207, 208, 209 Introduction to Cultural Anthropology.

# ART HISTORY

This program is recommended for students who plan to transfer to the major program in art history at the University of Oregon. Students transferring must have a grade-point average of 2.50.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| First-year language (French or German)[1] | 4 | 4 | 4 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Studio arts (drawing, painting, sculpture or ceramics) | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 14-15 | 15-16 | 14-15 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Second-year language | 4 | 4 | 4 |
| Literature sequence | 3 | 3 | 3 |
| Science sequence or 12 hours of mathematics | 3-4 | 3-4 | 3-4 |
| AA 201, 202, 203 Survey of the Visual Arts | 3 | 3 | 3 |
| Studio arts (drawing, painting, sculpture, or ceramics) | 2 | 2 | 2 |
| Physical Education | 1 | 1 | 1 |
| | 16-17 | 16-17 | 16-17 |

TOTAL: 93 hours

[1]Students must complete language requirement in French or German. No other language is acceptable.

# AUTO BODY AND FENDER

## Two Year Associate Degree 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 in the various phases of auto body and fender and painting through class instruction and shop practice. Special costs include: tools $95, welding fee $10.

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

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

AUTOMOTIVE BODY AND FENDER

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Automotive Metal Work I, II, III | 3-3 | 3-3 | 2-2 |
| Automotive Metal Work I, II, III Lab | 20-7 | 20-7 | 20-7 |
| Welding IA, IIA, IB | 5-2 | 5-2 | 5-2 |
| Practical Physics II or | 5-4 | | |
| General Physics 202 | 6-5 | | |
| Communications Skills I or II or | | | |
| English Comp. 111 or 112 | | 3-3 | |
| Math II | | | 3-3 |
| or Math 95 | | | 5-4 |
| Physical Education | | | 3-1 |

*H—Hours, C—Credits

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

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

AUTOMOTIVE PAINTING

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Automotive Painting I, II, III | 3-3 | 3-3 | 3-3 |
| Automotive Painting I, II, III Lab | 20-7 | 20-7 | 20-7 |
| Practical Physics II or | 5-4 | | |
| General Physics 201 | 6-5 | | |
| Mathematics II or | 3-3 | | |
| Mathematics 95 | 5-4 | | |
| Communications Skills I or II | | 3-3 | |
| or English Comp. Wr 111 or 112 | | | |
| Employer-Employee Relations | | | 2-2 |
| Health Education | | 2-2 | |
| Applied Economics | | | 3-3 |

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

# AUTOMOTIVE MECHANICS

## Two Year Associate Degree 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. Beginners earn $1.50 an hour; journeymen get up to $10,000 annually.

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. Class vacancies total 100. Special costs include: tools $100, coveralls.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Auto Chassis | 3-3 | | |
| Auto Chassis Lab | 6-2 | | |
| Internatal Combustion Engine I, II | 2-2 | 2-2 | |
| Internal Combustion Engine 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 I, II, Lab | | 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 | | | 2-2 |
| | 27-17 | 30-17 | 29-18 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| 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 |
| Automotive Transmissions | 3-3 | | |
| Automotive 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 Lub. | | | 2-2 |
| Automotive Repair Est. | | | 2-2 |
| Automotive Service Management | | | 2-2 |
| Health | | | 2-2 |
| Blueprint Reading | | | 3-1 |
| | 26-14 | 30-17 | 23-15 |

# BIOLOGY, BOTANY, ENTOMOLOGY, MICROBIOLOGY, ZOOLOGY, GENERAL SCIENCE

This program is recommended for students who plan to transfer to a major program in biology

at the University of Oregon, Portland State College, or Southern Oregon College, or to a major program in botany, entomology, microbiology, zoology, or the biological science option in general science at Oregon State University. Students may complete the requirements for the baccalaureate degree with three additional years of work at the four-year institution.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Mth 200, 201, 202 Calculus with Analytic Geometry | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Humanities or social science sequence | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15 | 16 | 15 |

TOTAL: 46 hours

BIOLOGY (EOC)

This program is recommended for students who plan to transfer to the major program in biology at Eastern Oregon College. Students may complete the requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| Mathematics[2] | 4 | 4 | 4 |
| GS 101, 102, 103 General Biology | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry (or Ch 101, 102, 103 according to placement) | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | 1 |
| | 15-16 | 15-16 | 15-16 |

**SOPHOMORE YEAR**

| | F | W | S |
|---|---|---|---|
| Bot 201, 202, 203 General Botany | 4 | 4 | 4 |
| Z 201, 202, 203 General Zoology | 3 | 3 | 3 |
| Ph 201, 202, 203 General Physics | 4 | 4 | 4 |
| Literature or social science sequence[3] | 3 | 3 | 3 |
| Personal Health | | 2 | |
| Physical Education[4] | 1 | | 1 |
| | 15 | 16 | 15 |

TOTAL: 93 hours[4]

[1]Students planning to transfer to OSU or PSC should complete Wr 111 and 6 hours of electives. Students transferring to UO or SOC should complete Wr 111, 112, 113.
[2]Students should enroll in mathematics according to placement test scores and complete a minimum of 12 hours of work numbered 101 and above.
[3]Students planning to teach in the secondary schools should complete Psy 201, 202 General Psychology and Sp 111 Fundamentals of Speech.
[4]Students who completed 48 hours of work in freshman year should postpone completion of 1 hour of physical education until after transfer in order to hold total hours credit to 93.

# BOOKKEEPING/CLERICAL

## Two Year Associate Degree Program

More than 1.1 million U.S. citizens are bookkeepers. And more are needed. Starting weekly salaries range from about $75 to $90.

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

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Typing I, II, III | 5-3 | 5-3 | 5-3 |
| Business English I, II, III | 3-3 | 3-3 | 3-3 |
| Bookkeeping & Accounting I, II, II | 4-3 | 4-3 | 4-3 |
| Business Math | 3-3 | | |
| Sociology 204, 205 | 3-3 | 3-3 | |
| Business Machines I, II | | 3-3 | 3-3 |
| Physical Education | | 3-1 | 3-1 |
| Personal Development | | | 3-3 |
| | 18-15 | 21-16 | 21-16 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Accounting I, II, III | 3-3 | 3-3 | 3-3 |
| Office Procedures I, II, III | 4-3 | 4-3 | 4-3 |
| Economics I, II, III | 3-3 | 3-3 | 3-3 |
| Business Environment | 3-3 | | |
| Business Law | | 3-3 | |
| Health | | | 3-3 |
| Human Relations II | 3-3 | | |
| Elective (Business) | | 3-3 | 3-3 |
| Physical Education | | | 3-1 |
| | 16-15 | 16-15 | 19-16 |

# BOOKKEEPING/CLERICAL

## One Year Program

See Description Above

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Typing I, II, III | 5-3 | 5-3 | 5-3 |
| Bookkeeping & Accounting I, II, III | 4-3 | 4-3 | 4-3 |
| Business English I, II, III | 3-3 | 3-3 | 3-3 |
| Business Math | 3-3 | | |
| Business Machines I, II | | 3-3 | 3-3 |
| Office Procedures I, II, III | 4-3 | 4-3 | 4-3 |
| Elective | 3-3 | 3-3 | 3-3 |
| | 22-18 | 22-18 | 22-18 |

*H—Hours, C—Credits

# BUILDING MATERIALS MANAGEMENT

## Two Year Associate Degree Program

This program prepares students for careers which utilize a knowledge of building construction techniques and materials, and blueprint reading. A typical job is selling building and construction equipment and supplies. Pay is about $325 monthly.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Machine and Tool Mainenance | 5-3 | | |
| Construction Practices I, II | | 10-5 | 10-5 |
| Communication Skills I or Writing 111 | 3-3 | | |
| Communication Skills II or Speech 111 | | 3-3 | |
| Communication Skills III | | | 3-3 |
| Technical Math I, II, III | 3-3 | 3-3 | 3-3 |
| Practical Physics II | 5-4 | | |
| Introduction to Fabrication Practices II | | 5-3 | |
| Drafting Fundamentals | 5-2 | | |
| Mechanical or Architect Drafting | | 5-2 | |
| Blueprint Reading for Construction I | | | 5-2 |
| Employer-Employee Relation | | | 2-2 |
| | 21-15 | 26-16 | 23-15 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Construction Material Sales I, II, III (Supervised Work Experience) | 15-5 | 15-5 | 15-5 |
| Business Math I | 3-3 | | |
| Construction Codes | | 2-2 | |
| Construction Estimating | | | 2-2 |
| Marketing | 3-3 | | |
| Advertising | | 3-3 | |
| Salesmenship | | | 3-3 |
| Business Records & Reports | 3-3 | | |
| Business Machines I | 3-3 | | |
| Electives (Gen. Ed.) | | 4-4 | 3-3 |
| Technical Electives | | 2-2 | 3-3 |
| | 27-17 | 26-16 | 26-16 |

# BUSINESS ADMINISTRATION AND GENERAL STUDIES-BUSINESS

This program, if successfully completed, will permit a student to transfer into any of the major programs in business administration offered by institutions of the Oregon State System of Higher Education, or the general studies program in business at EOC, at the junior level. Students may complete requirements for the baccalaureate degree with two additional years of work at the four-year institutions.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| BA 101 Introduction to Business | 4 | | |
| Sp 111 Fundamentals of Speech | | 3 | |
| Mathematics[1] | 4 | 4 | 4 |
| Wr 111, 112, 113 English Composition[2] | 3 | 3 | 3 |
| Social science sequence[3] | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives | | | 3-4 |
| | 15 | 15 | 14-15 |

**SOPHOMORE YEAR**

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

TOTAL: 93 hours

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

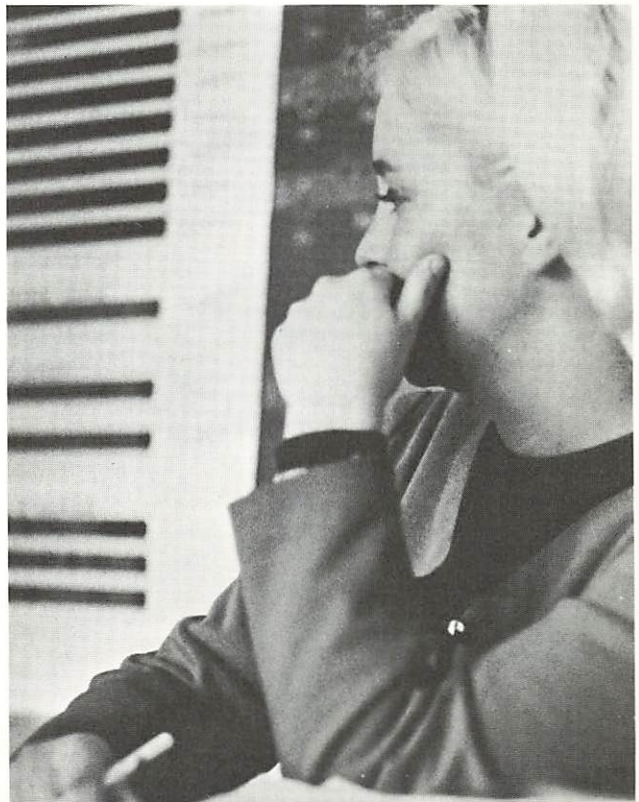
[1]Students should enroll in mathematics according to placement test scores. Students planning to transfer to UO or OSU should complete mathematics through Mth 200. Eight hours of mathematics is adequate for students transferring to SOC.

[2]Students planning to transfer to OSU or PSC should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113.

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

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

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



ments. PSC students should complete literature, foreign language, or other arts and letters sequence.
[6]Students planning to transfer to PSC should take BA 214 Business Communications and, **if available,** BA 221, 222, 223 Production, Finance, Marketing; those planning to transfer to SOC, BA 214 and Mus 201 Introduction to Music and Its Literature; those planning to transfer to EOC, BA 214, Mus 201, and AA 201 Survey of Visual Arts.

# BUSINESS EDUCATION

UNIVERSITY OF OREGON

Students should complete programs outlined above for business administration, substituting a literature sequence meeting UO group requirements for the social science sequence in the freshman year and completing Psy 201, 202 instead of the literature sequence indicated in the sophomore year. Students should enroll in skill courses in typing and shorthand according to placement, completing work through SS 223 Applied Stenography. (No credit is given for beginning typewriting.)

OREGON STATE UNIVERSITY

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

PORTLAND STATE COLLEGE

Students should complete the following program:

**FRESHMAN YEAR**

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

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Ec 201, 202, 203 Principles of Economics | 3 | 3 | 3 |
| Psy 201, 202 General Psychology | 3 | 3 | |
| Arts and letters sequence (literature, foreign languauge, music, art) | 3 | 3 | 3 |
| BA 214 Business Communications | | | 3 |
| Stenography according to placement | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Electives (BA 221, 222, 223 Production, Finance, Marketing, if available) | 3 | 3 | 3 |
| | 16 | 16 | 16 |

SOUTHERN OREGON COLLEGE
EASTERN OREGON COLLEGE

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| GS 101, 102, 103 General Biology (SOC, EOC) or GS 104, 105, 106 Physical Science (SOC, EOC) or Mathematics, 12 hours (EOC) | 4 | 4 | 4 |
| Literature sequence | 3 | 3 | 3 |
| Sp 111 Fundamentals of Speech | | 3 | |
| Mus 201 Introduction to Music and Its Literature or AA 201 Survey of Visual Arts | 3 | | |
| Typing according to placement and/or electives | 2 | 2 | 2 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| | 16 | 16 | 14 |

**SOPHOMORE YEAR**

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

# CHEMISTRY

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

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Mathematics[2] | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| GL 50, 51, 52 First-year German (UO, PSC)[3] | 4 | 4 | 4 |
| GS 101, 102, 103 General Biology (OSU) | 4 | 4 | 4 |
| Social science, foreign language, or literature sequence (SOC) | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15-16 | 16-17 | 15-16 |

TOTAL: 46-49 hours

[1]PSC students should complete Wr 111 and 6 hours of social science or humanities.
[2]Students should enroll in mathematics at the level indicated by placement tests.
[3]UO: German language study strongly recommended. PSC: students should complete work in German or Russian.

# 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**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Plane Surveying I, II | 5-3 | | 5-3 |
| Engineering Problems I, II | 2-1 | 5-3 | |
| Technical Math 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 | 26-19 | 23-15 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Mapping and Computing I, II | 4-2 | 6-2 | |
| Strength of Materials II | 5-3 | | |
| Structural Analysis and 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 |

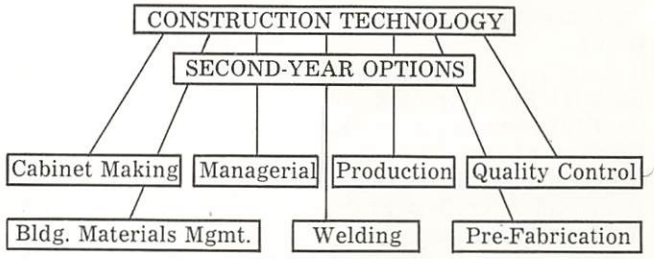
# CONSTRUCTION TECHNOLOGY

## 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 have the background necessary for ultimate promotion into supervisory positions. The curriculum consists of a year of common study and laboratory experience, and a second year of specialized options.

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 studies mathematics, physics, communcation skills, psychology, and business and supplements it by second year on-the-job experiences. These experiences correlate theory to practical work application.

Second year specialization is offered in the areas of Welding, Millwork and Cabinet Making, Building Materials Management. See descriptions of these programs in other parts of this catalog. Further development is anticipated in Production, Prefabrication, Quality Control and Managerial Training.




**FIRST YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Machine & Tool Maintenance | 5-3 | | |
| Construction Practice I, II | | 10-5 | 10-5 |
| Drafting Fundamental I, II | 4-2 | 4-2 | |
| Architectural Drafting | | | 4-2 |
| Blueprint Reading for Construction | | 5-2 | |
| Communication Skills I, II | | 3-3 | 3-3 |
| Mathematics II | 3-3 | | |
| Practical Physics I, II | 5-4 | | 5-4 |
| Employer-Employee Relation | | 2-2 | |
| | 17-12 | 24-14 | 22-14 |

**SECOND YEAR**

| | | | |
|---|---|---|---|
| Construction Material Sales I, II, III (Supervised Work Experience) | 15-5 | 15-5 | 15-5 |
| Business Math I | 3-3 | | |
| Construction Codes | | 2-2 | |
| Construction Estimating | | | 2-2 |
| Marketing | 3-3 | | |
| Advertising | | 3-3 | |
| Salesmanship | | | 3-3 |
| Business Records & Reports | 3-3 | | |
| Business Machines I | 3-3 | | |
| Electives (Gen. Ed.) | | 4-4 | 3-3 |
| Technical Electives | | 2-2 | 3-3 |
| | 27-17 | 26-16 | 26-16 |

# DATA PROCESSING

## Two Year Associate Degree Program

The Business Data Processing Program is structured to provide training for persons planning to work as Data Processing Machine Operators and Computer 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.

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Survey of Data Processing | 3-3 | | |
| Bookkeeping & Accounting | 5-3 | | |
| Mathematics II | 3-3 | | |
| Communication Skills I | 3-3 | | |
| Elective | 3-3 | | |
| (College transfer students substitute BA211 Accounting for 2.110 Bookkeeping & Accounting and WR 111 English Composition for 1.100 Communication Skills I.) | | | |
| Unit Record Equipment I | | 5-4 | |
| Bookkeeping & Accounting II | | 5-3 | |
| Mathematics III | | 3-3 | |
| Communication Skills II | | 3-3 | |
| Health | | 3-3 | |
| (College transfer students substitute BA 212 Accounting for 2.111 Bookkeeping & Accounting and SP 111 Speech for 1.102 Communication Skills II.) | | | |
| Unit Record Equipment II | | | 8-4 |
| Bookkeeping & Accounting | | | 5-3 |
| Mathematics for Data Processing | | | 5-5 |
| Applied Economics | | | 3-3 |
| (College transfer students substitue Ec 201, 202 or 203 for 1.506 Applied Economics and BA 213 Accounting for 2.112 Bookkeeping & Accounting.) | | | |
| | 17-15 | 19-16 | 21-15 |

*H—Hours, C—Credits

Data Processing field projects in the summer between the first and second year require 30 hours weekly for 10 credits.

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Computer Programming I | 9-5 | | |
| Psychology or Psychology 201 | 3-3 | | |
| Introduction to Business Statistics | 3-3 | | |
| Elective | 3-3 | | |
| Computer Programming II | | 9-5 | |
| Automated Systems & Procedures | | 3-3 | |
| Human Relations I or Psychology 202 | | 3-3 | |
| Elective | | 6-6 | |
| Computer Programming III | | | 9-5 |
| Recent Developments in Data Processing | | | 5-4 |
| Introduction Business Law | | | 3-3 |
| Labor Management Relations | | | 3-3 |
| | 18-14 | 21-17 | 20-15 |

# DENTAL ASSISTANT

## One Year Program

This program prepares the dental assistant graduate to take employment as a chair-side assistant. The concept known as "four handed dentistry," as proposed by the Council on Dental Education of the American Dental Association, is taught. The use of the most modern equipment available affords the dental assistant trainee an opportunity to become proficient in this method of dental assisting.

Upon completion of this course, the graduate is eligible to take the theory portion of the Dental Assistant Certification Examination by the American Dental Association.

The Dental Assistant Program 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.

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Introduction to Practice | 7-6 | | |
| History, Ethics, and Jurisprudence | 2-2 | | |
| Orientation: Equipment, Materials Supplies | 4-4 | | |
| Patient Education | 1-1 | | |
| Dental Sciences: Bacteriology, Hygiene, Nutrition, Pharmacology, Gross Anatomy | 5-5 | | |
| Dental Anatomy | 2-2 | | |
| X-Ray, Part I | 4-3 | | |
| Typing II | 5-3 | | |
| Communication for Dental Assistants | | 3-3 | |
| Practices and Procedures | | 12-8 | |
| First Aid | | 3-3 | |

*H—Hours, C—Credits

# DENTAL HYGIENE

## Two Year Program

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

She must pass the Oregon State Board of Dental Examinors Examination to practice her profession in this state. She must pass, in addition, a National Board Examination.

Class size is 16. Applicants should have had high school math, biology and chemistry. They will be asked to take an aptitude test and appear for a

personal interview. Special costs will total about $350 for books, uniforms and shoes.

Graduates can expect to start at $25 to $28 a day. A high wage is $35 a day.

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Chemistry 104, 105, 102 | 5 | 4 | 3 |
| Human Anatomy & Physiology I, II | 2 | 2 | |
| Human Anatomy & Physiology I, II, Lab | 1 | 1 | |
| English Comp. Wr 111, 112 | 3 | 3 | |
| Physical Education | 1 | 1 | 1 |
| Dental Anatomy I, II | 1 | 1 | |
| Dental Hygiene I, II, III | 4 | 4 | 2 |
| Dental Procedures I, II | | 1 | 1 |
| Microbiology | | | 3 |
| Oral Roentgenology I | | | 1 |
| Fundamentals of Speech | | | 3 |
| First Aid | | | 3 |
| | 17 | 17 | 17 |

*H—Hours, C—Credits

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| General Psychology | 3 | | |
| General Sociology | 3 | | |
| Periodontology | 1 | | 1 |
| Human Biology | 2 | 2 | |
| Dental Procedures III, IV, V | 2 | 2 | 3 |
| Dental Hygiene IV, V, VI | 3 | 3 | 4 |
| Oral Roentgenology II, III, IV | 2 | 2 | 1 |
| Dental Health Education | 1 | 1 | 3 |
| Pharmacology | | 2 | |
| Nutrition | | 3 | |
| Physical Education | | 1 | 1 |
| Clinical Caries Prevention | | | 1 |
| Personal Health | | | 3 |
| | 17 | 16 | 17 |

# DENTISTRY (PREPROFESSIONAL PROGRAM)

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

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Mth 101 College Algebra[2] | 4 | | |
| Mth 102 Trigonometry | | 4 | |
| Mth 200 Calculus with Analytical Geometry | | | 4 |
| Social science sequence (OSU, UO, OCE, EOC, SOC) | 3 | 3 | 3 |
| Z 201, 202, 203 General Zoology (PSC) | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15-16 | 16-17 | 15-16 |

TOTAL: 46-49 hours

[1]Students planning to transfer to PSC should complete Wr 111 and 6 hours of humanities or social science. The second and third terms of English Composition will be completed after transfer during the spohomore and junior years. Students transferring to OCE should complete Wr 111, Sp 111 Fundamentals of Speech, and 3 hours of electives. Students transferring to UO, SOC, OSU, or EOC should complete Wr 111, 112, and 113.

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

# DIESEL MECHANICS

## Two Year Program

Training in the diesel mechanics program is planned to provide basic instruction in automotive heavy equipment and diesel heavy equipment repair. It prepares 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. Beginning pay is $3 an hour; journeymen get $4.50 an hour.

Possible job opportunities are available with truck fleets, logging operations, heavy construction, factory diesel sales outlets, road construction contractors, parts sales and service outlets, general heavy equipment repair jobs, and automotive diesel service and repair.

Special costs include tools and coveralls. Class vacancies total 40.

**FIRST YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Automotive Chassis I | 3-3 | | |
| Automotive Chassis I Lab (Heavy Equipment) | 6-2 | | |
| Internal Combustion Engine I, II | 2-2 | 2-2 | |
| Internal Combustion Engines I, II Lab | 3-1 | 6-2 | |
| Power Trains | | 2-2 | |
| Power Trains Lab, Heavy Equipment | | 5-2 | |
| Fuel Systems & Carb, Heavy Equip. | | 2-2 | |
| Fuel Systems & Carb. Lab (Heavy Equip) | | 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 (Heavy Equipment) | | | 3-1 |
| Machine Shop Orientation | 5-3 | | |
| Machine Tool Operation | | 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 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| 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 |
| Communications 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 |

# DOMESTIC REFRIGERATION SERVICE

## One Year Program

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

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

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

The Associate of Science Degree is awarded after completion of 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 Domestic Refrigeration the second.

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Domestic Refrigeration Services 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 I (Heat, Sound, Light) | | 5-4 | |
| Human Relations I** | | | 3-3 |
| Salesmanship | | | 3-3 |
| | 30-15 | 30-16 | 26-15 |

*H—Hours, C—Credits

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

# DRAFTING, TECHNICAL

## Two Year Associate Degree Program

This program provides b a s i c 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 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**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Drafting I, II | 4-2 | 4-2 | |
| Mathematics II, III | 3-3 | 3-3 | |
| Practical Physics I, II, II | 5-4 | 5-4 | 5-4 |
| Introduction 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 |
| Communication Skills III | | | 3-3 |
| Employer-Employee Relations | | 2-2 | |
| Advanced Drafting Problems | | | 5-3 |
| | 23-18 | 22-17 | 28-17 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Advanced Machine Drafting I, II, III | 5-2 | 5-2 | 5-2 |
| Technical Math 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 |

# ECONOMICS

This program is recommended for students who plan to transfer to the major program in economics at the University of Oregon, Oregon State University, or Portland State College. Students

may complete requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Mathematics[2] | 4 | 4 | 4 |
| Social science sequence | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 14 | 15 | 14 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Ec 201, 202, 203 Principles of Economics | 3 | 3 | 3 |
| BA 211, 212, 213 Principles of Accounting (PSC) | 3 | 3 | 3 |
| BA 232 Introduction to Business Statistics (UO) | 3 | | |
| First or second year foreign language (OSU) | 4 | 4 | 4 |
| Second humanities sequence | 3 | 3 | 3 |
| Second science sequence (with laboratory)[3] | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93 | 2-4 | 2-7 | 2-7 |
| | 15-17 | 15-17 | 15-17 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU or PSC should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO should complete Wr 111, 112, 113.
[2]Students should enroll in mathematics at level indicated by placement test scores. Courses must be completed through Mth 200 to meet group requirement at University of Oregon.
[3]Students planning to transfer to UO may use Psy 201, 202, 203 to meet science requirement if laboratory work is completed after transfer.

# EDUCATION (ELEMENTARY)

Successful completion of this program will permit students to transfer to any institution of the Oregon State System of Higher Education offering a program in elementary education and, upon admission to the professional teacher education program, complete requirements for a baccalaureate degree with two additional years of work. Programs in elementary education are offered at Eastern Oregon College, Oregon College of Education, Oregon State University, Portland State College, Southern Oregon College, and the University of Oregon. Admission to the professional program is based on several qualifications—academic, personal, social, and ability to speak and write adequately. Application for admission should be made immediately upon transfer to the four-year institution.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Mth 191, 192, 193 Mathematics for Elementary Teachers[2] | 3 | 3 | 3 |
| GS 104, 105, 106 Physical Science | 4 | 4 | 4 |
| Literature sequence[3] | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 14 | 15 | 14 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Psy 201, 202 General Psychology | 3 | 3 | |
| Sp 111 Fundamentals of Speech | | | 3 |
| Hst 201, 202, 203 History of the United States (UO, OSU, SOC, EOC) | | | |
| Hst 101, 102, 103 History of Western Civilization (OCE) | 3 | 3 | 3 |
| Soc 204, 205, 206 General Sociology or Anth 101, 102, 103 General Anthropology (PSC) | | | |
| GS 101, 102, 103 General Biology | 4 | 4 | 4 |
| Geog 105, 106, 107 Introductory Geography[4] | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93[5] | 2-3 | 2-3 | 2-3 |
| | 16-17 | 16-17 | 16-17 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU, PSC, or OCE should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113.
[2]SOC students should take AA 201 Survey of Visual Arts, Mus 201 Introduction to Music and Its Literature, and Sp 111 Fundamentals of Speech or electives. AA 201, Mus 201, and Sp 111 should be completed sometime during the transfer program.
[3]Students transferring to EOC or SOC should take Eng 107, 108, 109 World Literature.
[4]UO requires 105; OSU, EOC, OCE, 105 and 106; PSC and SOC, 105, 106, 107.
[5]Recommended: Hst 201, 202 History of the United States (PSC); AA 201 Survey of the Visual Arts and Mus 201 Introduction to Music and Its Literature (EOC); Hst 101, 102, 103, Soc 204, 205, 206, or Anth 101, 102, 103 (SOC); courses in one of the following areas of concentration: art, English, mathematics, modern languages, music, physical education and health, science, social science, speech (OSU).

# EDUCATION (SECONDARY)

Students planning to become high school teachers should enroll in the transfer program for the subject they plan to teach, being sure to include Psy 201, 202 General Psychology. Students who will complete their programs at PSC, SOC, EOC, or UO should also take Sp 111 Fundamentals of Speech. Students planning to teach social studies should complete the transfer program in general social science. Admission to the professional program in education is based on several qualifications—academic, personal, social, and ability to speak and write adequately. Application for admission should be made immediately upon transfer to the four-year institution.

**TEACHER PREPARATION PROGRAMS AT SYSTEM INSTITUTIONS**

(Four-Year Basic Norm)

| Subject Norms | Institutions | | | | | |
|---|---|---|---|---|---|---|
| | OSU | UO | PSC | EOC | OCE | SOC |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Art[1] | x | x | x | x | x | x |
| Biology | x | x | x | x | x | x |
| Business[2] | x | x | x | x | | x |
| Chemistry | x | x | x | x | x | x |
| French | x | x | x | x | x[6] | x |
| General Science—Physical Science | x | x | x | x | x | x |
| German | x | x | x | x | | x |
| Health and Physical Education[3] | x | x | x | x | x | x |
| Home Economics | x | x[4] | | | | |
| Industrial Arts[5] | x | | | | | |
| Latin | | x | | | | |
| Journalism | x[6] | x | x[6] | x[6] | x[6] | x[6] |
| Literature, Writing, and Language | x | x | x | x | x | x |
| Mathematics | x | x | x | x | x | x |
| Music | x | x | x | x | x | x |
| Physics | x | x | x | x | | x |
| Russian | x | x | x[6] | | | |
| Social Studies | x | x | x | x | x | x |
| Spanish | x | x | x | x | x[6] | x |
| Speech and Drama | x | x | x | x[6] | x[6] | x[6] |

[1]See Art
[2]See Business
[3]See Physical Education
[4]Student teaching not offered. Students should plan to complete requirements in an additional teaching field.
[5]Transfer program not available at present because of specialized course work required.
[6]Students interested in this area should plan also to complete requirement in an additional teaching field.

# ELECTRONIC ENGINEERING TECHNICIAN

## Two Year Associate Degree Program

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

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Elctrical Theory (DC) | 5-4 | | |
| Electrical Theory (AC) | | 5-4 | |
| Engineering Problems I, II | 2-1 | 2-1 | |
| Technical Math 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. Analysis | | | 3-3 |
| Vacuum Tube & Trans. Analysis Lab | | | 3-1 |
| | 23-18 | 23-18 | 23-15 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Oscillator Circuits & Design | | 2-2 | |
| Oscillator Circuits & Design Lab | | 6-2 | |
| Servo Systems | 4-2 | | |
| Wave Generation and Shaping | 5-3 | | |
| Electrical Math 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 Circuits & Design Lab | 6-2 | | |
| Electronic Data Processing | | 3-3 | |
| Health | | 2-2 | |
| Advanced Elect. Circuits | | | 5-3 |
| Automation Systems | | | 3-3 |
| Microwaves | | | 5-3 |
| | 25-17 | 23-15 | 22-14 |

# ENGINEERING

## (Four and Five Years)

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

**Freshman Year—First-Year Engineering**

| | F | W | S |
|---|---|---|---|
| GE 101, 102, 103 Engineering Orientation | 2 | 2 | 2 |
| Mth 200, 201, 202 Calculus with Analytic Geometry | 4 | 4 | 4 |
| Ph 207, 208, 209 Introductory Classical Physics | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry (chemical or electrical engineering majors) or social science or humanities sequence (agricultural, civil, general, mechanical engineering and engineering physics majors) | 3-4 | 3-4 | 3-4 |
| Wr 111 English Composition | 3 | | |
| Elective | | | 2-3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 17-18 | 15-16 | 16-18 |

TOTAL: 48-52 hours

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

**Freshman Year—Pre-Engineering**

| | | | |
|---|---|---|---|
| Mth 95 Intermediate Algebra[1] | 4 | | |
| Mth 101 College Algebra | | 4 | |
| Mth 102 Trignometry | | | 4 |
| Ch 201, 202, 203 General Chemistry (chemical and electrical engineering majors) or social science or humanities sequence (agricultural, civil, general, and mechanical engineering and engineering physics majors)[2] | 3-4 | 3-4 | 3-4 |
| Wr 111, 112, English Composition | 3 | 3 | |
| Electives | 3-4 | 3-4 | 5-6 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| | 15-16 | 15-16 | 15-16 |

**Sophomore Year—First-Year Engineering**

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

TOTAL: 87-93 hours

[1]Students should begin work in mathematics at the level indicated in placement tests. If possible, the entire sequence Mth 200, 201, 202, 203 should be completed before the end or the sophomore year.
[2]Or Ch 101, 102, 103 and 241.

# ENGLISH

This program is recommended for students who plan to transfer to the major program in English at the University of Oregon, Oregon State University, Portland State College, Eastern Oregon College, or Southern Oregon College. Students may complete requirements for the baccalaureate degree with two additional years of work at the four-year institution.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence numbered at 100 level[2] | 3 | 3 | 3 |
| Science sequence (with laboratory or 12 hours of mathematics numbered 101 or above) | 4 | 4 | 4 |
| Foreign language[3] | 4 | 4 | 4 |
| Physical Education | 1 | 1 | 1 |
| | 15 | 15 | 15 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Eng 201, 202, 203 Shakespeare[4] | 3 | 3 | 3 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Second social science sequence[5] | 3 | 3 | 3 |
| Foreign language[3] | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives[6] | 3 | | 2 |
| | 17 | 15 | 16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU or PSC should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113. (SOC students may substitute a writing elective for Wr 113.)
[2]OSU: Eng 101, 102, 103 or Eng 107, 108, 109. SOC: Eng 104, 105, 106 or Eng 107, 108, 109.
[3]The language requirement for the B.A. degree may be met in any one of the following ways: (1) two years (normally 24 term hours) of college work in a foreign language (2) one year of college work at the second-year or higher level; or (3) examination showing language competence equivalent to that attained at the end of two years of college study. SOC also offers a BS program in English which does not require a foreign language. Students selecting this option should complete Sp 111 and two of following: AA 201, Mus 201, Phl 201.
[4]PSC students may substitute Eng 253, 254, 255 Survey of American Literature. EOC students may complete Eng 201, 202 and Wr 226 Expository Writing.
[5]Students planning to teach should complete Psy 201, 202 Introduction to Psychology, and Sp 111 Introduction to Speech.
[6]OSU students should begin a second sequence in science or complete courses in mathematics to meet OSU distribution requiremtnts.

# FIRE PREVENTION TECHNOLOGY

## Two Year Associate Degree Program

The majority of fire fighters employed in Oregon have learned their skills on the job. Complexities in the science of fire fighting, and increasing knowledge of better methods of fire fighting, have

created a need for a comprehensive training program in this field.

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

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

During the 1968-69 school year this program will be offered only to employed firemen.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Communication Skills I, II | 3-3 | 3-3 | |
| Fire Apparatus & Equipment | 5-3 | | |
| Mathematics | 3-3 | | |
| Introduction to Fire Protection | 3-3 | | |
| Practical Physics I, II | 5-4 | 5-4 | |
| Introduction to Psychology | | 3-3 | |
| Drafting I, II | | 4-2 | 4-2 |
| Physical Science of Fire* | | 6-3 | |
| Fire Fighting Skill I | | | 9-3 |
| Fire Department Hydraulics* | | | 6-3 |
| Report Writing* | | | 3-3 |
| Company Organization & Station Assignments | | | 3-3 |
| General Education Elective | | | 3-3 |
| | 19-16 | 21-15 | 28-17 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| American Institutions | 3-3 | | |
| Hazardous Material I*, II* | 5-3 | 5-3 | |
| Fundamentals of Fire Prevention* | 3-3 | | |
| Fire Fighting Skills II, III | 7-3 | 5-3 | |
| Pump Operation and Practical Hydraulics* | 5-3 | | |
| Human Relations I | | 3-3 | |
| Building Construction for Fire Prevention | | 5-3 | |
| Fire Department Communication & Alert System* | | 2-2 | |
| First Aid | | 4-2 | |
| Rescue Practices | | | 6-2 |
| Water Distribution Systems* | | | 3-3 |
| Fixed Systems and Exting.* | | | 5-3 |
| Fire Investigation* | | | 6-4 |
| Fire Fighting Tactics & Strategy | | | 3-3 |
| | 23-15 | 24-16 | 23-15 |

*Recommended in-service core program.

# FLIGHT TECHNOLOGY

## Two Year Associate Degree Program

Training in 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. Pay is $750 per month and up.

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

Fee costs for this program vary with the rates for different aircraft. Examples of cost are:

| | |
|---|---|
| Introductory & Basic Flight | range $716 to $916 |
| Flight Intermediate I | range $462 to $602 |
| Flight Intermediate II | range $504 to $664 |
| Flight Intermediate III | range $462 to $602 |
| Flight Intermediate IV | range $580 to $774 |

The above 200 flight hours total cost will range from $2,751.00 to $3,558.00.

Veteran students who wish to pursue the "vocational objective" of commercial pilot may take a break from college training and fly with a V.A.-approved commercial operator. Flight time with that approved operator will be credited by the college for the comparable courses in this curriculum when he re-enters to continue working for the 94-credit associate degree.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Flight Orientation | 3-3 | | |
| Introductory & Basic Flight** (25 dual, 25 solo hours) | 8-4 | | |
| Flight Theory, Private Pilot | 3-3 | | |
| Aerophysics | 5-4 | | |
| Mathematics II, III or Math 100, 102 | 3-3 | 3-3 | |
| Air Navigation | | 3-3 | |
| Aviation Meterology | | 3-3 | |
| Aerodynamics | | 3-3 | |
| Flight Intermediate I** (10 dual, 25 solo hours) | | 7-3 | |
| Physical Education 180/190 | | 3-1 | |
| Aircraft & Engines Structures Theory | | | 3-3 |
| Flight Intermediate II** (10 dual, 30 solo hours) | | | 7-3 |
| Radio Aids & Communications | | | 3-3 |
| Health | | | 2-2 |
| Communication Skills I or English Comp. | | | 3-3 |
| Aircraft Development | | | 3-3 |
| | 22-17 | 22-16 | 21-17 |

*H—Hours, C—Credits
**Flight Intermediate I or II may be made up during the summer.

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Advanced Commercial Pilot Ground School | 3-3 | | |
| General Aviation Safety | 3-3 | | |
| Flight Intermediate III* (10 dual, 25 solo hours) | 7-3 | | |
| Aircraft Systems | 3-3 | | |
| Communication Skills II or English Comp. | 3-3 | | |
| American Institutions or American Government | 3-3 | | |

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Flight Intermediate IV* (10 dual, 30 solo hours) | | 7-3 | |
| Air Transportation | | 3-3 | |
| Airline Management | | 3-3 | |
| Introduction to Business | | 4-4 | |
| Electives** | | 3-3 | |
| Flight Advanced I (10 hours flight) | | | 6-3 |
| Survey of Data Processing | | | 3-3 |
| Introduction to Business Law | | | 3-3 |
| Public Speaking or Speech 111 | | | 3-3 |
| Salesmanship | | | 3-3 |
| | 22-18 | 20-16 | 18-15 |

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

**Recommended electives are Applied Economics, Human Relations I, Introduction to Psychology, Public Speaking.

# FOREIGN LANGUAGES

This program is recommended for students who plan to transfer to the major program in foreign languages at the University of Oregon, Portland State College, or Oregon State University (French and German). Students may complete requirements for the baccalaureate degree with two additional years of work at the four-year institutions. Foreign language students may begin their study of language in college. However, it is more common and desirable for prospective language majors to begin their studies with two to four years of work in high school. Students ready to begin second-year course work in language their freshman year will need to transfer to a four-year institution for advanced course work during the sophomore year.

**Freshman Year**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Science sequence (with laboratory, or 12 hours of mathematics numbered 101 and above) | 3-4 | 3-4 | 3-4 |
| Foreign language | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 14-15 | 15-16 | 14-15 |

**SOPHOMORE YEAR**

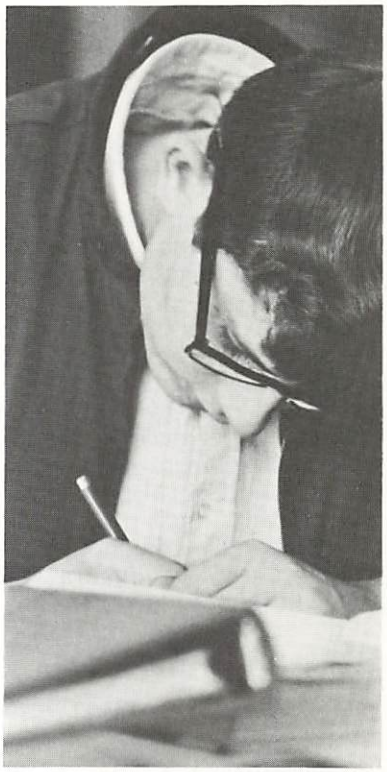
| | | | |
|---|---|---|---|
| Foreign language | 4 | 4 | 4 |
| Second science sequence[2] | 3-4 | 3-4 | 3-4 |
| Social science sequence (Hst 101, 102, 103 History of Western Civilization recommended) | 3 | 3 | 3 |
| Second social science or humanities sequence[3] | 3 | 3 | 3 |
| Physical Education |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

TOTAL: 93 hours

[1]Students tranferring to UO should complete Wr 111, 112, 113. Students transferring to PSC or OSU should complete Wr 111, 112 and 3 hours of electives.

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

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



# FORESTRY (College Transfer)

The one-year preforestry program outlined below, if successfully completed, will prepare students to enter professional curricula in forestry offered by the School of Forestry at Oregon State University at the sophomore level. Students planing to enter a professional program of forestry at Oregon State University, or some other institution, would transfer immediately following completion of the one-year forestry program. Forestry is a complex and demanding profession. Students will find that the one-year preforestry program must be followed by at least three years at a professional school of forestry to complete baccalaureate degree requirements.

**Freshman Year—Preforestry**

| | F | W | S |
|---|---|---|---|
| Bot 201, 202 General Botany | 4 | 4 | |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Mth 101 College Algebra[1] | 4 | | |
| Mth 102 Trigonometry | | 4 | |
| Mth 200 Calculus with Analytic Geometry | | | 4 |
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| GE 115 Graphics | | | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Sp 111 Fundamentals of Speech | | | 3 |
| | 16 | 17 | 18 |

TOTAL: 51 hours

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

# FOREST TECHNICIAN

## Two Year Associate Degree Program

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

Students completing the program 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 aide. The salaries for other employers would be comparable. Previous forestry experience and completion of the two-year technician program would qualify the graduate for a high rating.

Applicants must have completed high school or the equivalent, and should have successfully completed courses in algebra and trigonometry. The applicant should have demonstrated an interest in outdooor camping or woods experience, and be capable of hard, vigorous, physical and mental activity.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Communications I, II | 3-3 | 3-3 | |
| Technical Math I, II | 4-4 | 4-4 | |
| Human Relations I | 3-3 | | |
| General Forestry | 3-3 | | |
| Drafting I | 4-2 | | |
| Fire Control | 4-3 | | |
| Power Equipment & Safety | | 6-3 | |
| Silvicultural Practices | | 6-3 | |
| Plane Surveying I | | 5-3 | |
| Tree Identification | | | 6-3 |
| Forest Recreation | | | 6-3 |
| Plane Surveying II | | | 5-3 |
| Elective-General | | | 3-3 |
| Communication Skills III | | | 3-3 |
| Engineering Problems | | | 2-2 |
| | 21-18 | 24-16 | 25-17 |

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

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Forestry Mensuration I | 6-3 | | |
| Forest Protection | 3-3 | | |
| Forest Products | 4-2 | | |
| Introduction to Machine Records | 4-2 | | |
| Elective (General Education) | 3-3 | | |
| Applied Economics | 3-3 | | |
| Forestry Mensuration II | | 6-3 | |
| Elements of Supervision | | 3-3 | |
| Forestry Records & Reports | | 3-3 | |
| Forest Contracts | | 6-3 | |
| Elective (Gen. Ed.) | | 3-3 | |
| Health Education | | 2-2 | |
| Forest Surveying | | | 6-3 |
| Logging Planning | | | 6-3 |
| Forestry Practice (on-job training) | | | 10-5 |
| Senior Project | | | 3-3 |
| Elective—open | | | 3-3 |
| | 23-16 | 23-17 | 28-17 |

# GENERAL ARTS AND LETTERS, GENERAL STUDIES IN ARTS AND LETTERS, GENERAL STUDIES IN HUMANITIES

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

**Freshman Year**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence[2] | 3 | 3 | 3 |
| First year foreign language[3] or social science sequence | 3-4 | 3-4 | 3-4 |
| Science sequence (with laboratory or 12 hours of mathematics numbered 101 or above)[4] | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 14-15 | 15-16 | 14-15 |

**Sophomore Year**

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

TOTAL: 93 hours

[1]Students planning to transfer to OSU, PSC, or OCE should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO or EOC should complete Wr 111, 112, 113. SOC students complete Wr 111,112, and 113 or writing elective.

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

[3]The language requirement for the B.A. degree may be met in one of the following ways: (1) two years (normally 24 term hours) of college work in a foreign language; (2) one year of college work at the second-year level; or

(3) examination showing competence equivalent to that attained at the end of two years of college work. OSU, PSC, EOC, OCE, and SOC offer Bachelor of Science degree, which does not require completion of the foreign language requirement.

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

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

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

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

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

# GENERAL SCIENCE, GENERAL STUDIES IN SCIENCE

This program is recommended for students who plan to transfer to the major program in general science at the University of Oregon and Oregon State University or in general studies in science at Portland State College, Eastern Oregon College, Oregon College of Education, Southern Oregon College. Students may complete requirements for the baccalaureate degree with two additional years of work.

| FRESHMAN YEAR | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Compsition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Mathematics[2] | 4 | 4 | 4 |
| GS 101, 102, 103 General Biology | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15 | 16 | 15 |
| **SOPHOMORE YEAR** | | | |
| Social science sequence | 3 | 3 | 3 |
| Select two: | | | |
| Ch 201, 202, 203 General Chemistry (or Ch 101, 102, 103) | 3-4 | 3-4 | 3-4 |
| Ph 201, 202, 203 General Physics (or Geol 101, 102, 103) | 3-4 | 3-4 | 3-4 |
| G 201, 202, 203 Geology | 3-4 | 3-4 | 3-4 |
| Foreign language or second humanities sequence | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93 | 0-3 | 0-3 | 0-3 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU, OCE, or PSC should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113.

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

# GENERAL SOCIAL SCIENCE

This program is recommended for students who plan to transfer to a general studies or divisional major program in general social science at Eastern Oregon College, Oregon College of Education, Oregon State University, Portland State College, Southern Oregon College, or University of Oregon. Students may complete requirements for the baccalaureate degree with two additional years of work.

| FRESHMAN YEAR | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence [2] | 3 | 3 | 3 |
| Science sequence (with laboratory or 12 hours of mathematics numbered 101 and above)[3] | 3-4 | 3-4 | 3-4 |
| History sequence | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Elective | 2 | | 0-2 |
| | 15-16 | 14-15 | 14-15 |
| **SOPHOMORE YEAR** | | | |
| Second humanities or science sequence | 3-4 | 3-4 | 3-4 |
| Social science sequences (select three different: anthropology, sociology, economics, geography, political science, psychology, religion)[4] | 9 | 9 | 9 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total to 93 hours[5] | 2-3 | 2-3 | 2-3 |
| | 16 | 16 | 16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU, PSC, or OCE should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113.

[2]Students transferring to PSC may substitute a foreign language or philosophy. Students planning to teach should take philosophy.

[3]PSC students may take a non-laboratory science. Mth 95 is acceptable.

[4]Students planning to teach should complete Psy 201, 202; students planning to transfer to PSC, OCE, or SOC should fill out the year's schedule with Sp 111 Fundamentals of Speech. Students planning to transfer to the UO may use Psy 201, 202, 203 to meet science requirement provided laboratory work is completed after transfer. UO will also accept philosophy toward the social science major.

[5]OSU students should complete **both** a second humanities and a second science sequence during the sophomore year. Students planning to teach should note that certification requirements call for courses in five different social sciences: U.S. and world history, geography, political science, economics, and sociology or anthropology.

# GEOGRAPHY

This program is recommended for students who plan to transfer to the major program in geography at the University of Oregon or Portland State College or the program in physical and resource geography at Oregon State University. Students may complete requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Geog 105, 106, 107 Introductory Geography | 3 | 3 | 3 |
| G 201, 202, 203 Geology | 3 | 3 | 3 |
| G 204, 205, 206 Geology Laboratory | 1 | 1 | 1 |
| First year foreign language (recommended UO and PSC) | 4 | 4 | 4 |
| Mathematics through Mth 102 Trigonometry (OSU) | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15 | 16 | 15 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Ch 101, 102, 103 or 201, 202, 203 General Chemistry (recommended OSU, PSC) | 4 | 4 | 4 |
| Ph 201, 202, 203 General Physics (recommended UO)[2] | 4 | 4 | 4 |
| Social science sequence[3] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Second year foreign language or social science sequence (UO, PSC) | 3-4 | 3-4 | 3-4 |
| Bot 201, 202, 203 General Botany (OSU) | 4 | 4 | 4 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93 | 0-3 | 0-3 | 0-3 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU or PSC should complete Wr 111 and 112 and 3 hours of elective. Students transferring to UO should complete Wr 111, 112, 113.

[2]Ph 201 requires Mth 101 College Algebra previously or parallel. If students placement test scores indicate the need to complete this course, it should be taken in place of the elective hours fall term. If the student does not have the background to take Mth 101, he should take the appropriate chemistry sequence instead of physics.

[3]Students planning to teach should complete Psy 201, 202. Students planning to transfer to PSC should fill out the program with Sp 111 Fundamentals of Speech. Ec 201, 202, 203 is recommended for students transferring to OSU.

# GEOLOGY

This program has been approved by Oregon State University and Portland State College for students who plan to transfer to the major program in geology. Students may complete requirements for the baccalaureate degree with two additional years of work. The University of Oregon also offers a major program in geology.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Mathematics[2] | 4 | 4 | 4 |
| G 201, 202, 203 Geology | 3 | 3 | 3 |
| G 204, 205, 206 Geology Laboratory | 1 | 1 | 1 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15 | 16 | 15 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Ph 201, 202, 203 General Physics | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93[3] | 6-7 | 6-7 | 6-7 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

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

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

[3]Portland State College recommends Ec 201, 202, 203 Principles of Economics.

# HISTORY

This program is recommended for students who plan to transfer to the major program in history at the University of Oregon, Oregon State University, Portland State College, Eastern Oregon College, or Southern Oregon College. Students may complete requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Science sequence (with laboratory, or 12 hours of mathematics)[2] | 3-4 | 3-4 | 3-4 |
| Foreign language or humanities sequence[3] | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives | 0-2 | 0-2 | 0-2 |
| | 15 | 16 | 15 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Hst 201, 202, 203 History of the United States | 3 | 3 | 3 |
| Literature sequence (UO, OSU, EOC, SOC) | 3 | 3 | 3 |
| Second science sequence (UO, OSU, EOC, SOC)[4] | 3-4 | 3-4 | 3-4 |
| Second humanities **or** science sequence (PSC)[4] | 3-4 | 3-4 | 3-4 |
| Second year foreign language or social science sequence other than history | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total to 93 hours[5] | 0-6 | 0-6 | 0-6 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU or PSC should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113.

[2]PSC students may complete requirement with a non-laboratory science.

[3]A foreign language is required for students transferring to the UO and is recommended for those transferring to OSU. The language requirement for the B.A. degree may be met in any one of the following ways: (1) two years (normally 24 term hours) of college work in a foreign language; (2) one year of college work at the second-year or higher level; or (3) examination showing language competence equivalent to that attained at the end of two years of college study. PSC students wishing to teach should complete a humanities sequence in philosophy. For those wishing the B.A., the humanities sequence should be foreign language or, if the foreign language requirement can be met by examination, literature or philosophy.

[4]Students planning to teach should complete Psy 201, 202 instead of a second science. Those planning to transfer to PSC, EOC, or SOC should fill out the year with Sp 111 Fundamentals of Speech. Students transferring to UO may use Psy 201, 202, 203 to meet science requirements provided laboratory work is completed after transfer.

[5]Students planning to teach should note that certification requirements call for courses in five different social sciences: U.S. and world history, geography, political science, economics, and sociology or anthropology.

# HOME APPLIANCE SERVICE

## One Year Program

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

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

The Associate of Science Degree is awarded after completion of the sequence in 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.

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

*H—Hours, C—Credits

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

# HOME ECONOMICS

This program is recommended for students who plan to transfer to the major program in home economics at Oregon State University. Students may complete requirements for the baccalaureate degree with three additional years of work at the four-year institution.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| HEc 101 Introduction to Home Economics | 1 | | |
| Wr 111 English Composition | 3 | | |
| Mth 95 Intermediate Algebra[1] | | 4 | |
| AA 195, 196 Basic Design | 2 | 2 | |
| Art or Music | | | 2 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Literature sequence[2] | 3 | 3 | 3 |
| Science sequence with laboratory (chemistry or biology)[3] | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| Electives | | | 2-3 |
| | 16-17 | 16-17 | 16-17 |

TOTAL: 48-51 hours

This program may be completed by students attending community colleges offering professional course work in home economics for transfer credit. If two full years of *appropriate professional-level course work* is available at the community college, students may complete requirements for the baccalaureate degree with two additional years of work at Oregon State University.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| HEc Introduction to Home Economics | 1 | | |
| Wr 111, 112 English Composition | 3 | 3 | |
| Elective | | | 2 |
| AA 195, 196 Basic Design | 2 | 2 | |
| Art or Music | | | 2 |
| Home economics transfer courses or electives[4] | 2-3 | 2-3 | 2-3 |
| Literature sequence[2] | 3 | 3 | 3 |
| Science sequence with laboratory (chemistry or biology)[3] | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| | 15-17 | 14-16 | 14-16 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Psy 201, 202, 203 General Psychology | 3 | 3 | 3 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Home economics transfer courses or electives[5] | 2-3 | 2-3 | 2-3 |
| Mth 95 Intermediate Algebra[6] | | 4 | |
| Soc 204, 205, 206 General Sociology; PS 201, 202, 203 American Governments; or Ec 201, 202, 203 Principles of Economics[7] | 3 | 3 | 3 |
| Physical education | 1 | 1 | 1 |
| Electives[8] to bring total hours to 93 | 2-4 | 2-4 | |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Unless exempt by Achievement Test (Level I Mathematics) score.

[2]Or 6 hours of literature and Sp 111 Fundamentals of Speech.

[3]Chemistry recommended for all students. Ch 201, 202,

203 General Chemistry or Ch 101, 102, 103 General Chemistry and Ch 241 Chemical Theory, required for students whose main interest is foods, nutrition, dietetics, or textiles.

[4]Home economics courses to be selected from the following: CT 210 Clothing Construction, CT 211 Clothing Selection, CT 250 Textiles, FL 222 Marriage Preparation, FL 225 Child Development, FN 225 Nutrition, HM 240 Management in Family Living.

[5]Home economics courses to be selected from the following: CT 210 Clothing Construction, CT 211 Clothing Selection, CT 250 Textiles, FL 222 Marriage Preparation, FL 225 Child Development, FN 225 Nutrition, HM 240 Management in Family Living.

[6]Unless exempt by Achievement Test (Level I Mathematics) score.

[7]Students interested in family life or home management areas should select sociology or economics.

[8]If Ch 101, 102, 103 is taken during freshman year, adjust program so Ch 241 Chemical Theory will be completed during sophomore year.

# JOURNALISM

This program is recommended for students who plan to transfer to the major program in journalism at the University of Oregon. Students may complete requirements for the baccalaureate degree with two additional years of work at the four-year institution. Lower-division course work in journalism, up to 13 hours, is accepted as elective credit. It does not apply toward the upper-division major.

| FRESHMAN YEAR | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| Eng 101, 102, 103 Survey of English Literature or Eng 104, 105, 106 Introduction to Literature | 3 | 3 | 3 |
| Science sequence (with laboratory or 12 hours, Mth 101 and above | 4 | 4 | 4 |
| Foreign language or electives[1] | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15 | 16 | 15 |
| **SOPHOMORE YEAR** | | | |
| Hst 101, 102, 103 History of Western Civilization or Hst 201, 202, 203 History of the United States | 3 | 3 | 3 |
| Eng 253, 254, 255 Survey of American Literature or Eng 201, 202, 203 Shakespeare | 3 | 3 | 3 |
| Ec 201, 202, 203 Principles of Economics or PS 201, 202, 203 American Governments | 3 | 3 | 3 |
| Foreign language or Second social science sequence | 3-4 | 3-4 | 3-4 |
| Electives[2] | 2-3 | 2-3 | 1-2 |
| Physical Education | 1 | 1 | 1 |
| Personal Health | | 2 | |
| | 16 | 16 | 15 |

TOTAL: 93 hours

[1]Students are encouraged to study one foreign language through the second-year college level. J 224, 225, 226 Introduction to Journalism, is a satisfactory elective.

[2]J 215 Journalism Lab, J 216, 217 Reporting I and II, J 218 Copy Editing and Makeup, are satisfactory electives.

# JOURNALISM TECHNICIAN

## One Year Program

Students are helped to develop skills in publications and graphics techniques. They prepare for jobs as weekly newspaper reporters, house organ editors, photojournalists, photoletter machine operators, justowriter operators, vari-typists, or lithographic copy preparers.

Helpful high school courses include: journalism, typing, business, advanced writing art. Applicants should have a high degree of interest in working creatively with words and pictures as a means of transmitting information.

The program is offered only when enrollment is sufficient. Students who wish to earn an Associate of Science Degree may combine the journalism technician program with a year of clerical or business training.

| | F | W | S |
|---|---|---|---|
| Reporting I, II | 2 | 2 | |
| Printing 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.

# LAW ENFORCEMENT

## Two Year Associate Degree Program

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

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

Those who meet minimum physical, emotional, intellectual, citizenship, and moral standards are

eligible for the program, provided they meet the school entrance requirements. 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.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Administration of Justice | 3-3 | | |
| Communication Skills I, II | 3-3 | 3-3 | |
| Criminal Law I, II | | 3-3 | 3-3 |
| First Aid I, II, III Emergency Care & Rescue | 2-1 | 2-1 | 2-1 |
| Introduction to Law Enforcement | 3-3 | | |
| Introduction to Psychology | | 3-3 | |
| Police Report Writing | | | 3-3 |
| Human Relations I | | | 3-3 |
| Public Speaking | | | 4-2 |
| Traffic Control | | | 5-3 |
| Typing I, II | 6-2 | 6-2 | |
| Elective | 3-3 | 3-3 | 3-3 |
| | 20-15 | 20-15 | 23-18 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| American Institutions | | | 3-3 |
| Criminal Evidence | 5-3 | | |
| Criminal Investigation I, II, III | 5-3 | 5-3 | 5-3 |
| PE 190 | | 3-1 | 3-1 |
| Firearms I, II | 2-1 | 2-1 | |
| Jail Procedures | | | 2-1 |
| Juvenile Procedures | | 5-3 | |
| Patrol Precedures | 5-3 | | |
| Photographic Evidence | 2-1 | | |
| Problems of Physical Evidence I, II, III | 5-1 | 5-1 | 5-1 |
| Electives | 5-5 | 5-5 | 5-5 |
| | 29-17 | 25-15 | 23-14 |

# LAW ENFORCEMENT

## (College Transfer)

This program is recommended for students who plan to transfer to the Certificate Program in Law Enforcement at Portland State College or Southern Oregon College. To earn this certificate at Portland State College the student must also earn a baccalaureate degree in political science, psychology, or sociology. Students must earn a baccalaureate degree in general studies in the social sciences at Southern Oregon College. Students may normally expect to complete the requirements for a degree and certificate with two years additional work at the four-year institutions.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| LE 111, 112, 113 Law Enforcement and Society | 3 | 3 | 3 |
| Soc 204, 205, 206 General Sociology | 3 | 3 | 3 |
| Science sequence[2] | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 14 | 15 | 14 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Psy 201, 202, 203 General Psychology | 3 | 3 | 3 |
| PS 201, 202, 203 American Governments | 3 | 3 | 3 |
| Hst 201, 202, 203 History of the United States | 3 | 3 | 3 |
| Humanities sequence[3] | 3 | 3 | 3 |
| Second humanities sequence[4] | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| | 16 | 16 | 16 |

TOTAL: 91 hours

[1]Students planning to transfer to PSC should complete Wr 111, 112 and 3 hours of elective.

[2]Students planning to transfer to PSC are urged to take 12 hours of mathematics. Students planning to transfer to SOC should take GS 101, 102, 103, General Biology or another laboratory science.

[3]Students planning to transfer to SOC should complete three courses from AA 201 Survey of Visual Arts, Mus 201 History of Music and Its Literature, Phl 201 Introduction to Philosophy, and Sp 121 Fundamentals of Speech. Students planning to transfer to PSC should complete Sp 111, 112, 113 Fundamentals of Speech.

[4]Students planning to transfer to SOC should take this second sequence in Introduction to Literature or World Literature.

# LAW (PREPROFESSIONAL PROGRAM)

This program meets the lower-division requirements of the University of Oregon, and, if successfully completed, will permit a student to transfer to the University of Oregon or other institution in the state system and complete academic requirements for admission to the School of Law with one additional year of study. Students should note that to be admitted to the School of Law a student must have a cumulative grade-point average of at least 2.25 for all prelegal work.

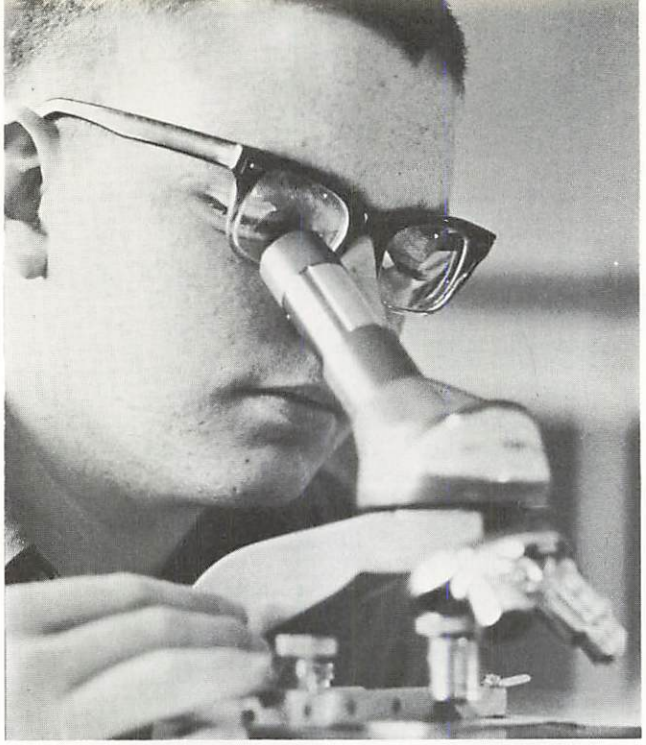
**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Literature sequence (numbered 100-110 or 200-210) | 3 | 3 | 3 |
| Science sequence (with laboratory or mathematics numbered 101 and above) | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives to bring total hours to 45 | 1-2 | | 2 |
| | 15-16 | 14-15 | 15-16 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| BA 211, 212, 213 Principles of Accounting | 3 | 3 | 3 |
| PS 201, 202, 203 American Governments | 3 | 3 | 3 |
| Ec 201, 202, 203 Principles of Economics | 3 | 3 | 3 |
| Hst 201, 202, 203 History of the United States | 3 | 3 | 3 |
| Electives | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| | 16 | 16 | 16 |

TOTAL: 93 hours



# MACHINE SHOP

## Two Year Program

Instruction and training in the Machine Shop 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 is directed at preparing a person for entrance occupations in machine shop or related industries. Class vacancies total 30.

Special costs include: tools $85, books $35, welding fee $10.

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. Beginning pay is $3 an hour; journeymen earn $3.90 an hour.

**FIRST YEAR**

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

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Machine Shop IV, V, VI | 3-3 | 3-3 | 3-3 |
| Machine Shop IV, V, VI Lab | 12-4 | 12-4 | 12-4 |
| 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 |

# MATHEMATICS

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

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Foreign language (French, German, or Russian) (UO, OSU) | 4 | 4 | 4 |
| Biological science sequence (SOC) | 3-4 | 3-4 | 3-4 |
| Non-math science sequence (PSC) | 4 | 4 | 4 |
| Mathematics[2] | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15 | 16 | 15 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Mathematics[2] | 4 | 4 | 4 |
| Second year foreign language (UO,OSU) | 4 | 4 | 4 |
| Second science sequence (SOC) | 4 | 4 | 4 |
| Non-math science sequence (PSC) | 3-4 | 3-4 | 3-4 |
| Social science sequence[3] | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93[4] | 3-4 | 3-4 | 3-4 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU should complete Wr 111, 112, and 3 hours of elective. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113. Students transferring to PSC should complete Wr 111 and 6 hours of humanities or social science.

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

[3]Students transferring to SOC should take Hst 201, 202, 203 History of the United States or Ps 201, 202,, 203 American Governments.

[4]Students preparing to become secondary teachers should complete Psy 201, 202 General Psychology. Those transferring to SOC should fill out the year with Sp 111 Fundamentals of Speech.

# MEDICAL ASSISTANT

This is planned as a one-year program to prepare the student for employment in a physician's office, in a hospital as ward clerk, and in other related areas of employment. Inquire at the Nursing Department.

# MEDICAL TECHNOLOGY (PREPROFESSIONAL PROGRAM)

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

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

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

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Ch 201, 202, 203 General Chemistry (or Ch 101, 102, 103) | 4 | 4 | 4 |
| Mth 95 Intermediate Algebra[2] | 4 | | |
| Mth 101 College Algebra | | 4 | |
| Mth 102 Trigonometry | | | 4 |
| Social science sequence (UO, OSU, OCE, EOC) | 3 | 3 | 3 |
| Z 201, 202, 203 General Zoology (PSC, SOC) | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15-16 | 16-17 | 15-16 |

TOTAL: 46-49 hours

[1]Students planning to transfer to PSC should complete Wr 111 and 6 hours of humanities or social science. The second and third terms of English Composition will be completed after transfer during the sophomore and junior years. Students transferring to OCE should complete Wr 111, Sp 111 Fundamentals of Speech, and 3 hours of electives. Students transferring to UO, OSU, SOC, or EOC should complete Wr 111, 112, 113.

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

# MEDICINE (PRE-PROFESSIONAL PROGRAM

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

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

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

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Mth 101 College Algebra[2] | 4 | | |
| Mth 102 Trigonometry | | 4 | |
| Mth 200 Calculus with Analytic Geometry | | | 4 |
| Literature sequence (OSU, UO, OCE, EOC, SOC) | 3 | 3 | 3 |
| Z 201, 202, 203 General Zoology (PSC) | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15-16 | 16-17 | 15-16 |

TOTAL: 46-49 hours

[1]Students planning to transfer to PSC should complete Wr 111 and 6 hours humanities or social science. The second and third terms of English Composition will be completed after transfer during the sophomore and junior years. Students transferring to OCE should complete Wr 111, Sp 111 Fundamentals of Speech, and 3 hours of electives. Students transferring to UO, OSU, SOC, or EOC should complete Wr 111, 112, and 113.

[2]Students should register in mathematics at level indicated by placement test scores. All students should complete 12 hours of mathematics during the freshman year.

# MIDDLE MANAGEMENT

## Two Year Associate Degree Program

This program offers background for assuming mid-management positions in business. Contact the Business Department for further information.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| English Composition | 3-3 | | |
| Fundamentals of Speech | | 3-3 | |
| Communication Skills III | | 3-3 | |
| Principles of Accounting | 3-3 | 3-3 | 3-3 |
| Business Environment | 3-3 | | |
| Business Law | | 3-3 | |
| Marketing | | | 3-3 |
| Business Math | 3-3 | | |
| Business Math/Statistics | | 3-3 | |
| Techniques of Business Decisions | | | 3-3 |
| Sociology 204, 205 | 3-3 | 3-3 | |
| Social Psychology | | | 3-3 |
| Physical Education | 3-1 | 3-1 | 3-1 |
| | 18-16 | 18-16 | 18-16 |

*H—Hours, C—Credit

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Principles of Economics | 3-3 | 3-3 | 3-3 |
| Management Data Processing | 3-3 | | |
| Financial Management | | 3-3 | |
| Seminar Occupational Dev. | | | 3-3 |
| Human Relations II | 3-3 | | |
| Elective | | 3-3 | 3-3 |
| Health | 3-3 | | |
| Elective* | | 3-3 | 3-3 |
| Elective* | 3-3 | 3-3 | 3-3 |
| | 15-15 | 15-15 | 15-15 |

*12 Credits of Electives must be in Business and 6 must be in the Liberal Arts.

# MILLWORK AND CABINET MAKING

## Two Year Associate Degree Program

Students receive the broad background necessary to help them gain entry positions in millwork and cabinetmaking and to advance to management positions in the industry.

### FIRST YEAR

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Machine & Tool Maintenance | 5-3 | | |
| Construction Practices I, II | | 10-5 | 10-5 |
| Communication Skills I or Writing | 3-3 | | |
| Communication Skills II or Speech III | | 3-3 | |
| Communication Skills III | | | 3-3 |
| Technical Math I, II, III | 3-3 | 3-3 | 3-3 |
| Practical Physics II | 5-4 | | |
| Introduction to Fab. Prac. II | | 5-3 | |
| Drafting Fundamentals | 5-2 | | |
| Mechanical or Architectural Drafting | | 5-2 | |
| Blue Print Reading for Construction I | | | 5-2 |
| Employer-Employee Relations | | | 2-2 |
| | 21-15 | 26-16 | 23-15 |

### SECOND YEAR

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Production Millwork I, II, III | 8-4 | 8-4 | 8-4 |
| Human Relations I | | | 3-3 |
| Machine Woodwork (Millwork) | | | 3-3 |
| Millwork & Cabinet Design | 6-3 | | |
| Wood & Metal Finishing | | 6-3 | |
| Welding IA, IB | 5-2 | 5-2 | |
| Electives (Gen. Ed.) | 2-2 | | 3-3 |
| Electives (Tech.) | 2-2 | 4-4 | 3-3 |
| Health Education | | 2-2 | |
| Woodworking Technology | 6-3 | | |
| | 29-16 | 25-15 | 23-16 |

# MUSIC

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

### FRESHMAN YEAR

| | F | W | S |
|---|---|---|---|
| Wr. 111, 112, 113 English Composition[1] | 3 | 3 | 2-3 |
| Mus 111, 112, 113 Music Theory I | 4 | 4 | 4 |
| Mus 190 Applied Music | 1 | 1 | 1 |
| Mus 195 Band or Mus 196 Orchestra or Mus 197 Chorus | 1 | 1 | 1 |
| First or Second Year French or German | 4 | 4 | 4 |
| HE 250 Personal Health | | | 2 |
| Physical Education | 1 | 1 | |
| Mus 50 Basic Piano (optional)[2] | 1 | 1 | 1 |
| | 14-15 | 14-15 | 15-16 |

### SOPHOMORE YEAR

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

TOTAL: 93 hours[4]

[1]Students planning to transfer to OSU or PSC should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO or SOC should complete Wr 111, 112, 113.

[2]Students who cannot pass the proficiency examination for Mus 214, 215, 216 Keyboard Harmony should complete work in Mus 50 Basic Piano as required to attain this proficiency during the freshman year.

[3]If the second year language was completed during the freshman year, students should complete a science sequence meeting general education requirements of the institution to which transferring.

[4]Students may find it necessary to delay completion of the physical education requirement until after transfer, in order to hold transfer credits within the 93-hour limitation.

# NURSE AIDE

A one-term program for aides is being developed for the 1969-70 college year. It will prepare students for employment in nursing homes, hospitals, home health agencies, private homes, and other care facilities. Inquire at the Nursing Department.

# NURSING, ASSOCIATE DEGREE

## Two Year Program

The Associate Degree Nursing program is six quarters in length, and the first class for 40 students starts in September, 1968.

Hospital practice and related classroom theory are offered concurrently throughout the entire program, beginning with the first quarter.

The aim of the Associate Degree Nursing program is to produce technically competent nurses who are qualified to (1) take the State Board Examinations for registration as a Registered Nurse, and (2) give direct patient care of high quality. Registered Nurses earn $500 to $550 a month.

For admission to the program, candidates must make application and be accepted as regular college students according to the procedures outlined in the catalog. Nursing candidates will be required to submit the following: High school transcript or equivalent, transcripts of all education acquired following high school, three personal references, physical and dental pre-entrance examinations and immunizations, as requested on the health forms, chest X-ray, or tuberculosis test before entrance into the program.

Special costs include those for uniforms, shoes, hose, watch with sweep second hand, books and school supplies.

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Anatomy & Physiology I, II | 5-3 | 5-3 | |
| English Comp. or Communication Skills I | 3-3 | | |
| Chemistry 101, 102 | 5-3 | 5-3 | |
| Psychology 201, 202 | 3-3 | 3-3 | |
| Nursing Fundamentals I, II | 5-3 | 13-7 | |
| Human Development & Individual Differences | | | 3-3 |
| Microbiology | | | 5-3 |
| English Comp. 112 or Communication Skills II | | | 3-3 |
| Maternal & Child Health Nursing | | | 16-8 |
| | 21-15 | 26-16 | 27-17 |

*H—Hours, C—Credits

A six-week summer term in psychiatric nursing requires 27 hours weekly for 13 credits.

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| General Sociology 204, 205, 206 | 3-3 | 3-3 | 3-3 |
| Speech 111 | 3-3 | | |
| PMI I, II, III | 16-8 | 16-8 | 16-8 |
| History of Nursing | 1-1 | | |
| Elective (optional) | 3-3 | | |
| Health 251 | | 3-3 | |
| Elective | | 3-3 | 3-3 |
| Nursing Seminar Trends | | | 2-2 |
| | 26-18 | 25-17 | 24-16 |

# NURSING, DIPLOMA SCHOOL

In cooperation with the Diploma School of Nursing at Sacred Heart General Hospital, LCC provides courses for those students who are completing the nursing program there. These students follow regular college registration procedures and are under the policies of the college for these courses.

# NURSING, LICENSED PRACTICAL

The purpose of this four term program in practical nursing is to prepare acceptable applicants 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. This may also qualify them for licensure in other states by endorsement. Cost for the course, 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, dentist, 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. Pay is about $365 a month.

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 40 or better. They must be in good physical and mental health as determined by a doctor's examination and they must have suitable personality and character traits necessary for this occupation. For admission a personal interview is required and a pre-test is given. The final selection of class membership is made at the Counseling Center.

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. Class size is 30.

The curriculum includes classroom instruction and supervised practice in community health facilities. Sacred Heart General Hospital cooperates with the school by giving the students the major portion of their clinical practice.

| | F | W | S | Su |
|---|---|---|---|---|
| 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 |
| Clinical Experience | 3 | 8 | 8 | 8 |
| | 20 | 15 | 15 | 16 |

# PHARMACY (PREPROFESSIONAL PROGRAM)

Successful completion of this program prepares a student for admission to Oregon State University School of Pharmacy or any other accredited pharmacy school. The pharmacy curriculum at Oregon State University is four years of professional study during which time courses in the humanities and social sciences are also taken. Transfer students enter the pharmacy program as sophomores. A total of five academic years, with 240 quarter hours, is required for the bachelor's degree.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition | 3 | 3 | 3 |
| Z 201, 202, 203 General Zoology | 3 | 3 | 3 |
| Mth 101 College Algebra[1] | 4 | | |
| Mth 102 Trigonometry | | 4 | |
| Mth 200 Calculus with Analytic Geometry | | | 4 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| | 15 | 15 | 16 |

TOTAL: 46 hours

[1]Students should enroll in mathematics at the level indicated by placement test scores. If Mth 200 is completed before end of freshman year, the student may fill out his program with elective credit. Suggested is Sp 111 Fundamentals of Speech.

# PHILOSOPHY

This program is recommended for students who plan to transfer to the major program in philosophy at the University of Oregon or Portland State College. Students may complete requirements for the baccalaureate degree with two additional years of work at the four-year institution.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Science sequence (with laboratory or 12 hours of mathematics numbered 101 or above) | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Social science sequence | 3 | 3 | 3 |
| | 13-14 | 14-15 | 13-14 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Select Three: Phl 201 Problems of Philosophy; Phl 202 Elementary Ethics; Phl 203 Elementary Logic; Phl 204 Elementary Aesthetics; or Phl 201, 202, 203 Problems of Philosophy | 3 | 3 | 3 |
| Second science sequence[2] | 3-4 | 3-4 | 3-4 |
| Second humanities sequence[2] | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93 | 2-3 | 2-3 | 2-3 |
| | 16-17 | 16-17 | 16-17 |

TOTAL: 93 hours

[1]Students transferring to PSC should complete Wr 111, 112 and 3 hours of electives. The third term of English Composition will be completed during the junior year.

[2]Students transferring to UO may use Psy 201, 202, 203 General Psychology to meet science requirement if laboratory work is completed after transfer. PSC students should complete **either** a second science or a second humanities sequence and electives to bring total hours to 93.

# PHYSICAL EDUCATION - HEALTH AND PHYSICAL EDUCATION

Students who wish to become physical education or health and physical education instructors must begin course work in professional activities (PE 194 and 195 Professional Activities) during the freshman year if they are to complete a baccalaureate program in four years. Service course work in physical education (PE 180 and 190 Physical Education) cannot be substituted for the professional activity courses. This program will permit transfer into teacher preparation programs offered by state system institutions.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Z 201, 202, 203 General Zoology (or GS 101, 102, 103 General Biology)[2] | 3-4 | 3-4 | 3-4 |
| PE 194/195 Professional Activities | 2 | 2 | 2 |
| PE 131 Introduction to Health, Physical Education, and Recreation | 3 | | |
| Sp 111 Introduction to Speech | | 3 | |
| HE 252 First Aid | | | 3 |
| Literature sequence (UO, OSU, OCE, SOC, EOC) | 3 | 3 | 3 |
| Phl 201, 202, 203 Problems of Philosophy. Elementary Ethics, Elementary Aesthetics (PSC) | 3 | 3 | 3 |
| | 14-15 | 14-15 | 14-15 |

**SOPHOMORE YEAR**

| | F | W | S |
|---|---|---|---|
| Ch 101, 102, 103 or 201, 202, 203 General Chemistry | 3-4 | 3-4 | 3-4 |
| PE 294/295 Professional Activities | 2 | 2 | 2 |
| Psy 201, 202, 203 General Psychology | 3 | 3 | 3 |
| Social science sequence[4] | 3 | 3 | 3 |
| HE 250 Personal Health | 2 | | |
| FN 225 Nutrition | | 3 | |
| Electives to bring total hours to 93[3] | 3-4 | 2-3 | 5-6 |
| | 16-17 | 16-17 | 16-17 |

TOTAL: 93 hours

**ONE-YEAR PREPROFESSIONAL PROGRAM**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Z 201, 202, 203 General Zoology (or GS 101, 102, 103 General Biology)[2] | 3 | 3 | 3 |
| Ch 101, 102, 103 or 201, 202, 203 General Chemistry | 3-4 | 3-4 | 3-4 |
| Literature sequence (UO, OSU, OCE, SOC, EOC) | 3 | 3 | 3 |
| Phl 201, 202, 203 Problems of Philosophy, Elementary Ethics, Elementary Aesthetics (PSC) | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| | 16-17 | 16-17 | 16-17 |

TOTAL: 48-51 hours

[1]Students planning to transfer to OSU, PSC, or OCE should complete Wr 111, 112 and 3 hours of electives. (If student plans to transfer to PSC at the end of the freshman year of the two-year program, he should complete Wr 111, GS 105 Physical Science [chemistry], and 3 hours of electives). Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113.

[2]PSC students should take GS 101, 102, 103 General Biology.

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

[4]SOC students should complete either Hst 201, 202, 203 or PS 201, 202, 203.

# PHYSICS

## Two-Year Program

This program is recommended for students who plan to transfer to a major program in physics at Oregon State University, the University of Oregon, or Portland State College. Upon satisfactory completion of the two-year program outlined below, students should be ready to begin the *second* year of physics studies.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Mathematics courses (Mth 101, 102, 200)[2] | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 15 | 16 | 15 |

**SOPHOMORE YEAR**

| | F | W | S |
|---|---|---|---|
| Mathematics courses (Mth 201, 202, 203) | 4 | 4 | 4 |
| Ph 207, 208, 209 Introductory Classical Physics | 4 | 4 | 4 |
| Social science sequence[3] | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93 | 3-4 | 3-4 | 3-4 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

## One-Year Program

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

**PHYSICS — FIRST YEAR**

| | | | |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Mth 200, 201, 202 Calculus with Analytic Geometry | 4 | 4 | 4 |
| Ph 207, 208, 209 Introductory Classical Physics | 4 | 4 | 4 |
| Ch 201, 202, 203 General Chemistry | 4 | 4 | 4 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| | 16 | 17 | 16 |

TOTAL: 49 hours

[1]Students planning to transfer to OSU should complete Wr 111, 112 and 3 hours of electives. PSC students should complete Wr 111 and 6 hours of humanities or social science. Students transferring to UO, EOC, or SOC should complete Wr 111, 112, 113.

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

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

# POLITICAL SCIENCE

This program has been approved by Oregon State University, the University of Oregon, and Portland State College for students who plan to transfer to a major program in political science. Students may complete requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Science sequence (with laboratory or 12 hours of mathematics[2] numbered 101 and above) | 3-4 | 3-4 | 3-4 |
| Hst 101, 102, 103 History of Western Civilization | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives[3] | 2-3 | 0-2 | 2-3 |
| | 15-16 | 15-16 | 15-16 |

**SOPHOMORE YEAR**

| | F | W | S |
|---|---|---|---|
| PS 201, 202, 203 American Governments | 3 | 3 | 3 |
| Second humanities sequence (OSU, UO) | 3 | 3 | 3 |
| Second science sequence (OSU, UO) | 3-4 | 3-4 | 3-4 |
| Second humanities or science[2] sequence (PSC) | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | 1 |
| Social science sequence (History of the United States, economics, geography, sociology, anthropolgy, or psychology[3]) | 3 | 3 | 3 |
| Electives to bring total hours to 93[3] | 2-6 | 2-6 | 2-6 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU or PSC should complete Wr 111, 112, and 3 hours of electives.
[2]The science requirement at PSC need not be met with a laboratory course. Mth 95 is acceptable as part of a mathematics sequence.
[3]Students who plan to become teachers should complete Psy 201, 202, and Sp 111 Fundamentals of Speech sometime during the lower-division program.

# PSYCHOLOGY

This program is recommended for students who plan to transfer to the major program in psychology at the University of Oregon, Oregon State University, or Portland State College. Students may complete requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Science sequence (with laboratory or 12 hours of mathematics numbered 101 and above)[2] | 3-4 | 3-4 | 3-4 |
| Social science sequence (anthropology or sociology recommended) | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives | 0-2 | 0-2 | 0-2 |
| | 15-16 | 15-16 | 15-16 |

**SOPHOMORE YEAR**

| | | | |
|---|---|---|---|
| Psy 201, 202, 203 General Psychology | 3 | 3 | 3 |
| Second science sequence[2] | 3-4 | 3-4 | 3-4 |
| Second humanities sequence | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Electives (additional science or social science; foreign language if planning to do graduate work)[3] | 5-6 | 5-6 | 5-6 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU or PSC should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO should complete Wr 111, 112, 113.
[2]Students planning to transfer to OSU should complete Bi 101, 102, 103 and 12 hours of mathematics, according to placement. UO students should select biology, physics, chemistry, or mathematics as one of their science sequences.
[3]OSU students should complete Hst 101, 102, 103; anthropology or sociology, whichever is not completed during the freshman year, is recommended as additional elective hours. UO recommends biology or mathematics, if not already taken to meet science requirement.

# RADIO BROADCASTING

## One Year Program

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

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

Instruction and training in this program are aimed at preparing a person for employment as a combination man, announcer-technician, or announcer. 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. Beginning pay is about $400 a month.

Radio broadcasting may be combined with telecasting for those who wish to earn a two-year Associate Degree.

| | F | W | S |
|---|---|---|---|
| | H-C* | H-C | H-C |
| Radio Broadcasting I | 3-3 | | |
| Radio Broadcasting Lab I | 12-4 | | |
| Electronics I, II | 5-4 | 5-4 | |
| Math 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 |
| Radio Broadcasting III | | | 3-3 |
| Radio Broadcasting Lab III | | | 12-4 |
| Electronics III | | | 5-4 |
| Radio Operator Preparation I, II | | 5-4 | 5-4 |
| | 27-16 | 31-21 | 28-18 |

*H—Hours, C—Credits

# RADIO AND TELEVISION SERVICE

## Two Year Program

Instruction and training are given in the basic fundamentals of troubleshooting, 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**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Fundamentals of Radio Service | 3-3 | | |
| Fund. of Radio Service I Lab | 12-4 | | |
| Electronics (DC) I, (AC) II | 5-4 | 5-4 | |
| Electrical Drafting | 4-2 | | |
| Math II, III | 3-3 | 3-3 | |
| Radio Service II, III | | 3-3 | 3-3 |
| Radio Service II, III Lab | | 12-4 | 12-4 |
| Communication Skills I, II | | 3-3 | 3-3 |
| Electronics III | | | 5-4 |
| Applied Economics | | | 3-3 |
| | 27-16 | 26-17 | 26-17 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Television Service I, II | 3-3 | 3-3 | |
| Television Service I, II Lab | 12-4 | 12-4 | |
| Slide Rule | 2-1 | | |
| Practical Physics I, II | 5-4 | 5-4 | |
| Audio Systems | | 5-3 | |
| Salesmanship | | 3-3 | |
| Health | | | 2-2 |
| Color Television Service | | | 5-5 |
| Color Television Service Lab | | | 10-3 |
| Employer-Employee Relations | 2-2 | | |
| Human Relations I | | | 3-3 |
| Business Records and Report | | | 3-3 |
| | 24-14 | 28-17 | 23-16 |

# SECRETARIAL, PROFESSIONAL

## Two Year Associate Degree Program

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

Nearly 20 per cent of available clerical jobs are for stenographers and secretaries. Stenos earn a starting wage of $75 to $90 a week. Secretaries earn about $60 to $90 to start.

The following are descriptions of typical stenography and secretarial jobs as reported in the Department of Labor's "Dictionary of Occupational Titles."

STENOGRAPHER. Takes dictation in shorthand of correspondence, reports, and other matter, and transcribes dictated material, using typewriter. Performs variety of clerical duties except when working in stenographic pool. May transcribe material from sound recordings.

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

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

**FIRST YEAR**

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Typing I, II, III | 5-3 | 5-3 | 5-3 |
| Shorthand I, II, III | 4-3 | 4-3 | 4-3 |
| Business English I, II, III | 3-3 | 3-3 | 3-3 |
| Business Math | 3-3 | | |
| Business Machines I, II | | 3-3 | 3-3 |
| General Sociology | 3-3 | 3-3 | |
| Personal Development | | | 3-3 |
| P.E. | | 3-1 | 3-1 |
| | 18-15 | 21-16 | 21-16 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Advanced Transcription I, II, III | 4-3 | 4-3 | 4-3 |
| Office Procedures I, II, III | 4-3 | 4-3 | 4-3 |
| Economics | 3-3 | | |
| Business Environment | 3-3 | | |
| Human Relations II | 3-3 | | |
| Filing & Record Mgt. | | 3-3 | |
| Business Law | | 3-3 | |
| Health | | | 3-3 |
| Communication Skills III | | | 3-3 |
| Elective (Business) | | 3-3 | 3-3 |
| P.E. | | | 3-1 |
| | 17-15 | 17-15 | 20-16 |

# SECRETARIAL

## One Year Program

See description under "Secretarial, Professional: Two Year Associate Degree Program."

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Typing I, II, III | 5-3 | 5-3 | 5-3 |
| Shorthand I, II, III | 4-3 | 4-3 | 4-3 |
| Business English I, II, III | 3-3 | 3-3 | 3-3 |
| Business Mathematics | 3-3 | | |
| Business Machines I, II | | 3-3 | 3-3 |
| Office Procedures I, II, III | 4-3 | 4-3 | 4-3 |
| Elective | 3-3 | 3-3 | 3-3 |
| | 22-18 | 22-18 | 22-18 |

*H—Hours, C—Credits

# SECRETARIAL SCIENCE

## (College Transfer)

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

**FRESHMAN YEAR**

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

**SOPHOMORE YEAR**

| | F | W | S |
|---|---|---|---|
| Ec 201, 202, 203 Principles of Economics | 3 | 3 | 3 |
| BA 211, 212, 213 Principles of Accounting | 3 | 3 | 3 |
| SS 211, 212, 213 Applied Stenography | 3 | 3 | 3 |
| PS 201 American Governments (secretarial science majors) | 3 | | |
| Hst 203 History of the United States (secretarial science majors) | | | 3 |
| Psy 201, 202 General Psychology and Sp 111 Fundamentals of Speech (business education majors) | 3 | 3 | 3 |
| BA 224 Business Communications | 3 | | |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total to 93 hours | | 2-5 | 2 |
| | 16 | 15 | 15 |

TOTAL: 93 hours

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

# SOCIOLOGY

This program is recommended for students who plan to transfer to the major program in sociology at the University of Oregon, Oregon State University, or Portland State College. Students may complete requirements for the baccalaureate degree with two additional years of work.

**FRESHMAN YEAR**

| | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| Science sequence (with laboratory or 12 hours of mathematics numbered 101 and above) | 3-4 | 3-4 | 3-4 |
| Social science sequence (anthropology or History of Western Civilization recommended) | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives | 0-2 | | 0-2 |
| | 15-16 | 15-16 | 15-16 |

**SOPHOMORE YEAR**

| | F | W | S |
|---|---|---|---|
| Soc 204, 205, 206 General Sociology | 3 | 3 | 3 |
| Ec 201, 202, 203 Principles of Economics[2] | 3 | 3 | 3 |
| Second science sequence (OSU, UO)[3] | 3-4 | 3-4 | 3-4 |
| Foreign language or second humanities sequence (OSU, UO) | 3-4 | 3-4 | 3-4 |
| Second humanities or science sequence (PSC) | 3-4 | 3-4 | 3-4 |
| Physical Education | 1 | 1 | 1 |
| Electives to bring total hours to 93[5] | 0-6 | 0-6 | 0-6 |
| | 15-16 | 15-16 | 15-16 |

TOTAL: 93 hours

[1]Students planning to transfer to OSU or PSC should complete Wr 111, 112 and 3 hours of electives. Students transferring to UO should complete Wr 111, 112, 113.

[2]Psy 201, 202, 203 is recommended as an acceptable alternative for students transferring to PSC. OSU students should take Hst 101, 102, 103 if they did not already do so in the freshman year.

[3]Students transferring to UO may use Psy 201, 202, 203 to meet science requirement provided laboratory work is completed after transfer.

[4]The science requirement at PSC need not be met with a laboratory course. Mth 95 is acceptable.

[5]PSC students who do not have a satisfactory score on the mathematics placement examination should complete Mth 95 Intermediate Algebra.

# SPEECH, SPEECH AND THEATER ARTS

These programs are recommended for students who plan to transfer to the major program in speech at the University of Oregon or Oregon State University or speech and theater arts at Portland State College. Students may complete requirements for the baccalaureate degree with two additional years of work at the University of Oregon, three years at Portland State College.

**TWO-YEAR PROGRAM (UO, OSU)**

| FRESHMAN YEAR | F | W | S |
|---|---|---|---|
| Wr 111, 112, 113 English Composition[1] | 3 | 3 | 3 |
| Literature sequence | 3 | 3 | 3 |
| First year foreign language[2] or Science sequence[3] (with laboratory or 12 hours of mathematics numbered 101 and above) | 3-4 | 3-4 | 3-4 |
| Sp 111, 112, 113 Fundamentals of Speech | 3 | 3 | 3 |
| Physical Education | 1 | | 1 |
| Personal Health | | 2 | |
| Electives | 2 | | 2 |
| | 15-16 | 14-15 | 15-16 |
| **SOPHOMORE YEAR** | | | |
| Social science sequence[4] | 3 | 3 | 3 |
| Sp 229 Interpretation | 2 | | |
| Second year foreign language (B.A. degree) | 4 | 4 | 4 |
| Science sequence (B.A. degree)[3] | 3-4 | 3-4 | 3-4 |
| Second humanities sequence (B.S. degree)[5] | 3 | 3 | 3 |
| Second social science sequence (B.S. degree)[6] | 3 | 3 | 3 |
| Physical Education | 1 | 1 | 1 |
| Electives[7] | 0-4 | 3-6 | 3-6 |
| | 14-16 | 15-16 | 15-16 |

TOTAL: 93 hours

**ONE-YEAR PROGRAM (PSC)**

| | | | |
|---|---|---|---|
| Wr 111 English Composition | 3 | | |
| Social science sequence | 3 | 3 | 3 |
| Science sequence[8] | 3-4 | 3-4 | 3-4 |
| Sp 111, 112, 113 Fundamentals of Speech | 3 | 3 | 3 |
| Physical Education | 1 | 1 | |
| Personal Health | | | 2 |
| Electives[7] | 2-3 | 2-3 | 0-2 |
| | 16 | 16 | 15-16 |

TOTAL: 47-48 hours

[1]Students planning to transfer to OSU should complete Wr 111, 112 and 3 hours of elective. Students transferring to UO should complete Wr 111, 112, 113.

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

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

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

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

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

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

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

# SPECIAL MANPOWER OCCUPATIONAL TRAINING PROGRAMS

This program provides occupational training for unemployed and underemployed persons who cannot reasonlably 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 under the Manpower Development Training Act 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. Institutional allowance costs are paid by the federal government.

Those having priority for selection 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.

The Oregon State Employment Service provides initial vocational counseling, testing, and screening prior to the student's referral into an occupational training program. It also is responsible for student placement.

These programs are offered:

BASIC EDUCATION (Indeterminate Length)

This program 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 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 is given. Good grooming and human relations are stressed throughout the course.

BUILDING MAINTENANCE (6 weeks)

This is a practical course that includes all phases of building maintenance and care: 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 (30 weeks)

Trainees are instructed in shorthand and use of 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 (18 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 work program.

GENERAL OFFICE CLERK (15 weeks)

This is 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 is given. The courses include instruction in job finding techniques, personal grooming, and office relations. All students are requested to take a Civil Service examination prior to completion.

WELDING (9 weeks)

This is 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.

HOME HEALTH AIDES (8 weeks)

This is a practical course that includes instruction in nursing skills, ethics, anatomy and physiology, basic nutrition, rehabilitation, first aid, homemaking skills and orientation to nursing.

Each student is expected to exhibit proficiency in all of the following: Personal health care of homebound individuals in order that they may regain and/or maintain their best possible physical, psychosocial health and degree of independence; use of body mechanics and exercise; maintenance of good posture and prevention of deformity; planning and preparing nutritious meals and maintaining a home environment conducive to good health.

# TELECASTING

## One Year Program

This is planned to give students, who have 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.

Telecasting may be combined with radio broadcasting for those who wish to earn a two-year Associate Degree.

| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Telecasting I | 3-3 | | |
| Telecasting I Lab | 12-4 | | |
| Practical Physics I, II | 5-4 | 5-4 | |
| Applied Economics | 3-3 | | |
| Telecasting II | | 3-3 | |
| Telecasting II Lab | | 12-4 | |
| Salesmanship | | 3-3 | |
| Audio Systems | | 5-4 | |
| Telecasting III | | | 3-3 |
| Telecasting III Lab | | | 12-4 |
| Human Relations I | | | 3-3 |
| Employer-Employee Relations | 2-2 | | |
| Business Records and Reports | | | 3-3 |
| Health | | | 2-2 |
| | 25-16 | 28-18 | 23-15 |

*H—Hours, C—Credits

# WELDING TECHNOLOGY

## Two Year Program

This is designed to give the student basic preparation for employment as a welder or in a supervisory capacity. The course material offered prepares for entry positions in the welding industry, and background information suitable for advancement into management, sales and service, ownership, and technician positions in production industries.

**FIRST YEAR**

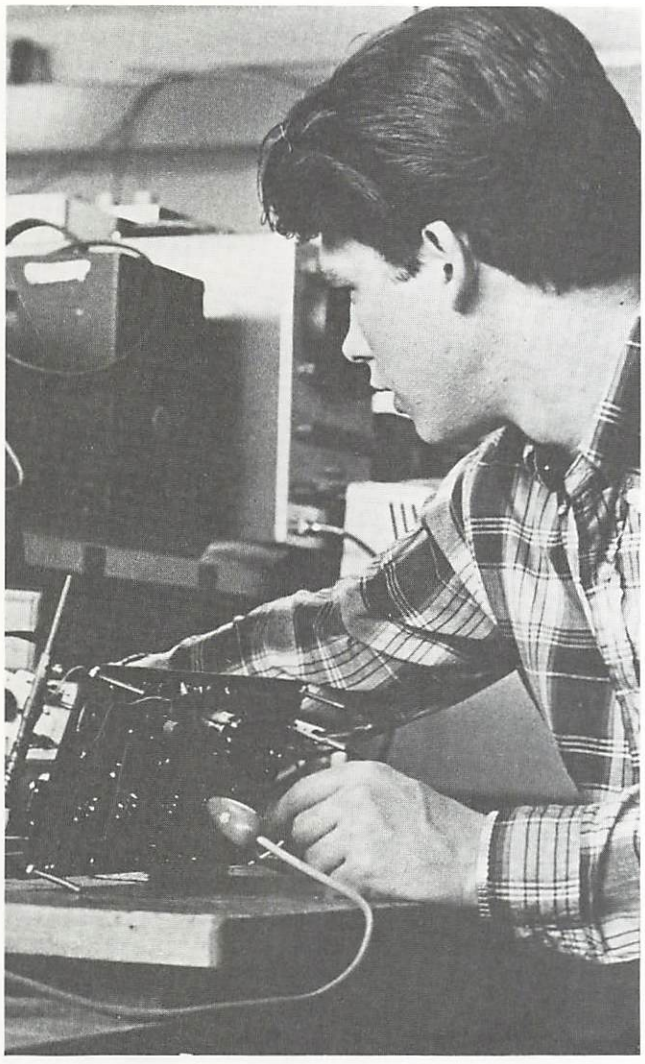
| | F H-C* | W H-C | S H-C |
|---|---|---|---|
| Welding Processes IA, IB, IIB | 5-2 | 5-2 | 5-2 |
| Communication Skills 1, II | 3-3 | 3-3 | |
| or | | | |
| English Comp. & Fund. of Speech | (3-3) | (3-3) | |
| Communication Skills III | | | 3-3 |
| Technical Math I, II, III | 3-3 | 3-3 | 3-3 |
| Practical Physics II | 5-4 | | |
| Introduction to Fab. Prac. I & IA | 5-3 | 5-3 | |
| Metals Application Treatment & Testing | | | 5-3 |

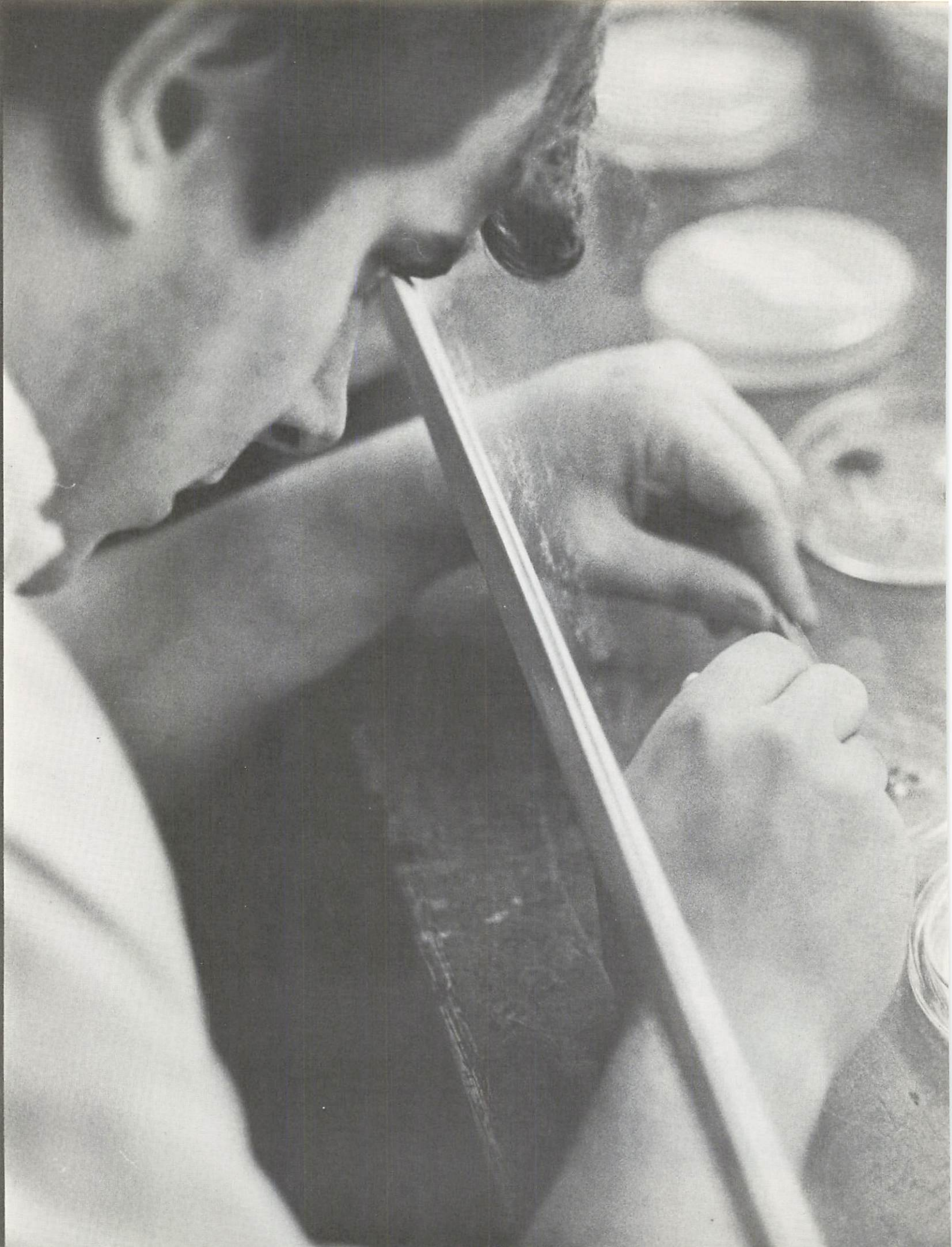
| | | | |
|---|---|---|---|
| Machine Tool Operation | | 5-3 | |
| Drafting Fundamentals | 5-2 | | |
| Mechanical Drafting | | 5-2 | |
| Blue Print Reading for Construction I | | | 5-3 |
| Health Education | | | 2-2 |
| | 26-17 | 26-16 | 23-16 |

*H—Hours, C—Credits

**SECOND YEAR**

| | F H-C | W H-C | S H-C |
|---|---|---|---|
| Welding I, II, III | 15-9 | 15-9 | 15-9 |
| Employer-Employee Relations | | | 2-2 |
| Human Relations I | | 3-3 | |
| Blue Print Reading for Construction II | 5-3 | | |
| Senior (Welding) Projects I, II | | 8-4 | 8-4 |
| Strength of Materials I | 2-2 | | |
| Strength of Materials Lab I | 3-1 | | |
| Physical Education | 3-1 | | |
| | 28-16 | 26-16 | 25-15 |





# COURSES

**ADMINISTRATION OF JUSTICE, 5.202**
(3 class hrs/wk) 3 Credits
Review of court systems; procedures from incident to final disposition; principles of constitutional, federal, state, and civil laws as they apply to and affect law enforcement.

**ADVANCED COMMERCIAL PILOT GROUND SCHOOL, 6.425** (3 class hrs/wk) 3 Credits
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.

**ADVANCED DRAFTING PROBLEMS, 4.115**
(2 class - 3 lab hrs/wk) 3 Credits
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.

**ADVANCED ELECTRONIC CIRCUITS, 6.216R**
(2 class - 3 lab hrs/wk) 3 Credits
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.

**ADVANCED MACHINE DRAFTING I, 4.117**
(5 lab hrs/wk) 2 Credits
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.

**ADVANCED MACHINE DRAFTING II, 4.123**
(5 lab hrs/wk) 2 Credits
Advanced studies in the major areas of machine drafting. The area covered will include threads and fasteners, assembly drawings, pictorial drawings, and engineering graphics.
Prerequisite: Advanced Machine Drafting I.

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

**ADVANCED TRANSCRIPTION I, 2.502**
(4 class hrs/wk) 3 Credits
An advanced course designed to train the student for stenographic work on a production basis with emphasis on comprehensive reading of notes in thought sequence and sustained transcription practice. Aims at coordinating skills and speed of typing, shorthand, and English essentials.

**ADVANCED TRANSCRIPTION II, 2.504**
(4 class hrs/wk) 3 Credits
Dictation of unfamiliar material at levels accepted by business. Study of terminology in special areas such as legal, medical, and other specified areas.
Prerequisite: Advanced Transcription I, 2.502.

**ADVANCED TRANSCRIPTION III, 2.506**
(4 class hrs/wk) 3 Credits
An advanced course designed to train students for production work while allowing specialization in professional and industrial fields such as legal, engineering, medical, etc. Transcription of material dictated from these special areas.
Prerequisite: Advanced Transcription II, 2.504.

**ADVERTISING, 2.314** (3 class hrs/wk) 3 Credits
This course provides a detailed examination of the purposes, preparation, placement and analysis of the various types of advertisements within **each** of the **media** such as television, radio and the newspaper. The relative merits of several media are then explored. The course concludes with practice in the planning and analysis of complete advertising campaigns and their coordination with other marketing strategies.
Prerequisite: Marketing, BA 223, 2.223.

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

**AEROPHYSICS, 6.407** (3 class hrs/wk) 3 Credits
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 princinciples of electrical circuits, hydraulics, and pneumatics.

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

**AIRCRAFT AND ENGINE STRUCTURES, 6.415**
(3 class hrs/wk) 3 Credits
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.

**AIRCRAFT POWERPLANT I, 3.226**
(10 class hrs/wk) 10 Credits
**AIRCRAFT POWERPLANT I LAB, 3.227**
(10 lab hrs/wk) 3 Credits

**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 effects on stability and performance.

**AIRCRAFT POWERPLANT II, 3.228**
(5 class hrs/wk) 5 Credits
**AIRCRAFT POWERPLANT II LAB, 3.229**
(20 lab hrs/wk) 7 Credits

**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 power-plant certification. Instruction and practice in engine disassembly, measuring equipment, micrometers, dial indicators, manufacturing manuals, torque tables, tables of fits, cleaning and inspections, magnaflux, magnaglo, zyglo, 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 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 I.

**AIRCRAFT POWERPLANT III, 3.230**
(5 class hrs/wk) 5 Credits
**AIRCRAFT POWERPLANT III LAB, 3.231**
(15 lab hrs/wk) 6 Credits

**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, after-burners 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 II.

**AIRCRAFT SYSTEMS, 6.423** (3 class hrs/wk) 3 Credits
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.

**AIRFRAME I, 3.220** (5 class hrs/wk) 5 Credits
**AIRFRAME I LAB, 3.221** (15 lab hrs/wk) 5 Credits

**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 application, spray-gun operation, covers, refinishing completed aircraft, airfoil layout.

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

**AIRFRAME II, 3.222** (5 class hrs/wk) 5 Credits
**AIRFRAME II LAB, 3.223** (19 lab hrs/wk) 6 Credits

**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.

**AIRFRAME III, 3.224** (5 class hrs/wk) 5 Credits
**AIRFRAME III LAB, 3.225** (10 lab hrs/wk) 3 Credits

**Aircraft Electrical**
Direct current, circuits, series circuits, parallel circuits, relays, solenoid switches, batteries, battery charges, 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.

**AIRLINE MANAGEMENT, 6.427** (3 class hrs/wk) 3 Credits
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.

**AIR NAVIGATION, 6.409** (3 class hrs/wk) 3 Credits
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.

**AIR TRANSPORTATION, 6.419** (3 class hrs/wk) 3 Credits
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.

**AMERICAN GOVERNMENTS, PS 201, 202, 203**
3 Credits each
201: principles of American constitutional system, political process, and organization of national government; 202: powers and functions of national government; prerequisite, PS 201; 203: practical operations and contemporary reforms in government at state and local level.

**AMERICAN INSTITUTIONS, 1.600**
(3 class hrs/wk) 3 Credits
A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker in business and industry. Topics considered are: culture, its functions and changes; social groups in relation to problems in urban living; the American economic system and the American political system.

**AMPLIFIER CIRCUITS AND DESIGN, 6.214R**
(3 class hrs/wk) 3 Credits
**AMPLIFIER CIRCUITS AND DESIGN LAB, 6.215**
(6 lab hrs/wk) 2 Credits
Application of vacuum tubes and transistors in amplifier circuits. Analyzes the vacuum-tube amplifier into its basic and equivalent circuit. 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.

**APPLIED ECONOMICS, 1.506** (3 class hrs/wk) 3 Credits
Industrial economics deals with the principles involved in the operation of the American economic system. The role of business and industry in the total economy is studied. Basic economic principles are applied to the relationship of employer and employee. Topics considered include historic trends, business organization, price and competition, imperfect competition, and monopoly, price levels, business cycles, taxation, labor unions, management association, labor-management relations, labor legislation, and social and private security.

**APPLIED FLUID MECHANICS, 3.320**
(2 class hrs/wk) 2 Credits
The practical uses of hydraulic power transmission and application. The fundamental principles are reviewed and the uses of Hydraulic pressure and fluid flow in brakes, pumps, power steering units, fluid couplings, torque converters, and power accessories are covered thoroughly.
Prerequisite: Practical Physics I and II.

**APPLIED MECHANICS I, 6.109**
(2 class - 3 lab hrs/wk) 3 Credits
This course concerns iteself with the mechanics of solids. Statics is of prime importance.

**APPLIED MECHANICS II, 6.111**
(2 class - 3 lab hrs/wk) 3 Credits
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.

**APPLIED PHYSICS I ,6.370**
(3 class - 2 lab hrs/wk) 4 Credits
A course in applied physics on the post-high school level. Covers mechanics of measurement, vectors, kinematics, work power-energy, machines and rotational motion. Laboratory time is provided for demonstrations and experiments covering the principles and procedures covered in class.
Prerequisite: Technical Math I concurrently or approval of department head.

**APPLIED PHYSICS II, 6.371**
(3 class - 2 lab hrs/wk) 4 Credits
Covers structure of matter, heat, sound, and light. Laboratory time is provided for demonstrations and experiments covering principles and procedures covered in class.
Prerequisite: Technical Math II or approval of department head.

**APPLIED PHYSICS III, 6.366**
(3 class - 2 lab hrs/wk) 4 Credits
Magnetism and electricity, including basic electric currents, sources, electro-magnetism, alternating current, generators, and motors. Laboratory time is provided for dem-

onstrations and experiments to clarify principles and procedures covered in class.
Prerequisite: Technical Math II or approval of department head.

**APPLIED STENOGRAPHY, SS 211, 212, 213** 3 Credits 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.

**ARCHITECTURAL DRAFTING, 4.107**
(5 lab hrs/wk) 2 Credits
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.

**AUDIO SYSTEMS, 4.912** (2 class - 3 lab hrs/wk) 3 Credits
Theory and principles of high fidelity systems, components, amplifiers, pickups and loudspeakers, AM and FM tuners, record players, tape recorders, inter-communication systems. Servicing audio systems. Demonstrations and laboratory practice.
Prerequisite: Electronic Circuits.

**AUTO CHASSIS LAB I, HEAVY EQUIP., 3.346**
(6 lab hrs/wk) 2 Credits
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.

**AUTO ELEC. LAB I, HEAVY EQUIP., 3.352**
(3 lab hrs/wk) 1 Credit
Practical application of the theory studied in Automotive Electricity I as related to heavy equipment.
Prerequisite: To be taken concurrently with Automotive Electricity.

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

**AUTOMATIC TRANSMISSIONS, 3.326**
(3 class hrs/wk) 3 Credits

**AUTOMATIC TRANSMISSIONS LAB, 3.327**
(3 lab hrs/wk) 1 Credit
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.

**AUTOMATION SYSTEMS, 6.244**
(3 class hrs/wk) 3 Credits
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.

**AUTOMOTIVE AIR CONDITIONING,** (number to be assigned) (3 class hrs/wk) 3 Credits

**AUTOMOTIVE AIR CONDITIONING LAB,** (number to be assigned) (12 lab hrs/wk) 4 Credits
Types of air conditioning units used in modern automobiles. Installation and servicing of automotive air conditioning systems. Theory of operation and adjustment of operating controls.
Prerequisite: Domestic Refrigeration III or consent of instructor.
Note: This course is one term in length but may be offered any term if there is sufficient demand.

**AUTOMOTIVE CHASSIS I, 3.300**
(3 class hrs/wk) 3 Credits

**AUTOMOTIVE CHASSIS LAB I, 3.301**
(6 lab hrs/wk) 2 Credits
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.

**AUTOMOTIVE ELECTRICITY I, 3.308**
(3 class hrs/wk) 3 Credits

**AUTOMOTIVE ELECTRICITY LAB I, 3.309**
(3 lab hrs/wk) 1 Credit
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.

**AUTOMOTIVE ELECTRICITY II, 3.322**
(3 class hrs/wk) 3 Credits

**AUTOMOTIVE ELECTRICITY LAB II, 3.323**
(3 lab hrs/wk) 1 Credit
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.

**AUTOMOTIVE FUELS & LUBRICANTS, 3.334**
(2 class hrs/wk) 2 Credits
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.

**AUTOMOTIVE MATERIALS, 3.336**
(2 class hrs/wk) 2 Credits
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.

**AUTOMOTIVE METAL WORK I, 3.397**
(3 class hrs/wk) 3 Credits
History and development 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. Instruction on removal, repair and replacement of hardware, glass and trim. Instruction on sealing for water and dust leaks.

**AUTOMOTIVE METAL WORK I LAB, 3.398**
(20 lab hrs/wk) 7 Credits
Provides shop practice in straightening metal damage; practice in door assembly and alignment; fender, hood, and deck lid replacement; removal and replacement of W/S and back glass; and seal for dust and water leaks.
Prerequisite: To be taken concurrently with Automotive Metal Work I and Welding IA.

**AUTOMOTIVE METAL WORK II, 3.321**
(3 class hrs/wk) 3 Credits
Instruction on fender and panel major repair; replacement of fenders, doors, and hood; and rear-end repair. Instruction on portable push-pull method of frame and body repair; also, welding panels and filling with plastic.
Prerequisite: Automotive Metal Work I.

**AUTOMOTIVE METAL WORK II LAB, 3.328E**
(20 lab hrs/wk) 7 Credits
Provides shop practice on major front end repair; major rear end damage, and damages resulting from side swipe.
Prerequisite: To be taken concurrently with Automotive Metal Work II.

**AUTOMOTIVE METAL WORK III, 3.337**
(2 class hrs/wk) 2 Credits
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 bumping and finishing. Instruction on fabrication of major body replacements or alterations.
Prerequisite: Automotive Metal Work II.

**AUTOMOTIVE METAL WORK III LAB, 3.315E**
(20 lab hrs/wk) 7 Credits
Provides shop practice in repairing extensive damage: frame repair, superstructure alignment, major body replacements, and general production.
Prerequisite: To be taken concurrently with Automotive Metal Work III.

**AUTOMOTIVE OVERHAUL, 3.335** (9 lab hrs/wk) 3 Credits
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.

**AUTOMOTIVE PAINTING I, 3.238**
(3 class hrs/wk) 3 Credits
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 painting with lacquer type material, paint construction and its use.

**AUTOMOTIVE PAINTING I LAB, 3.239E**
(20 lab hrs/wk) 7 Credits
Provides shop practice in mixing primers and color; spray gun adjusting and cleaning; preparing metal for painting; painting with lacquer type products; and rubbing and cleaning.
Prerequisite: To be taken concurrently with Auto Painting I.

**AUTOMOTIVE PAINTING II, 3.240**
(3 class hrs/wk) 3 Credits
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.
Prerequisite: Automotive Painting I.

**AUTOMOTIVE PAINTING II LAB, 3.241E**
(20 lab hrs/wk) 7 Credits
Provides shop practice in all phases of lacquer type painting; sanding; priming; sealing; spraying; matching colors; and general production work.
Prerequisite: To be taken concurrently with Auto Painting II.

**AUTOMOTIVE PAINTING III, 3.243**
(3 class hrs/wk) 3 Credits
Instruction in the methods of preparing a car for complete painting; spraying with enamel; special enamel finishes; interior refinishing; auto clean-up after painting; and preparing car for delivery to customer.
Prerequisite: Automotive Painting II

**AUTOMOTIVE PAINTING III LAB, 3.244E**
(20 lab hrs/wk) 7 Credits
Provides shop practice in preparing car for painting with enamel; sanding; priming; sealing; spraying with enamel; interior painting detailing; and preparing car for delivery to customer.
Prerequisite: To be taken concurrently with Automotive Painting III.

**AUTOMOTIVE REPAIR I, 3.329** (9 lab hrs/wk) 3 Credits
A shop course in which the students can develop additional abilities and understanding through diagnosis and repair of automotive equipment. It will include overhaul and maintenance procedures and practices on suspension systems, brakes, power trains and engines. Students will develop skills in analyzing problems, outlining job procedures, conservation of working time, and overhaul of the defective units.
Prerequisite: Second-year standing on instructor's approval.

**AUTOMOTIVE REPAIR II, 3.331**
(9 lab hrs/wk) 3 Credits
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.

**AUTOMOTIVE REPAIR III, 3.333**
(9 lab hrs/wk) 3 Credits
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.

**AUTOMOTIVE REPAIR ESTIMATING, 3.338**
(2 class hrs/wk) 2 Credits
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.

**AUTOMOTIVE SERVICE MANAGEMENT, 3.332**
(2 class hrs/wk) 2 Credits
This outlines the duties and responsibilities of the service manager. The students study methods of organizing service personnel, shop facilities, and an instruction to shop layout and buildings. Appreciation of good relationship with customers, labor and management groups, and individuals is emphasized.

**AUXILIARY SYSTEMS, 3.812** (2 class hrs/wk) 2 Credits
**AUXILIARY SYSTEMS LAB, 3.813**
(3 lab hrs/wk) 1 Credit
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.

**AVIATION METEOROLOGY, 6.411**
(3 class hrs/wk) 3 Credits
The interpretation of meteorlogical 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.

**BAND, Mus 195** (6 units maximum credit) 1 Credit
Designed for the student desiring to study dance music, radio, or theater 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.

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

**BASIC PIANO, Mus 50**
1 hour any term (3 hrs maximum credit
Classroom instruction for music students who receive a low rating on test of keyboard proficiency and for other students ineligible for piano instruction at the level of Mus 190.

**BASIC VOICE, Mus 51**
(3 units maximum credit) 1 Credit
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.

**BLUEPRINT READING AND SKETCHING, 3.339**
(3 lab hrs/wk) 1 Credit
Introductory course to blue print 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.

**BLUEPRINT READING FOR CONSTRUCTION I, 3.910**
(5 hrs/wk) 3 Credits
Relationship of the various drawings in a set of plans to basic drawing principles will be established. Recognition of detail in job prints related to the construction industries will be stressed. Prints of construction jobs will be used. Free hand, large scale detailing of portions of construction will be a part of the course. Material take off will be emphasized.

**BLUEPRINT READING FOR CONSTRUCTION II, 3.911**
(5 hrs/wk) 3 Credits
Advanced study related to the needs of the individual student in the interpretation of shop prints for special features of design, fabrication, construction, and assembly. Residences, commercial buildings, and bridge or dam construction prints will typify the type of plans used for study.
Prerequisite: Blueprint reading for Constructnon I.

**BOOKKEEPING & ACCOUNTING I, 2.110**
(3 class - 1 lab hrs/wk) 3 Credits
Introduction to basic principles of bookkeeping and accounting; the bookkeeping cycle; journals and ledgers, special journals and subsidiary ledgers and financial statements.

**BOOKKEEPING & ACCOUNTING II, 2.111**
(3 class - 1 lab hrs/wk) 3 Credits
The bookkeeping and accounting cycle as it applies to the combination journal; payroll accounting, payroll taxes applying to the employer, depreciation and disposal of fixed assets, and principles for the recording of bad debts.
Prerequisite: Bookkeeping & Accounting I.

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

**BOOKKEEPING AND ACCOUNTING FOR DENTAL ASSISTANTS, 5.439** (2 class - 3 lab hrs/wk) 3 Credits
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.

**BUILDING CONSTRUCTION FOR FIRE PREVENTION, 5.264** (2 class - 3 lab hrs/wk) 3 Credits
Classification of buildings; structural features affecting fire spread; effect of fire on structural strength; fire stops and rating of materials; fire retardants; Sanborne maps.

**BUSINESS ENGLISH I, 1.120** (3 class hrs/wk) 3 Credits
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.

**BUSINESS ENGLISH II, 1.122** (3 class hrs/wk) 3 Credits
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.

**BUSINESS ENGLISH III, 1.124** (3 class hrs/wk) 3 Credits
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.

**BUSINESS ENVIRONMENT, BA 125, 2.125**
(3 class hrs/wk) 3 Credits
The business organization with role and responsibility in society. The interrelationships of major functional areas of business. The study of the management process with the intention of orienting the student in the field of business and to help him determine his field of major concentration.
(No credit if credit received for Introduction to Business, BA 101)

**BUSINESS LAW, BA 226** (3 class hrs/wk) 3 Credits
The framework of the law as it effects 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.

**BUSINESS MACHINES I, 2.519**
(2 class - 1 lab hrs/wk) 3 Credits
This course combines basic mathematics with instruction in the applications of business 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 business machines and understanding their application in business and the acquiring of reasonable skills in their use is a major goal.
Prerequisite: Business Math, 2.206.

**BUSINESS MACHINES II, 2.521**
(2 class - 1 lab hrs/wk) 3 Credits
This is a continuation of Business Machines I with attention given to application of 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.
Prerequisite: Business Math, 2.206; Typing I, 2.101.

**BUSINESS MATHEMATICS, 2.206**
(3 class hrs/wk) 3 Credits
This is a course designed to acquaint the student with fundamental mathematics as they apply to the business organization. Special attention is given to fractions, decimal equivalents, percentages, estimating and checking answers. Business measurements covered in this term include ledger accounting, bank statement reconciliations, invoicing and discounting, inventory valuation techniques, and profit margin analysis.

**BUSINESS MATHEMATICS/STATISTICS, 2.210**
(3 class hrs/wk) 3 Credits
This course is designed to provide the student with some of the more complex mathematical calculations applicable to the firm. The material covered in this course includes the mathematics of payroll, depreciation, insurance, taxes, stocks and bonds, borrowing and lending funds, and sinking funds and annuities. A special section in the latter part of the course includes the elements of statistical analysis, including the measures of central tendency, samplings, ratios, and measurements of variation. The final unit in the course involves the student in an anlysis of comparative business statistics by using charting and graphing techniques.
Prerequisite: Business Mathematics, 2.206.

**BUSINESS RECORDS AND REPORTS, 2.500**
(3 class hrs/wk) 3 Credits
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.

**CACULUS WITH ANALYTIC GEOMETRY, Mth 200, 201, 202, 203** (4 class hrs/wk) 4 Credits each
Standard sequence for students in mathematics, science and engineering.
**Math 200**
A careful development of the concepts of plane analytic geometry, limits and derivative. Theorems on differentiation and their applications.
Prerequisite: Trigonometry, Mth 102.
**Mth 201**
Development and analysis of definitions and theorems related to the definite integral with applications. Review of lines, conics and trigonometric and exponential functions.
Prerequisite: Mth 200.
**Mth 202**
Treatment of parametric equations, polar coordinates, vectors, and methods of integration with applications.
Prerequisite: Mth 201.
**Mth 203**
Study of solid analytic geometry, vector in three dimensions, infinite series, partial differentiation, multiple integration and linear algebra.
Prerequisite: Mth 202.

**CARE IN CONDITIONS OF ILLNESS, 5.530, 5.531, 5.532, 5.533** (120 class hrs) 12 Credits
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.

**CERAMICS, Art 255** 2 - 4 Credits
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.

**CHILD DEVELOPMENT, FL 225**
(4 class hrs/wk) 3 Credits
Open to men and women. The infant and young child are considered in the light of physical, intellectual and emotional development. Observations will be included in the Day Care Center.

**CHORUS, Mus 197** 1 Credit each
(No more than 6 credits may be earned in Mus 195, 196, 197)

**CLINICAL CARIES PREVENTION, (number to be assigned)** 1 Credit
This course will be the clinical application of preventing decay by stressing education, diet, nutrition, food theories, and flouride theories.

**CLINICAL EXPERIENCE, 5.545, 5.546, 5.547, 5.548**
(1084 clinical hrs) 27 Credits
Clinical learning experiences are provided for the student in the following clinical areas by rotating assignments throughout the 4 terms of the course:
General Nursing (480 hrs)
Medical
Diet Kitchen
Surgical
Operating Room
Post anesthesia room
Maternal and Child (364)
Obstetrics (1 week in obstetrician's office)
Pediatrics (1 week in pediatrician's office)
Elective (240)
Cardiac Care Unit
Central Service
Emergency Room
Intensive Care Unit
Orthopedic Nursing
Rehabilitation
Special Services
Prerequisite: Previous term or terms.

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

**CLOTHING CONSTRUCTION, CT 210**
(6 class hrs/wk) 3 Credit
Principles of selection, construction and fitting. Management problems and basic techniques are emphasized.

**CLOTHING SELECTION, CT 211**
(3 class hrs/wk) 3 Credits
Artistic, economic and psychological factors affecting selection of adult clothing. Self-analysis and wardrobe planning are stressed.

**COLLEGE ALGEBRA, Mth 101** 4 Credits
Fundamental concepts of number systems, functions, linear equations, systems of linear equations, matrices, determinants, mathematical induction and logarithms.
Prerequisite: Intermediate Algebra, Mth 95, or one and one-half years of high school algebra.

**COLLISION ESTIMATING, 3.246**
(2 class - 3 lab hrs/wk) 3 Credits
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.

**COLOR TELEVISION SERVICE, 6.914**
(5 class hrs/wk) 5 Credits
**COLOR TELEVISION SERVICE LAB, 6.915**
10 lab hrs/wk) 3 Credits
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.

**COMMUNICATIONS SKILLS I, 1.100**
(3 class hrs/wk) 3 Credits
This course provides practice in the skills of communication with emphasis on speaking and listening. Analyzing, discussing, participating in group activities such as spelling and vocabulary will be included.
Prerequisite: High school English or equivalent.

**COMMUNICATIONS SKILLS II, 1.102**
(3 class hrs/wk) 3 Credits
This course continues practice in the skills of communications, with emphasis on reading and writing. The most practical usages in mechanics and grammar are considered, with subject material chosen from the students' major occupational discipline wherever possible. Practice in writing is essential, with emphasis on note-taking, outlining, summarizing and report making. Drill in basic spelling and vocabulary is continued.
Prerequisite: Communications Skills I or equivalent.

**COMMUNICATIONS SKILLS III, 6.126**
(3 class hrs/wk) 3 Credits
This course deals with the many types of report writing or letter writing that are basic to any of the occupational areas. Methodology will be varied to meet the needs of

each specific group. The principles of composition are applied, whether the class is dealing with reports related to forestry, electronics,machinists trades, or business management, or some other discipline. Some of the reports are highly technical and specific, others general and non-technical. Examples of trade related technical reports are examined. There is considerable practice in techniques of gathering and classifying data for technical reports.
Prerequisite: Communications Skills I & II or equivalent.

**COMMUNICATION FOR DENTAL ASSISTANTS, 5.419**
(3 class hrs/wk) 3 Credits
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.

**COMMUNITY HEALTH, HE 251** 3 Credits
Methods of handling health and sanitation problems in the community with special reference to water supply, food and milk sanitation, sewage disposal, insect and rodent control, air pollution, hospitals, nursing homes, and state and local official and voluntary health agencies.

**COMPANY ORGANIZATION AND STATION ASSIGNMENT, 5.258** (3 class hrs/wk) 3 Credits
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.

**COMPUTER PROGRAMMING I, 2.611**
(3 class - 6 lab hrs/wk) 5 Credits
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: Unit Record Equipment II, or consent of instructor.

**COMPUTER PROGRAMMING II, 2.613**
(3 class - 6 lab hrs/wk) 5 Credits
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.

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

**CONCRETE CONSTRUCTION AND DESIGN, 6.123**
(2 class - 5 lab hrs/wk) 3 Credits
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. The laboratory work consists of the design of concrete mixes to specified compressive strengths. Laboratory work will consist of problem solving.
Prerequisite: Sixth-term standing or approval of department head.

**CONSTRUCTION CODES, 6.122** (2 class hrs/wk) 2 Credits
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.

**CONSTRUCTION ESTIMATING, 6.110**
(2 class hrs/wk) 2 Credits
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.

**CONSUMER FINANCE, 2.114 BA 218**
(3 class hrs/wk) 3 Credits
A survey course designed to familiarize the student with the many alternative savings and investment opportunities available to the American consumer. Emphasis is placed upon personal budgets, real estate ownership, wise use of consumer credit, credit institutions, social security, stock market, mutual funds and individual tax and estate planning. The course designed for non-business vocational and college transfer students and for business students wishing an additional course beyond beginning finance.

**CONSTRUCTION MATERIALS SALES I, 4.058**
(15 class hrs/wk) 5 Credits
Supervised on-the-job experience will be provided in the area of marketing, business records and reports and in the operation of business machines.

**CONSTRUCTION MATERIALS SALES II, 4.060**
(15 class hrs/wk) 5 Credits
Supervised work experience will be provided in the area of advertising and display.
Prerequisite: Construction Materials Sales I, 4.058.

**CONSTRUCTION MATERIALS SALES III, 4.062**
(15 class hrs/wk) 5 Credits
Supervised work experiences will be provided in the area of salesmanship.
Prerequisite: Construction Materials Sales II, 4.060.

**CONSTRUCTION PRACTICES I, 4.051**
10 class hrs/wk) 5 Credits
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.

**CONSTRUCTION PRACTICES II, 4.052**
(5 class hrs/wk) 5 Credits
This course 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.

**CONTRACTS AND SPECIFICATIONS, 6.118**
(3 class hrs/wk) 3 Credits
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.

**COPY EDITING AND MAKEUP, J 218** 2 Credits
Basic instruction in copy reading, headline writing and makeup.
Prerequisite: Reporting I, J 216.

**CORRECTIVE ENGLISH, WR 10** 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.

**CRAWLER TRACTORS, 8.121** (5 class hrs/wk) 5 Credits
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.

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

**CRIMINAL EVIDENCE, 5.222**
(2 class - 3 lab hrs/wk) 3 Credits
The kinds and degrees of evidence and the rules governing the admissibility of evidence in court.

**CRIMINAL INVESTIGATION I, 5.216**
(3 class - 3 lab hrs/wk) 3 Credits
Fundamentals of investigation; crime scene search; sketching and recording; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information interviews and interrogation, follow-up, and case preparation.

**CRIMINAL INVESTIGATION II, 5.217**
(3 class - 3 lab hrs/wk) 3 Credits
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.

**CRIMINAL INVESTIGATION III, 5.218**
(3 class - 3 lab hrs/wk) 3 Credits
A continuation of Criminal Investigation 5.217. Description to be developed.

**CRIMINAL LAW I, 5.208** (3 class hrs/wk) 3 Credits
The structure definitions and the most frequently used section of the Penal Code and other criminal statutes.

**CRIMINAL LAW II, 5.238** (3 class hrs/wk) 3 Credits
A continuation of Criminal Law 5.208. Description to be developed.

**DATA PROCESSING FIELD PROJECTS, 2.610**
(30 hrs field work/wk) 10 Credits
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.

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

**DENTAL HEALTH EDUCATION (number to be assigned)**
1 credit hour fall and winter terms, 3 credit hours spring term second year.
Included will be planning, developing and evaluating instructional materials for various age levels (pre-school through geriatric group.) Field experiences will be in the Eugene Public Schools. Oral inspections and classroom talks to be included, also visual aids in education. Above all, to learn to motivate people to accept dental health.

**DENTAL HYGIENE (number to be assigned)**
Four hours credit fall and winter terms, 2 credit hours spring term of the first year. Three credit hours fall and winter terms, 4 hours credit spring term of the second year.
The theory of stains and hard deposits on the teeth are taught. The student learns the principles and methods for removal of these deposits. It begins with the laboratory techniques on manikins. Techniques and principles of patient education are taught coordinated to clinical procedures and patient management. The student will leave the manikin at the beginning of winter term, first year, and begin on the live patient the performance of the oral prophylaxis. Routine examination procedures, charting of oral conditions, patient appointment procedures, and recalls are taught. Dental assisting techniques are experienced. Flouride application theory and techniques are taught for the child patient and child management will be stressed. Other aspects of this course is that this is a time to correlate many other teachings and courses in a clinical setting such as caries prevention, dental health education, oral roentgenology and the basic and biological sciences.

**DENTAL PATHOLOY, 5.435**
(1 class - 1 lab hrs/wk) 2 Credits
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.

**DENTAL PROCEDURES, (number to be assigned)**
1 credit hour winter and spring terms, first year, two credit hours fall and winter terms, 3 credit hours spring term, second year.
Designed to familiarize the student with procedures used in dentistry. Subjects included: orientation to dentistry, dental materials, operative dentistry, endodontics, oral surgery, prosthetic dentistry, four handed dental assisting, medical emergencies, polishing of alloy restorations, and dentistry in public health.

**DENTAL SCIENCES: BACTERIOLOGY, HYGIENE, NUTRITION, PHARMACOLOGY, GROSS ANATOMY, 5.410**
(4 class - 1 lab hrs/wk) 5 Credits
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.

**DIESEL ENGINES I ,3.800** (2 class hrs/wk) 2 Credits
**DIESEL ENGINES I LAB, 3.801** (6 lab hrs/wk) 2 Credits
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.

**DIESEL ENGINES II, 3.802** (2 class hrs/wk) 2 Credits
**DIESEL ENGINES II LAB, 3.803** (6 lab hrs/wk) 2 Credits
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.

**DIESEL ENGINE REPAIR I, 3.811**
(9 lab hrs/wk) 3 Credits
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.

**DIESEL ENGINE REPAIR II, 3.816**
(9 lab hrs/wk) 3 Credits
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 system.
Prerequisite: Sixth-term standing.

**DIESEL TUNE-UP AND DIAGNOSIS, 3.808**
(2 class hrs/wk) 2 Credits
**DIESEL TUNE-UP AND DIAGNOSIS LAB, 3.809**
(5 lab hrs/wk) 2 Credits
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.

**DOMESTIC REFRIGERATION I, 3.606**
(5 class hrs/wk) 5 Credits
**DOMESTIC REFRIGERATION I LAB, 3.607**
(15 lab hrs/wk) 5 Credits
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.

**DOMESTIC REFRIGERATION II, 3.608**
(3 class hrs/wk) 3 Credits
**DOMESTIC REFRIGERATION II LAB, 3.609**
(17 lab hrs/wk) 6 Credits
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 moisutre. Charging refrigeration systems. Lubrication problems. Testing the refrigeration system after repairs have been made.
Prerequisite: Domestic Refrigeration I.

**DOMESTIC REFRIGERATION III, 3.610**
(3 class hrs/wk) 3 Credits
**DOMESTIC REFRIGERATION III LAB, 3.611**
(17 lab hrs/wk) 6 Credits
Types of compressors used in mechanical refrigeration systems. Non-mechanical refrigeration systems. Metering devices. Supplementary system controls. Electrical circuits in typical modern refrigeration units. Shop experience will include actual experience in repairing and servicing modern domestic refrigeration units.
Prerequisite: Domestic Refrigeration II.

**DRAFTING I, 4.101** (4 lab hrs/wk) 2 Credits
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.

**DRAFTING II, 4.105** (4 lab hrs/wk) 2 Credits
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.

**DRAFTING FUNDAMENTALS, 4.160**
(5 lab hrs/wk) 2 Credits
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.

**DRAWING, AA 291** 1-2 Credits 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 credits.

**ELECTRICAL CIRCUITS, 6.204R**
(3 class hrs/wk) 3 Credits
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 waveforms, 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.

**ELECTRICAL CIRCUITS LAB, 6.205R**
(6 lab hrs/wk) 2 Credits
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.

**ELECTRICAL DRAFTING, 4.103** (4 lab hrs/wk) 2 Credits
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.

**ELECTRICAL MATHEMATICS, 6.115**
(4 class hrs/wk) 4 Credits
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.

**ELECTRICAL THEORY (DC) I, 6.200**
(3 class - 2 lab hrs/wk) 4 Credits
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, charactersitics of capacitance, and electrical measurement instruments.
Prerequisite: High school algebra or equivalent.

**ELECTRICAL THEORY (AC) II, 6.202**
(3 class - 2 lab hrs/wk) 4 Credits
A continuation of electrical theory on the basis of alternating currents with an emphasis on contemporary techniques as a supplement to basic concepts. 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 nonresonant and the resonant transformer and attenuators and pads.
Prerequisite: Second-term standing or approval of department head.

**ELECTRONIC DATA PROCESSING, 6.240**
(3 class hrs/wk) 3 Credits
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.

**ELECTRONICS I, 4.920E** (3 class - 2 lab hrs/wk) 4 Credits
Electron theory of matter. Electron movement. Voltage and current relationships. Ohm's Law, Kirchoff's Law. Electrical units. Magnetism and electromagnetism. Primary and secondary cells. Analysis of series, parallel, and series parallel circuits.
Prerequisite: High School algebra or Mathematics II.

**ELECTRONICS II, 4.922E** (3 class - 2 lab hrs/wk) 4 Credits
Use of meters for measurement of voltage, current, power and resistance. Introduction to alternating current. Generating an alternating current. Impedance, inductive reactance, and capacitive reactance relationships. Power factor. Transformer design and operation. Relationship of AC to radio and audio frequency voltages and currents.
Prerequisite: Electronics I.

**ELECTRONICS III, 4.924E** (3 class - 2 lab hrs/wk) 4 credits
Introduction to vacuum tubes. Diodes, triodes, tetrodes, pentodes, and multi-element types. Introduction to solid state devices such as diodes and transistors. Typical power supply circuits. Typical audio-frequency circuits. Typical radio-frequency circuits. Comparison of vacuum tube to transistor circuitry. Transducers. Block diagrams of specialized applications including electronic organs, tape recorders, and stereo amplifiers.
Prerequisite: Electronics II.

**ELEMENTARY ALGEBRA, Mth 10** Non-Credit
Fundamental concepts of algebra including signed numbers, monomials, polynomilas, linear equations and stated problems. Designed to qualify the student with little or no background in algebra for Mth 95. Placement may result from the Cooperative tests given in Mth 95.
Prerequisite: None.

**ELEMENTARY CALCULUS, Mth 106** 4 Credits
This is a one term course in the elements of differential and integral calculus approached largely from an intuitive viewpoint. Electronic calculators and computers will be utilized to facilitate computations.
Prerequisite: Trigonometry, Mth 102.

**ELEMENTS OF LAW FOR POLICE OFFICERS, LE 113**
3 Credits
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.

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

**EMPLOYER-EMPLOYEE RELATIONS, 4.500**
(2 class hrs/wk) 2 Credits
The objective of this course is to provide an understanding of the rights and responsibilities of employees and employers. A study of population, economic, and unemployment trends, hours and working conditions, role played by labor organizations, government laws covering collective bargaining, state and federal laws, unemployment assistance, employee-employee and employee-employer relations are covered.

**ENGINEERING ORIENTATION, GE 101, 102, 103**
2 Credits each
Engineering Orientation directs the future Engineer toward the goals of Engineering. In addition to problem solving and math indoctrination with reference to the use of the slide rule, the student is encouraged in adopting the overall viewpoint regarding problems of development in our civilization, the objective questioning and critical approach to technological problems. Contemporary approach to solutions is made by the use of Fortran programming using the IBM 360 for solutions. The use of Fortran and other math-oriented programs is an important sector of this course during the three terms.

**ENGINEERING PROBLEMS I, 6.135**
(2 class hrs/wk) 2 Credits
This course is designed to meet the calculating needs of the technician in electronics, civil and structural engineering and technical drafting. Engineering methods and related problem solving will be considered. Prime emphasis, however, will be placed on slide rule computation.
Prerequisite: One year of high school algebra or equivalent.

**ENGINEERING PROBLEMS II, 6.136**
(2 class hrs/wk) 2 Credits
This course will continue with an emphasis on the slide rule and related problem solution. Other means of calculation will be related to problem solution in the technician's various fields. Problem solution will be structured in terms of analysis, formulation, calculation, and clear presentation.
Prerequisite: Engineering Problems I, 6.135.

**ENGLISH COMPOSITION, WR 111, 112 ,113** 3 Credits each
The fundamentals of English composition; frequent written themes. Special attention to correctness in fundamentals and to the organization of papers.
Prerequisite: Must be taken in sequence.

**EXPOSITORY WRITING, WR 226** 3 Credits
Practice in various forms of expository writing.
Prerequisite: WR 111, 112, 113.

**FAMILY LIVING, FL 223** (2 class hrs/wk) 2 Credits
Open to men and women. Historical, sociological and psychological aspects of early marital adjustment, child rearing, bereavement and divorce are discussed and studied.

**FARM EQUIPMENT ELECTRICAL SYSTEMS, 8.109**
(3 class - 3 lab hrs/wk) 4 Credits
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.

**FARM EQUIPMENT ENGINES, 8.111**
(5 class hrs/wk) 5 Credits
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.

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

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

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

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

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

**FARM EQUIPMENT SERVICE MANAGEMENT, 8.143**
(3 class hrs/wk) 3 Credits
Develops (1) an understanding of the operating procedures of an agricultural 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.

**FARM IMPLEMENT I, 8.101** (5 hrs/wk) 5 Credits
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.

**FARM IMPLEMENT I LAB, 8.102** (10 hrs/wk) 3 Credits
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.

**FARM IMPLEMENT II, 8.103** (5 class hrs/wk) 5 Credits
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.

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

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

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

**FILING AND RECORDS MANAGEMENT, 2.508**
(3 class hrs/wk) 3 Credits
The rules and principles of indexing, filing, establishing and maintaining a filing system, and training in the various methods of filing such as alphabetical, numerical, subject, geographic, Variadex, Soundex, and Kardex.

**FINANCIAL INSTITUTIONS, 2.402**
(3 class hrs/wk) 3 Credits
This course surveys the various financial institutions operating in the American economy. Included in the course is a brief history, and an analysis of the economic significance of the major financial institutions that serve the consumer, the government, and the business community. The institutions covered are commercial banks, savings and loan associations, credit unions, savings banks, insurance companies, investment trust organizations and governmental financial agencies. Special attention is given to the various money market instruments utilized in obtaining short-, intermediate-, and long-term funds for operational and capital demands of the economy.
Prerequisite: Financial Management, BA 222, 2.222.

**FINANCIAL MANAGEMENT, BA 222, 2.222**
(3 class hrs/wk) 3 Credits
This course covers the problems encountered in the financial management of the business organization. The emphasis is on the decision making area of managerial finance. The student is initially exposed to the finance function and elements of financial analysis and control. Planning and forecasting of future needs and directions are stressed. Units on budgeting; short-, intermediate-, and long-term financing; debt vs. equity financing for optimal capital structure; sources and uses of funds and the flow of funds; growth strategies; capital market institutions; and timing are all covered in this course. The case method approach to decision making is utilized to provide the student with realistic financial problems and solutions.

**FIELD METHODS IN GEOGRAPHY, Geog 221** 3 Credits
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.
Prerequisite: One sequence in Social Science.

**FIELD WORK I, 5.230** (2 lab hrs/wk) 1 Credit
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.

**FIELD WORK II, 5.231** (2 lab hrs/wk) 1 Credit
A continuation of Field Work II. Description to be developed.

**FIRE APPARATUS AND EQUIPMENT, 5.253**
(2 class - 3 lab hrs/wk) 3 Credits
Familiarization with different types of fire apparatus; principles of application, care, and preventive maintenance; safe operating practices, emergency and non-emergency; National Board standards.

**FIREARMS I, 5.226** (2 lab hrs/wk) 1 Credit
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).

**FIREARMS II, 5.227** (2 lab hrs/wk) 1 Credit
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.

**FIRE PROTECTION AND CONTROL, 6.640**
(2 class - 2 lab hrs/wk) 3 Credits
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 equipment, transportation, communications, and the operation of forest fire equipment are covered.

**FIRE DEPARTMENT COMMUNICATIONS AND ALERTING SYSTEMS, 5.267** ....(2 class hrs/wk) 2 Credits
Dispatching, receiving, and radio communication procedures; FCC regulations; municipal box alarm; telephone and tone-activated alarm; recording messages; tap-out procedures, running cards, etc.

**FIRE DEPARTMENT HYDRAULICS, 5.257**
(3 class - 3 lab hrs/wk) 4 Credits
Review of basic mathematics; hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculations to hydraulic problems; fire ground water-supply problems: Underwriters' requirements for pumps and accessories.

**FIRE FIGHTING SKILLS I, 5.250** (9 lab hrs/wk) 3 Credits
Individual skills using small tools and minor equipment, practice in forcible entry, use of masks, and other activities generally performed by the individual.

**FIRE FIGHTING SKILLS II, 5.251**
(1 class - 6 lab hrs/wk) 3 Credits
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.

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

**FIRE FIGHTING TACTICS AND STRATEGY, 5.274**
(3 class hrs/wk) 3 Credits
Response and size-up; fire ground tactics; analysis and postmortem; pre-fire survey and planning.

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

**FIRE REPORTS AND RECORDS, 5.270**
(3 class hrs/wk) 3 Credits
Analysis of fire department records and reports systems, their origins, types and functions. Application of these systems to the areas of pre-fire surveys, routine inspections, post-fire reporting, cost-accounting, research and planning.
Prerequisite: Communication Skills I and II.

**FIRST AID, 5.212** (2 class hrs/wk )1 Credit
A class in standard first aid procedures and techniques designed to meet certification requirements of all students who wish to secure first aid training. Upon successful completion of the course, a standard first aid card may be secured.

**FIRST AID, 5.213** (2 class hrs/wk) 1 Credit
A class in advanced first aid procedures and techniques to meet the needs of those who 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.
Prerequisite: First Aid, 5.212, or current Standard First Aid Card.

**FIRST AID, 5.214 (Emergency Care & Rescue)**
(2 class hrs/wk) 1 Credit
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.
Prerequisite: First Aid, 5.213, or current Advanced First Aid Card.

**FIRST AID, HE 252** 3 Credits
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.

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

**FLIGHT ADVANCED I, 6.443**
(2 class - 4 lab hrs/wk) 3 Credits
10 Dual hours.
Students have the option of selecting: Multi-engine, Flight Instructor, or Instrument Flight Instructor training to complete the flight program. Each course provides 60 hours instruction, 10 dual flight hours, and 50 hours oral preparation and de-briefing.
Prerequisite: Valid Commercial Pilot with Instrument Rating Certificate.

**FLIGHT INTERMEDIATE I, 6.433**
(2 class - 5 lab hrs/wk) 3 Credits
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 Acceptance Committee.

**FLIGHT INTERMEDIATE II, 6.435**
(2 class - 5 lab hrs/wk) 3 Credits
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 Acceptance Committee.

**FLIGHT INTERMEDIATE III, 6.439**
(2 class - 5 lab hrs/wk) 3 Credits
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 Acceptance Committee.

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

**FLIGHT ORIENTATION, 6.401** (3 class hrs/wk) 3 Credits
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.

**FLIGHT THEORY, PRIVATE PILOT, 6.405**
(3 class hrs/wk) 3 Credits
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.

**FOREST CONTRACTS, 6.635**
(2 class - 4 lab hrs/wk) 3 Credits
The basic principles of a forest contract are studied in the classroom, 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, 6.633, to be taken concurrently.

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

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

**FORESTRY PRACTICE, 6.636 (On Job Training)**
(2 class - 8 lab hrs/wk) 5 Credits
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.

**FOREST PRODUCTS, 6.605**
(1 class - 3 lab hrs/wk) 2 Credits
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.

**FOREST PROTECTION, 6.641**
(3 class hrs/wk) 3 Credits
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.

**FORESTRY RECORDS AND REPORTS, 6.633**
(3 class hrs/wk) 3 Credits
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.

**FOREST RECREATION, 6.656**
(2 class - 4 lab hrs/wk) 3 Credits
This course will introduce the student to Forest Recreation. It will include all phases of recreational forest usage from an understanding of the aesthetic needs of man for wilderness to the business management needed in areas of high density usage such as a marina. The sociology of forest users will be covered and the methods used for planning and maintenance of recreational facilities studied.

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

**FOUNDATIONS OF STRUCTURES, 6.120**
(3 class hrs/wk) 3 Credits
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.

**FRENCH, FIRST YEAR, RL 50, 51, 52** 4 Credits each
Must be taken in sequence.

**FRENCH, SECOND YEAR, RL 101, 102,** 103 4 Credits each
Must be taken in sequence.

**FRONT END ALIGNMENT, 3.318**
(2 class hrs/wk) 3 Credits
This course provides a detailed study of wheel alignment. Wheel alignment factors, equipment, and procedures are covered in detail. Wheel balance methods and machines are studied, as well as alignment troubles.
Prerequisite: Automotive Chassis I or equivalent.

**FUEL INJECTION SYSTEMS I, 3.804**
(2 class hrs/wk) 2 Credits
**FUEL INJECTION SYSTEMS I LAB, 3.805**
(4 lab hrs/wk) 1 Credit
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.

**FUEL INJECTION SYSTEMS II, 3.806**
(2 class hrs/wk) 2 Credits
**FUEL INJECTION SYSTEMS II LAB, 3.807**
(6 lab hrs/wk) 2 Credits
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.

**FUEL SYSTEMS AND CARBURETION I, 3.310**
(2 class hrs/wk) 2 Credits
**FUEL SYSTEMS AND CARBURETION LAB I, 3.3111**
(3 lab hrs/wk) 1 Credit
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.

**FUEL SYSTEMS AND CARBURETION II, 3.312**
(2 class hrs/wk) 2 Credits
**FUEL SYSTEMS AND CARBURETION LAB II, 3.313**
(3 lab hrs/wk) 1 Credit
An advanced course in techniques and procedures for overhaul and service of 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.

**FUEL SYSTEMS AND CARBURETION, HEAVY EQUIPMENT, 3.349** (2 class hrs/wk) 2 Credits
**FUEL SYSTEMS AND CARBURETION, HEAVY EQUIPMENT LAB, 3.350** (3 lab hrs/wk) 1 Credit
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 Combustion Engines I, Practical Physics II taken concurrently.

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

**FUNDAMENTALS OF FIRE PREVENTION, 5.262**
(3 class hrs/wk) 3 Credits
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.

**FUNDAMENTALS OF RADIO SERVICE I, 3.378E**
(3 class hrs/wk) 3 Credits
**FUNDAMENTALS OF RADIO SERVICE I LAB, 3.379E**
(12 lab hrs/wk) 4 Credits
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.

**FUNDAMENTALS OF SPEECH, Sp 111, 112, 113**
3 Credits 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.
Prerequisite: Must be taken in sequence.

**GENERAL ANTHROPOLOGY, 101, 102, 103** 3 Credits each
101: Physical Anthropology. 102: Archeology; study of historic cultures. 103: Organization and functioning of culture. Two lectures - one discussion period per week. May be taken out of sequence.

**GENERAL AVIATION SAFETY, 6.421**
(3 class hrs/wk) 3 Credits
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.

**GENERAL BIOLOGY, GS 101, 102, 103**
(3 class - 3 lab hrs/wk) 4 Credits
Biological principles applied to both plants and animals. Student may enter any term.

**GENERAL BOTANY, Bot 201, 202, 203**
(2 three hr lect/lab/wk) 4 Credits
201: Structure of celles and seed plants, metabolism and growth. 202: Reproduction and genetics. Taxonomy of lower plants. 203: Taxonomy of vascular plants, identification of native plants, ecology, evolution. Students may enter first or second term. Bot 202 prerequisite for Bot 203.

**GENERAL CHEMISTRY, Ch 101, 102, 103**
(2 class - 3 lab hrs/wk) 3 Credits
A terminal service course for students with no previous training in chemistry or those with a need for a more elementary approach. This course cannot be used as a prerequisite for any other college chemistry courses (except in instances of exceptional performance, Ch 106).
Prerequisites: Algebra recommended.

**GENERAL CHEMISTRY, Ch 104, 105, 106**
104: 3 lectures, 2 recitations, 2 laboratory hrs/wk. 5 Credits
105, 106: 3 lectures, 1 recitation, 2 laboratory hrs/wk. 4 Credits each.
A service course for students with no previous training in chemistry, and others who require a course which will serve as a prerequisite for further training in chemistry.
Prerequisites: Math 10 or equivalent within the past four years. Grades of "C" or better in 104 and 105 for admission to 105 and 106 respectively.

**GENERAL CHEMISTRY, Ch 201, 202, 203**
201: 3 lectures, 2 recitations, 2 laboratory hrs/wk. 4 Credits.
202, 203: 3 lectures, 1 recitation, 2 laboratory hrs/wk. 4 Credits.
A service course for students with a strong background in high school chemistry who require a course which will serve as a prerequisite for further training in chemistry.
Prerequisites: 201: one year high school chemistry with "A" or "B" grades and concurrent registration in Math 95 or equivalent. Grades of "C" or better in 201 and 202 for admission to 202 and 203 respectively.

**GENERAL FORESTRY, 6.601**
(3 class hrs/wk) 3 Credits
This course introduces the student to the total field of Forestry—a survey of the jobs and resources involved. Films and guest speakers are used extensively.

**GENERAL PHYSICS, Ph 201, 202, 203** 5 Credits each
A year sequence in the study of energy and physical phenomena; including the fundamental principles of mechanics, heat, sound, light, electricity, magnetism, and a brief introduction to modern physics. Three lectures, one discussion period and one three-hour lab.
Prerequisite: Math 102, Trigonometry, or equivalent high school trigonometry.

**GENERAL PSYCHOLOGY, Psy 201, 202, 203** 3 Credits 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. May be taken out of sequence.

**GENERAL SOCIOLOGY, Soc 204, 205, 206** 3 Credits each
Introduction to the sociological perspective with particular emphasis on the analysis and understanding of modern society and contemporary social problems.
Prerequisite: 204 prerequisite for 205.

**GENERAL ZOOLOGY, Z 201, 202, 203**
(2 class - 3 lab hrs/wk) 3 Credits
For zoology majors and premedical, predental, prenursing, prepharmacy students and others. Students may enter any term.

**GEOLOGY, G 201, 202, 203** 4 Credits each
Earth materials, processes and forms, formation of economic mineral deposits, the main events in earth history. There will be 3 hours of lecture and 3 hours of lab per week. Field work will be used where applicable.

**GERMAN, FIRST YEAR, GL 50, 51, 52** 4 Credits each
Must be taken in sequence.

**GERMAN, SECOND YEAR, GL 101, 102, 103**
4 Credits each
Must be taken in sequence.

**GRAPHICS, GE 115** 3 Credits
Fundamental principles of the language. Three 2 hour laboratory periods.

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

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

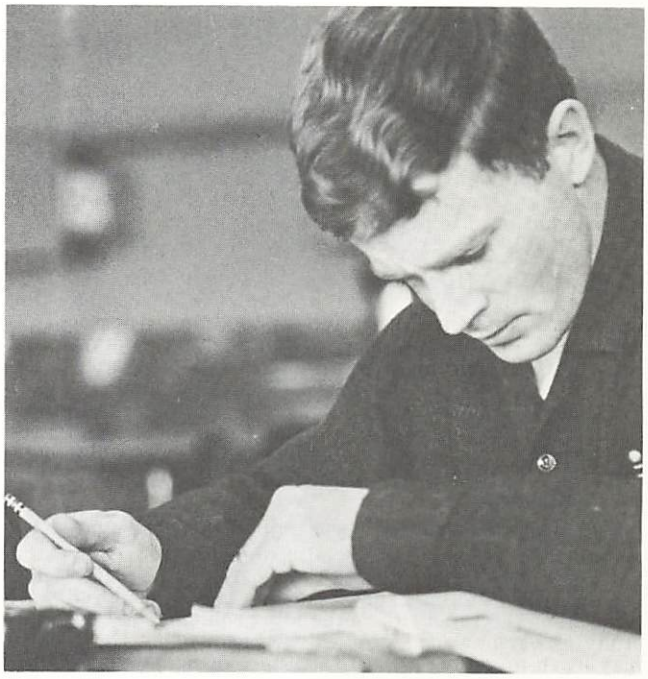
**HEALTH EDUCATION, 1.605** ....(2 class hrs/wk) 2 Credits
This course is designed to develop desirable mental and physical health practices as they relate to the individual and the community.

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

**HISTORY OF THE UNITED STATES, Hst 201, 202, 203**
3 Credits 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.

**HISTORY OF WESTERN CIVILIZATION, Hst 101, 102, 103**
3 Credits 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.

**HOME APPLIANCE SERVICE I, 3.600**
(5 class hrs/wk) 5 Credits
**HOME APPLIANCE SERVICE I LAB, 3.601**
(15 lab hrs/wk) 5 Credits
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.



**HOME APPLIANCE SERVICE II, 3.602**
(3 class hrs/wk) 3 Credits
**HOME APPLIANCE SERVICE II LAB, 3.603**
(17 lab hrs/wk) 6 Credits
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.

**HOME APPLIANCE SERVICE III, 3.604**
(3 class hrs/wk) 3 Credits
**HOME APPLIANCE SERVICE III LAB, 3.605**
(17 lab hrs/wk) 6 Credits
Diagnosis of both mechanical and electrical faults in such modern domestic appliances as washers, dryers, ranges, dishwashers, and waste disposals. Development of ability to locate cause of equipment malfunction by deduction and reasoning ability. Performing actual service operations on modern home appliances.
Prerequisite: Home Appliance Service II.

**HUMAN ANATOMY AND PHYSIOLOGY I, 5.601**
(2 class hrs/wk) 2 Credits
**HUMAN ANATOMY AND PHYSIOLOGY I LAB, 5.603**
(3 lab hrs/wk) 1 Credit
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. Two 3 hour lab/lecture sections per week.

**HUMAN ANATOMY AND PHYSIOLOGY II, 5.602**
(2 class hrs/wk) 2 Credits
**HUMAN ANATOMY AND PHYSIOLOGY II LAB, 5.604**
(3 lab hrs/wk) 1 Credit
A continuation of 5.601 which is also a prerequisite: Circulatory, respiratory alimentary, endocrine, and reproductive systems are treated. Emphasis on integrative control mechanisms. Two 3 hour lab/lecture sections per week.

**HUMAN BIOLOGY,** (Number to be assigned) 2 Credits
This course for the fall term will be devoted to oral embryology and microscopic anatomy. An understanding of the development of the face and oral cavity of the basic structure of the oral tissues is essential to the dental hygienist. The second term will be basic pathology and continuing into oral pathology. It will teach the oral manifestations of disease.

**HUMAN DEVELOPMENT AND INDIVIDUAL DIFFERENCES, Psy 217** 3 Credits
Study of the development of behavior and personality through the prenatal period, infancy, childhood, adolescence, and adult life. Topics will include development of language and recognition, socialization, emotional development and the development of motor capabilities. Personality development will be analyzed in terms of antecedent experiences, consequent characteristics, behavior and events, and the life period in which it occurs.
Prerequisite: General Psychology, Psy 201, 202

**HUMAN RELATIONS I, 1.608** (3 class hrs/wk) 3 Credits
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.

**HUMAN RELATIONS II, 1.609**.... (3 class hrs/wk) 3 Credits
A follow on study of the relationship of executive, managerial, supervisory, and worker relationships. Motivation, feeling and emotions, and learning are considered with particular reference to on-the-job problems. A continued study of personal and group dynamics so that the student may learn to apply the basic attitudes of behavioral science to business. Major theories of group formation and behavior are considered in terms of their implications for business management.
Prerequisite: Social Psychology, Psy 215

**HYDRAULICS I, 6.112** (3 class hrs/wk) 3 Credits
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.

**HYDRAULICS II, 6.114** (3 class hrs/wk) 3 Credits
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.

**HYDRAULICS, HEAVY EQUIPMENT, 3.353**
(2 class-3 lab hrs/wk) 3 Credits
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.

**INDUSTRIAL ELECTRONICS I, 6.218**
(2 class-3 lab hrs/wk) 3 Credits
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.

**INDUSTRIAL ELECTRONICS II, 6.220E**
(3 class-3 lab hrs/wk) 4 Credits
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.

**INDUSTRIAL SAFETY, 4.108** (3 class hrs/wk) 3 Credits
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.

**INDUSTRIAL TELEVISION I, 6.228**
(2 class-3 lab hrs/wk) 3 Credits
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.

**INDUSTRIAL TELEVISION II, 6.235**
(1 class-2 lab hrs/wk) 1 Credit

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.

**INTERMEDIATE ALGEBRA, MTH 95** 4 Credits

Basic algebraic concepts related to linear and quadratic equations, complex numbers, radicals, exponents and logarithms. No credit if taken after Mth 101 or any more advanced mathematics course. Not acceptable toward meeting science group requirements at the University of Oregon. Placement may result from Cooperative tests given in Mth 101.
Prerequisite: Mth 10, Mth 11, or one year of high school algebra, preferably within the past 5 years.

**INTERNATIONAL RELATIONS, PS 205** 3 Credits

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.

**INTERNAL COMBUSTION ENGINES II LAB, HEAVY EQUIP., 3.348** (6 lab hrs/wk) 2 Credits

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.

**INTERNAL COMBUSTION ENGINES I, 3.304**
(2 class hrs/wk) 2 Credits

**INTERNAL COMBUSTION ENGINES LAB I, 3.305**
(3 lab hrs/wk) 1 Credit

Instruction in the principles of operation of various types of internal combustion engines and all components, and and accessories. Service and overhaul techniques. Engine and accessory component functions.
Prerequisite: Practical Physics I taken concurrently.

**INTERNAL COMBUSTION ENGINES II, 3.306**
(2 class hrs/wk) 2 Credits

**INTERNAL COMBUSTION ENGINES LAB II, 3.307**
(6 lab hrs/wk) 2 Credits

Instruction in overhaul methods, trouble-shooting, general engine performance and testing, and service techniques covering valve, cylinder, and bearing systems.
Prerequisite: Internal Combustion Engines I. Practical Physics II concurrently.

**INTERPRETATION, SP 229** 2 Credits

The application of the principles of oral reading to literature.

**INTRODUCTION TO BUSINESS, BA 101** 3 Credits

Business organization, operation and management intended to orient the student in the field of business and to help him determine his field of major concentration.
(No credit if BA 125 has been completed.)

**INTRODUCTION TO BUSINESS STATISTICS, BA 232**
3 Credits

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.

**INTRODUCTION TO FABRICATION PRACTICES I, 4.128**
(2 class-3 lab hrs/wk) 3 Credits

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.

**INTRODUCTION TO FABRICATION PRACTICES II, 4.129**
(2 class-3 lab hrs/wk) 3 Credits

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.

**INTRODUCTION TO FABRICATION PRACTICES III, 4.130**
(2 class-3 lab hrs/wk) 3 Credits

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, high way construction, bridge construction, electrical and electronic applications, and plastics.
Prerequisite: Fabrication Practices I and II

**INTRODUCTION TO FABRICATION PRACTICES I-A, 4.128-A** (1 class hr/wk, 4 lab hrs/wk) 3 Credits

A study and application of fabricated, metal technology. Recognition of pattern and jig material. Positioning of fabricated sections for rapid completion. Areas where automated equipment can be utilized. Elimination of distortion problems. Cambering and shrinking factors. The correct use of blueprints.
Prerequisite: Introduction to Fabrication Practices I (4.128)

**INTRODUCTION TO FIRE PROTECTION, 5.254**
(3 class hrs/wk) 3 Credits

Philosophy and history of fire protection, history of loss of life and property by fire; role and responsibility of fire department in the community; organizations; sources of professional literature; survey of professional career opportunities.

**INTRODUCTORY GEOGRAPHY, GEOG 105, 106, 107**
3 Credits each

A general introduction to the field of geography. 105: Physical and Regional Survey of the World; 106: Economic Geography; 107: Cultural Geography.
Prerequisites: Must be taken in sequence.

**INTRODUCTION TO HEALTH, PHYSICAL EDUCATION AND RECREATION, PE 131** 3 Credits

Professional orientation; basic philosophy and objectives; professional opportunities and qualifications in each of the areas and sub-areas.

**INTRODUCTION TO HOME ECONOMICS, HEc 101**
(2 hours per week) 1 Credit

Orientation of beginning students in Home Economics. History and philosophy of the profession. Career and job opportunities are discussed.

**INTRODUCTION TO LAW ENFORCEMENT, 5.200**
(3 class hrs/wk) 3 Credits

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.

**INTRODUCTION TO MACHINE RECORDS, 6.632**
(1 class-3 lab hrs/wk) 2 Credits

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 use of machine records are covered. The application will be to forestry records.
Prerequisite: Second-year standing.

**INTRODUCTION TO MUSIC AND ITS LITERATURE, MUS 201, 202, 203** 3 Credits each

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

**INTRODUCTION TO PRACTICE, 5.401**
(5 class-2 lab hrs/wk) 6 Credits

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.

**INTRODUCTION TO PSYCHOLOGY, 1.606**
(3 class hrs/wk) 3 Credits

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.

**INTRODUCTION TO SPECIFICATIONS, 4.102**
(3 class hrs/wk) 3 Credits

Common usage and practice in the preparation and interpretation of specifications. Examination of existing specifications covering current subjects with practical problems.
Prerequisite: Second-year standing or approval of department head.

**INTRODUCTORY AND BASIC FLIGHT, 6.431**
(3 class-5 lab hrs/wk) 4 Credits

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 multiengine or flight instructor.

**INVESTMENTS, 2.412** 3 Credits

This course surveys the various investment alternatives available to the private investor. Units covered include the determination of investment objectives and the establishment of a sound individual program and portfolio, the selection and analysis of corporate securities, the securities markets and their operation.
Prerequisite: BA 222.

**JAIL PROCEDURES. 5.232** (2 lab hrs/wk) 1 Credit

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.

**JOURNALISM LABORATORY, J 215** 1 Credit

Work on student publications. No prerequisites.

**JUVENILE PROCEDURES, 5. 236**
(2 class-3 lab hrs/wk) 3 Credits

The organization, functions, and jurisdiction of juvenile agencies, the processing and detention of juveniles; juvenile case disposition: juvenile statutes and court procedures.

**LOGGING PLANNING, 6.631**
(2 class- 4 lab hrs/wk) 3 Credits

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.

**MACHINE SHOP I, 3.380** (3 class hrs/wk) 3 Credits
**MACHINE SHOP I LAB, 3.381** (12 lab hrs/wk) 4 Credits

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.

**MACHINE SHOP II, 3.382** (3 cass hrs/wk) 3 Credits
**MACHINE SHOP II LAB, 3.383** (12 class hrs/wk) 4 Credits

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

**MACHINE SHOP III, 3.384** (3 class hrs/wk) 3 Credits
**MACHINE SHOP III LAB, 3.385** (12 lab hrs/wk) 4 Credits

Precision lathe work. Instruction in varied uses of lathe. Thread cutting procedures. Methods and procedures for machining on face plate.
Prerequisite: Machine Shop II.

**MACHINE SHOP IV, 3.386** (3 class hrs/wk) 3 Credits
**MACHINE SHOP IV LAB, 3.387** (12 lab hrs/wk) 4 Credits

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

**MACHINE SHOP V, 3.388** (3 class hrs/wk) 3 Credits
**MACHINE SHOP V LAB, 3.389** (12 lab hrs/wk) 4 Credits

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.

**MACHINE SHOP VI, 3.390** (3 class hrs/wk) 3 Credits
**MACHINE SHOP VI LAB, 3.391** (12 lab hrs/wk) 4 Credits

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

**MACHINE SHOP ORIENTATION, 3.392**
(2 class-3 lab hrs/wk) 3 Credits

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.

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

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.

**MACHINE AND TOOL MAINTENANCE, 4.050**
(2 class-3 lab hrs/wk) 3 Credits

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.

**MACHINE WOODWORK (MILLWORK), 3.195**
(2 class-4 lab hrs/wk) 3 Credits
Design and construction of jigs and fixtures, and their use with common woodworking machines for mass production of a millwork project; organization of laboratory facilities and personnel for production; methods of quality control for items produced in limited quantities.

**MANAGEMENT DATA PROCESSING, 2.606** 3 Credits
This course provides a brief overview of the equipment used in punched card (unit record) and computer data processing. This is followed by an examination of three major areas of data processing that involve management decision making: (1) job definition—the determination of whether or not an organization would benefit by a data processing installation; (2) equipment selection — the evaluation of available systems with respect to present and future organizational requirements; and (3) systems design—the development and evaluation of master plans for the implementation of equipment.

**MANPOWER MANAGEMENT, 2.224, (non-business)**
(3 class hrs/wk) 3 Credits
An introductory course that combines personnel management and manpower management programs. The course will include considerable work in manpower management improvement programs and organizational structure development and analysis. This course will provide a foundation upon which the student can understand and develop manpower programming, analysis, and resource utilization.

**MAPPING AND COMPUTING I, 6.131**
(4 lab hrs/wk) 2 Credits
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.

**MAPPING AND COMPUTING II, 6.133**
(6 lab hrs/wk) 2 Credits
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.

**MAPPING AND PLATTING, 4.131**
(1 class-7 lab hrs/wk) 3 Credits
Principles of map platting, using field survey data. Office procedure; basic earthwork computation, legal description, and sub-division planning.
Prerequisite: Fourth-term standing or approval of department head.

**MARKET ANALYSIS AND SEGMENTATION, 2.318**
3 Credits
This course provides a detailed examination of the different types of markets that exist in our economy, how these markets may be identified, the analysis and preparation of products for presentation, and the analysis of projected and perceived product and brand images.
Prerequisite: Marketing, BA 223, 2.223.

**MARKETING, BA 223, 2.223** (3 class hrs/wk) 3 Credits
A study of the role of Marketing in our socio-economic system. Emphasis will be placed upon market problem solving and decision making required by Management. Sales promotion is critically analyzed and promotional methods evaluated. The course is designed as a background course for those students specializing in marketing and for those students in business and other divisions that will be taking only one course in the field. Both groups are provided with comprehensive treatment of Marketing as it operates in American industry today.

**MARRIAGE PREPARATION, FL 222**
(2 class hrs/wk) 2 Credits
Open to men and women. Historical, sociological and psychological aspects of love, dating, courtship, mate selection and engagement are considered.

**MATERIALS OF CONSTRUCTION, 6.108**
(2 class hrs/wk) 2 Credits
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.

**MATHEMATICS I, 4.200** (3 class hrs/wk) 3 Credits
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.

**MATHEMATICS II, 4.202** (3 class hrs/wk) 3 Credits
This is a first course in algebra, with applications peculiar to technical and vocational fields.
Prerequisite: High school level general mathematics.

**MATHEMATICS III, 4.204** (3 class hrs/wk) 3 Credits
This is a course in trigonometry, elements from algebra, and related practical mathematics, with applications peculiar to technical-vocational fields.
Prerequisite: Mathematics II, 4.202, or equivalent.

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

**MATHEMATICS FOR ELEMENTARY TEACHERS**
**Mth 191, 192, 193** 3 Credits each
Mth 191: Concepts of sets, functions, cardinal number system, factors and powers, division and systems of numeration.

Mth 192: A treatment of prime numbers, fundamental theorem of arithmetic, greatest common factor, least common multiple, rational and real number systems.

Mth 193: Measurement of geometric figures, ratio and proportion, plane geometry, algebraic concepts and additional topics from the real number system.
Prerequisites: Must be taken in sequence.

**MECHANICAL DRAFTING, 4.109** (5 lab hrs/wk) 2 Credits
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.

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

**MICROBIOLOGY, 5.605** (2 class hrs/wk) 2 Credits
**MICROBIOLOGY LAB, 5.606** (3 lab hrs/wk) 1 Credit
A medically oriented study of bacteria and other microorganisms concerned with normal and pathogenic behavior. Emphasis on sterile techniques, and application of the course content to diagnosis, prevention, and treatment of hospital patients.
Prerequisite: To be taken concurrently with Microbiology, 5.605.

**MICROWAVES, 6.242** (2 class-3 lab hrs/wk) 3 Credits
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.

**MILLWORK AND CABINET DESIGN, 3.196** (2 class, 4 lab hrs/wk) 3 Credits
Design, planning, and construction of millwork items with emphasis on materials use and construction of major millwork pieces and groupings.

**MUSIC THEORY I, Mus 111, 112, 113** 4 Credits 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.

**NORMAL HEALTH, GROWTH AND DEVELOPMENT, 5.510, 5.511, 5.512** (120 class hrs) 10 Credits
This is the study of normal anatomy, physiology, child development, the aging process, as well as diet and nutrition.
Prerequisite: Previous term or terms.

**NURSING SKILLS, 5.500, 5.501, 5.502, 5.503** (100 class-90 lab hrs) 11 Credits
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.
Prerequisite: Previous term or terms.

**NUTRITION, FN 225** 3 Credits
Study of optimal diet for health and fitness, of newer scientific investigations and present day feeding problems of various age groups.

**OFFICE MANAGEMENT, 2.518** 3 Credits
A course that presents the fundamental principles and successful practices used in getting office work accomplished. The effective solution of office management using both quantative and non-quantative analysis.

**OFFICE PROCEDURES I, 2.512** (3 class-1 lab hrs/wk) 3 Credits
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.

**OFFICE PROCEDURES II, 2.514** (3 class-1 lab hrs/wk) 3 Credits
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.

**OFFICE PROCEDURES III, 2.516** (3 class-1 lab hrs/wk) 3 Credits
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.

**ORAL ROENTGENOLOGY,** (number to be assigned)
1 credit hour spring term first year, 2 credit hours fall and winter terms, and 1 credit hour spring term second year.
Lecture and laboratory course covering theory and development of x-ray films and the correct use of x-ray machines. Students learn techniques for exposing, processing, and mounting films with clinical practices on the patient.

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

**ORGANIC CHEMISTRY, CH 226-227** 5 Credits
3 lectures, 6 laboratory hours per week.
A service course to meet the requirements of students other than those majoring in chemistry and chemical engineering. A systematic coverage of aliphatic and aromatic chemistry.
Prerequisites: Ch 106 (203) with grade of C or better.

**ORIENTATION: EQUIPMENT, MATERIALS, SUPPLIES, 5.405** (3 class-1 lab hrs/wk) 4 Credits
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.

**OSCILLATOR CIRC. AND DES., 6.212R** (2 class hrs/wk) 2 Credits
**OSCILLATOR CIRC. AND DES. LAB, 6.213R** (6 lab hrs/wk) 2 Credits
Study of single-phase rectifier circuits and filters with caculation 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.

**PAINTING, AA 290** 1-2 Credits 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 credits.

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

**PATIENT MANAGEMENT AND APPLIED PSYCHOLOGY, 5.433** (Total 45 class hours) 4 Credits
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.

**PATROL PROCEDURES, 5.220**
(2 class - 3 lab hrs/wk) 3 Credits
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.

**PERIODONTOLOGY** (number to be assigned)
1 credit hour fall and spring terms, second year.
Although review of the etiology, classification and treatment of periodontal diseases, prevention is given emphasis. Principles of therapy are presented.

**PERSONAL DEVELOPMENT, 2.116** 3 Credits
The students should learn the importance of correct social and business behavior through the presentation of text and workbook material and the visitations of guest speakers. They will also work, on an individual basis, in such areas as weight control, hair and complexion care, voice and personality problems. Etiquette will deal with such social graces as dining out, table manners, travel information, tipping, making of reservations, etc. Money management, home life, problems of city living, job applications and interviews will be studied.

**PERSONAL AND VOCATIONAL RELATIONSHIPS, 5.520, 5.521, 5.522, 5.523** (90 class hours) 8 Credits
A study of professional ethics teaches correct manners in dealing with patients, their friends and relatives, as well as with co-workers. It acquaints the student with community resources available to the ill and with the health agencies which may assist patients or which help to maintain health and welfare of the community. The value of professional organizations and the procedure of obtaining licenses or work in other states are learned in this course.
Prerequisites: Previous term or terms.

**PERSONAL HEALTH, HE 250** 3 Credits
Study of the personal health problems of men and women with emphasis on implications of family life, mental health, communicable diseases, degenerative diseases, nutrition.

**PHARMACOLOGY** (number to be assigned)
2 credit hours winter term second year.
The inner action of drugs and their effect orally is taught. This course will deal primarily with the application of this field to the therapy of oral diseases.

**PHOTOGRAPHY I, II, 2.207, 2.209** 3 Credits each
Designed to acquaint student with techniques of photo craftsmanship and graphic techniques, cameras, lenses, exposure, focus, film development, printing, and lighting.

**PHOTOGRAPHIC EVIDENCE, 5.234** (2 lab hrs/wk) 1 Credit
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.

**PHYSICAL EDUCATION PROFESSIONAL ACTIVITIES**
(6 class hrs/wk) 2 Credits

**PE 194 and 294 (Women) or PE 195 and 295 (Men)**
For major students, instruction and practice in specific teaching techniques and basic skills. One activity per term.

**PHYSICAL EDUCATION** (3 class hrs/wk) 1 Credit
**PE 180 (Women) or PE 190 (Men)**
A variety of activities taught for physiological and recreational values if offered for all students. Courses include individual, dual and team sports and other activities designed to improve fitness, movement and creative expression. Activities are scheduled for the skilled, unskilled and handicapped. To meet college requirements for an associate degree, five terms of physical education are required. 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. Special sections for restricted and corrective work.

**Archery (Men and Women)**
Fundamental skills and techniques of target shooting, rules, care and selection of equipment.

**Baseball (Men Only)**
Fundamentals, techniques of offensive and defensive play, rules, team play, and competition.

**Badminton (Men and Women)**
Instruction in the fundamental skills of serving, strategy, play, rules and 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 and Women)**
Primarily concerned with cardio-vascular development, variations in running, jogging, interval work, and wind sprints. Special programs of exercise and activities for men and women over thirty years of age.

**Contemporary Dance (Women and Men)**
Fundamentals of dance movement (Principles and practices of body movement and response to music); conditioning techniques; experience in elementary dance composition.

**Cross Country (Men and Women)**
A study and practice of the techniques of running. Individual and group competition.

**Field Hockey (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 (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; 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, 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.

**Swimming—lifesaving (Men and Women)**
Basic skills of Life Saving; leads to American Red Cross certification in Senior Lifesaving.

**Tennis (Men and Women)**
Theory and practice in tennis skills, strategy, and application of rules.

**Track (Men and Women)**
Fundamentals, rules, theories, and training in track and field events.

**Volleyball (Men and Women)**
Instruction in individual and team play, rules, and strategy.

**Wrestling (Men Only)**
Basic fundamentals, techniques, rules and competition.

**PHYSICAL SCIENCE, GS 104, 105, 106**
(3 class - 2 lab hrs/wk) 4 Credits
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.

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

**PLANE SURVEYING I, 6.101**
(1 class - 4 lab hrs/wk) 3 Credits
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.

**PLANE SURVEYING II, 6.103**
(1 class - 4 lab hrs/wk) 3 Credits
A continuation of Plan 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.

**POLICE AND SOCIETY, LE III** 3 Credits
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.

**POLICE REPORT WRITING, 5.240**
(3 class hrs/wk) 3 Credits
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 report, make-up of reports, effectiveness of writing styles, gathering of facts for a report, typing of a report, and visual aids in a report.

**POWER STEERING, 3.314**
(1 class - 3 lab hrs/wk) 2 Credits
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.

**POWER EQUIPMENT AND SAFETY, 6.621**
(2 class - 4 lab hrs/wk) 3 Credits
This course starts with the Basic First Aid course, and a study of Industrial Safety as it applies to logging and forest products. Basic operation and operator maintenance of transportation, and small engine driven equipment is covered. The use and field operation of power saws is taught. This part of the course is coordinated with Silvicultural Practices (Course 6.615), which must be taken concurrently. Pump operation and maintenance for fire fighting and water supply is briefly covered.

**POWER TRAINS, 3.316** (2 class hrs/wk) 2 Credits
**POWER TRAINS LAB, 3.317** (5 lab hrs/wk) 2 Credits
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.

**POWER TRAINS LAB, HEAVY EQUIPMENT, 3.351**
(5 lab hrs/wk) 2 Credits
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 conjuction with units in Power Trains.
Prerequisite: To be taken concurrently with Power Trains.

**PRACTICAL DESCRIPTIVE GEOMETRY, 6.127**
(4 lab hrs/wk) 2 Credits
This course gives a brief review of advanced drafting problems and takes the student further into the field of descriptive geometric principles.
Prerequisite: Third-term standing or approval of department head.

**PRACTICAL PHYSICS I, (Heat, Sound, Light), 4.300**
(3 class - 2 lab hrs/wk) 4 Credits
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: None.

**PRACTICAL PHYSICS II, (Mechanics), 4.302**
(3 class - 2 lab hrs/wk) 4 Credits
An introductory course in practical physics covering matter, measurements, mechanics, and machines. Laboratory time is provided for demonstration and experiments to further clarify the principles and procedures covered in class.
Prerequisite: Mathematics 4.200 or equivalent.

**PRACTICAL PHYSICS III (Electricity), 4.304**
(3 class - 2 lab hrs/wk) 4 Credits
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.

**PRACTICES AND PROCEDURES, 5.431**
(6 class - 6 lab hrs/wk) 8 Credits
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 prothodontics are all thoroughly covered.

**PRINCIPLES OF ACCOUNTING, BA 211, 212, 213**
3 Credits each term
Introduction to field of accounting; technique of account construction; preparation of financial statements; application of accounting principles to practical business problems; proprietorship studies from standpoint of single owner, partnership, and corporation.

**PRINCIPLES OF ECONOMICS, EC 201, 202, 203**
3 Credits each
The study of general economics principles and policies and their relation to specific goals and policies of our national economy.
Prerequisite: Sophomore standing, 201 prerequisite for 202.

**PRINCIPLES OF LAYOUT AND DESIGN, 2.211** 2 Credits
Developed to acquaint students with the principles of publications design.

**PROBLEMS OF PHILOSOPHY, PHL 201, 202, 203**
3 Credits each
An introduction to philosophical problems through the study of philosophical classics. May be taken out of sequence.

**PROBLEMS OF PHYSICAL EVIDENCE I, II, III, 5.241, 5.242, 5.243** (2 class - 3 lab hrs/wk) 3 Credits
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.

**PRODUCTION MANAGEMENT, BA 221, 2.221**
(3 class hrs/wk) 3 Credits
An introductory analysis as to allocation of productive resources; i.e., capacity, control, authority and productivity. A survey of the development of modern industry and scientific management, and introduction to the operating principles of production.

**PRODUCTION MILLWORK I, II, III, 3.192, 3.193, 3.194**
(2 class - 6 lab hrs/wk) 5 Credits
Production methods in contract millwork industries; special machines for multi-unit production; standard practices in the cabinet, furniture, and millwork industries. Laboratory work in design and construction of quantity, and quality control devices for specific production problems.

**PRODUCTION PLANNING AND PRACTICES, 4.104**
(3 class - 2 lab hrs/wk) 4 Credits
Elements of production control and planning such as: machine routing, steps of fabrication, efficient shop layout, materials handling, storage problems, and production records.
Prerequisite: Second-year standing or approval of department head.

**PRODUCTION PROCESSES I, II, 2.201, 2.203** 2 Credits each
Intended to acquaint students with printing processes, composition methods, pasteup, typography, scaling of photos, photo content, paper, and color printing.

**PROJECT DRAFTING, 4.119**
(1 class - 9 lab hrs/wk) 4 Credits
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 material of fabrication, checking and backchecking 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.

**PUBLIC SPEAKING, 1.610**
(2 class - 1 lab hr/wk) 2 Credits
This course is intended to develop speaking skills with emphasis on the dual role of speech as both a speaking and listening skill, and on adjusting the approach to the specific audience. Practice is provided through individual speeches and group discussion with careful attention being given to effective organization and delivery. In addition to the general principles of speech, stress is placed on poise and confidence and on understanding their psychological basis.

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

**QUANTITATIVE ANALYSIS, CH 234**
(3 class - 6 lab hrs/wk) 5 Credits
A service course to meet the requirements of students other than those majoring in chemistry and chemical engineering. A coverage of gravimetric and volumetric analysis and as introduction to instrumental analysis.
Prerequisites: Ch 106 (203) with a grade of C or better.

**RADIO AIDS AND COMMUNICATION, 6.417**
(3 class hrs/wk) 3 Credits
Basic radio fundamentals as used by the pilot. A description and practical use of various radio aids to safe aerial navigation, 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.

**RADIO BROADCASTING I, 3.400**
(3 class hrs/wk) 3 Credits
**RADIO BROADCASTING LAB I, 3.401**
(12 lab hrs/wk) 4 Credits
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.

**RADIO BROADCASTING II, 3.402**
(3 class hrs/wk) 3 Credits
**RADIO BROADCASTING II LAB, 3.403**
(12 lab hrs/wk) 4 Credits
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.

**RADIO BROADCASTING III, 3.404**
(3 class hrs/wk) 3 Credits
**RADIO BROADCASTING LAB III, 3.405**
(12 lab hrs/wk) 4 Credits
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. "A seminar in advanced radio station operation will be offered if there is sufficient demand."

**RADIO SERVICE II, 3.490E** (3 class hrs/wk) 3 Credits
**RADIO SERVICE LAB II, 3.491E** (12 lab hrs/wk) 4 Credits
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.

**RADIO SERVICE III, 3.492E** (3 class hrs/wk) 3 Credits
**RADIO SERVICE LAB III, 3.493E** (12 lab hrs/wk) 4 Credits
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. "Fundamentals of electronic musical instrument servicing. Theory of operation of electronic organs and electronic musical instrument amplifiers."
Prerequisite: Radio Service II, Electronic Circuits taken concurrently.

**RADIOTELEPHONE OPERATOR'S PREPARATION I, 4.915R** (3 class - 2 lab hrs/wk) 4 Credits
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.

**RADIOTELEPHONE OPERATOR'S PREPARATION II, 4.917** (3 class - 2 lab hrs/wk) 4 Credits
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.

**REAL ESTATE, 2.320** 3 Credits
A fundamental course for introduction into real estate. It will include the economic, social and legal basis of real estate transactions, factors of property rights, taxation, real estate instruments, finance and property ownership.

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

**REPORTING I, J 216** 2 Credits
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.

**REPORTING II, J 217** 2 Credits
Continuation of J 216. Reader appeal in writing.
Prerequisite: J 216.

**RETAIL ADVERTISING, 2.213** 3 Credits
Designed to acquaint students with objectives of advertising, copywriting, layout, and classified ads.

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

**REVIEW AND PRACTICE, 5.437** (10 Theory hrs and 20 lab hrs) 3 Credits
Final review of course content and practice.
Prerequisite: Completion of all courses in curriculum.

**RISK AND INSURANCE, 2.410** 3 Credits
An introduction to the concepts of risk, probability, and insurance; the role of insurance in the management of risk. An examination of the underlying legal principles and common elements of most insurance contracts. Special emphasis is made on the role of insurance from the viewpoint of the consumer; business and personal applications of the major types of property and liability insurance, and life and health insurance with emphasis on the underlying economic need each is designed to meet.

**SALESMANSHIP, 2.316** (3 class hrs/wk) 3 Credits
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.

**SEMINAR IN OCCUPATIONAL DEVELOPMENT, 2.509** 3 Credits
This course is designed to familiarize the student with the operations of local business firms, the occupations therein, and to provide practical experience in working with management. It is each student's responsibility to meet independently with the management of a specific organization, prepare a detailed report and personally conduct his class on a tour through the vital parts of the organization.
Prerequisite: Sixth-quarter standing.

**SENIOR PROJECTS, 6.650** (10 hrs/wk) 4 Credits
This course is given to provide the student a chance to undertake some special study or activity in his field of Forest Technology or related subjects.

**SERVO SYSTEMS, 6.236R** (1 class - 3 lab hrs/wk) 2 Credits
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.

**SHAKESPEARE, Eng 201, 202, 203** 3 Credits each
Study of important plays—comedies, histories, and tragedies. Should be taken in sequence.

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

**SHORTHAND & TRANSCRIPTION II, 2.106** (2 class - 2 lab hrs/wk) 3 Credits
Completion of shorthand theory and review of all principles. Development of ability to construct new outlines rapidly from dictation and to lay solid foundations for further development of dictation and transcription skill. Ability to produce mailable letters is developed.
Prerequisite: Shorthand & Transcription I, 2.105.

**SHORTHAND & TRANSCRIPTION III, 2.107** (2 class - 2 lab hrs/wk) 3 Credits
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.
Prerequisite: Shorthand & Transcription II, 2.106.

**SILVICULTURAL PRACTICES, 6.615** (2 class - 4 lab hrs/wk) 3 Credits
A course designed to introduce students to the basic theory of Silviculture, giving them a general understanding of the growth principles and cutting methods for our commercial forest species. Laboratory work in determining of sample area, selection, marking, and thinning operations, is carried out. This work is coordinated with Power Equipment, 6.621, which must be taken concurrently.

**SLIDE RULE, 4.208** (2 lab hrs/wk) 1 Credit
Basic course in the theory, operation, and applications of the slide rule, including multiplication, division, powers and roots, trigonometric functions, and logarithms.
Prerequisite: Mathematics II, 4.202, or equivalent.

**SMALL BUSINESS MANAGEMENT, 2.580**
(3 class hrs/wk) 3 Credits
The role, organization and operation of small business in the American Society. Emphasis will be placed upon the spirit of free enterprise and problems of the small merchant in meeting competition. A comprehensive study will be made on raising capital requirements for the small business. Problems in administrative controls, marketing programs and policies, operational management and legal and governmental relationships will be presented in some detail.

**SOCIAL PSYCHOLOGY, Soc Psy 215** 3 Credits
A study of Social Psychology and relevant fields through participation in groups and selected topical readings. Additional course participation will include selected lectures and discussions. The students will have required reading lists in the areas of sociology, psychology, and social psychology. In addition, in the small groups the students will be introduced to the concepts of the group process. A term paper concerning their particular occupational field of interest will be required. The paper will concern contact with some organization in their field and a sociological analysis of the structure, roles and norms present in the organization. This will also enable the individual to have personal contact with the employer and employee.

**SOIL MECHANICS I, 6.124**
(2 class - 3 lab hrs/wk) 3 Credits
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.

**SPANISH, FIRST YEAR, RL 60, 61, 62** 4 Credits each
Must be taken in sequence.

**SPANISH, SECOND YEAR, RL 107, 108, 109** 4 Credits each
Must be taken in sequence.

**SPEECH AND THEATER WORKSHOP, Sp 250**
1 - 3 Credits each term—maximum 6 Credits
Principles of acting and dramatic production; laboratory experience. Consent of instructor required.

**STENOGRAPHY, SS 111, 112, 113**
(5 class hrs/wk) 3 Credits each
Theory of shorthand; practical application in sentence and paragraph dictation. SS 121, 122, 123 must be taken concurrently unless the student has had the equivalent. Students with one year of high school shorthand may receive credit for SS 111 only upon recommendation of the instructor.

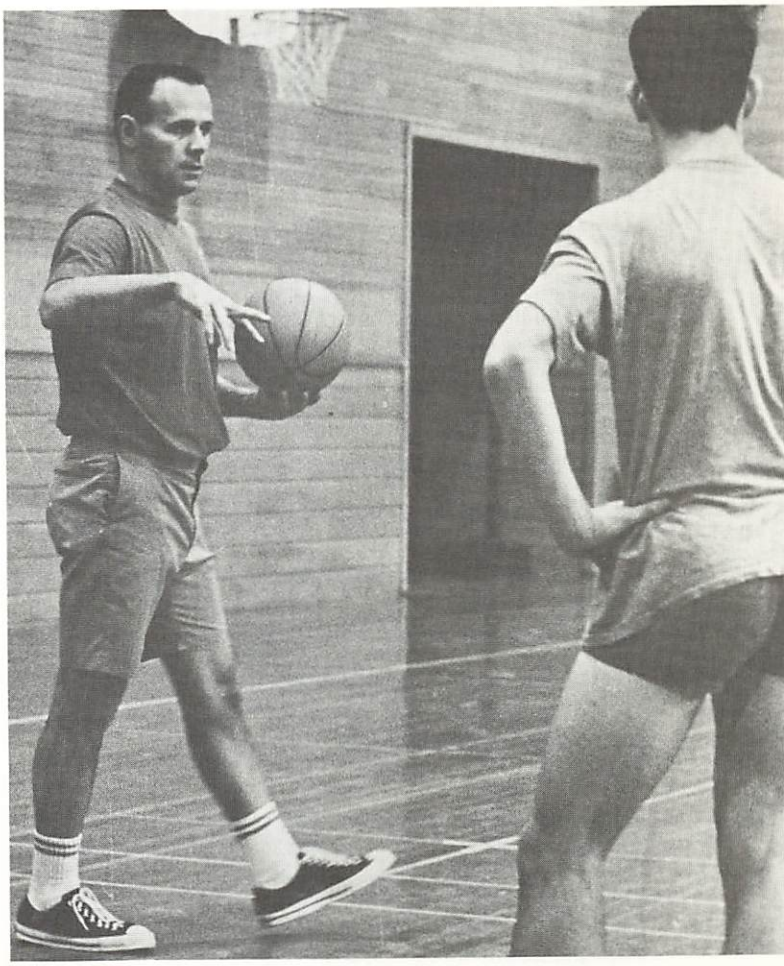
**STRENGTH OF MATERIALS I, 6.107T**
(2 class hrs/wk) 2 Credits
**STRENGHT OF MATERIALS I LAB, 6.107**
(3 lab hrs/wk) 1 Credit
A study of the stresses and strains that occur in bodies when subjected to tensile, compressive, and shearing forces, including the common theory of beams. The distribution and 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.

**STRENGTH OF MATERIALS II, 6.128**
(2 class - 3 lab hrs/wk) 3 Credits
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.

**STRUCTURAL ANALYSIS & DESIGN, 6.130**
(1 class - 3 lab hrs/wk) 2 Credits
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.

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

**SUPERVISORY MANAGEMENT, 2.550, (non-business)**
(3 class hrs/wk) 3 Credits
A survey of organizational objectives and supervisory functions and practices of the first-line administrative personnel. Emphasis is placed upon situational thinking by use of care or incident study of problems affecting foremen and administrative personnel. A review of basic concepts of incluence, attitude, morale, and motivation, with emphasis on the role of the first-line supervisor in problems of communication, control, inter-group conflict, disciplinary action, reorganization and union-management dispute. A course for non-business majors.



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

**SURVEYING COMPUTATIONS, 6.500**
(1 class - 4 lab hrs/wk) 3 Credits
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.

**SURVEY OF DATA PROCESSING, 2.601**
(3 class hrs/wk) 3 Credits
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.

**SURVEY OF ENGLISH LITERATURE, Eng. 101, 102, 103**
3 Credits 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. Should be taken in sequence.

**SURVEY OF VISUAL ARTS, AA 201, 202, 203**
3 Credits 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.

**TECHNICAL ILLUSTRATION, 4.127**
(4 lab hrs/wk) 2 Credits
Techniques required for modern technical illustrations and drawings such as those found in catalogs, published presentation, or exploded drawings. Both freehand drawing and template implements, pencils, brush and technique of light and shadow are discussed.
Prerequisite: Second-year standing or approval of department head.

**TECHNICAL MATHEMATICS I, 6.261**
(4 class hrs/wk) 4 Credits
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 fractions, variation, systems of linear equations, exponents and radicals, and quadratic equations in one unknown.
Prerequisite: High school algebra or equivalent.

**TECHNICAL MATHEMATICS II, 6.262**
(4 class hrs/wk) 4 Credits
Review of plane geometry, its applications and analytical trigonometry on the technician level. Emphasis on problem solving.
Prerequisite: Technical Mathematics I (6.261 or equivalent).

**TECHNICAL MATHEMATICS III, 6.266**
(4 class hrs/wk) 4 Credits
Mathematics on the technician level covering simultaneous quadratic equations, binomial theorem, arithmetic and geometric progressions, logarithms, exponential functions, complex numbers, and vector algebra.
Prerequisite: Technical Mathematics II (6.262 or equivalent).

**TECHNIQUES OF BUSINESS DECISIONS, 2.232** 3 Credits
An introduction to the concepts of probability, expected value, and utility theory; basic sampling techniques, random variables, and probability distributions; basic concepts of opportunity loss and costs of uncertainty determined by incremental analysis and subpective probability; basic concepts of binomial sampling, conditional, joint, and marginal probability, statistical decision rules, and their error characteristics. Methods of evaluating decisions in terms of expected loss and remission of probabilities in light of new information.
Prerequisite: Business Math 2.206, Business Statistics, 2.210.

**TELECASTING I, 3.410** (3 class hrs/wk) 3 Credits
**TELECASTING I LAB, 3.411** (12 lab hrs/wk) 4 Credits
TV station organization. Technical and production facilities of TV stations. TV methods. TV system fundamentals. Studio and control room procedure.

**TELECASTING II**, 3.412 (3 class hrs/wk) 3 Credits
**TELECASTING II LAB, 3.413** (12 lab hrs/wk) 4 Credits
TV cameras and their operation. Camera lenses. Floor management. TV lighting. Video switching of TV productions. Audio in TV productions.

**TELECASTING III, 3.414** (3 class hrs/wk) 3 Credits
**TELECASTING III LAB, 3.415** (12 lab hrs/wk) 4 Credits
Getting ready for the TV program. Set construction and decoration. Selection of colors for suitable interest and contrast values. Selection of set properties. Comparison of stage and TV set lighting. Key lighting, back lighting, and fill lighting. Commercial lighting equipment. Typical control equipment.
Prerequisite: Completion of Telecasting II, Theory and Laboratory.

**TELEVISION SERVICE I, 3.494E**
(3 class hrs/wk) 3 Credits
**TELEVISION SERVICE I LAB, 3.495E**
(12 lab hrs/wk) 4 Credits
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.

**TELEVISION SERVICE II, 3.496E**
(3 class hrs/wk) 3 Credits
**TELEVISION SERVICE II LAB, 3.497E**
(12 lab hrs/wk) 4 Credits
A continuation of Television Service covering the following subjects: video-amplifiers, picture tube circuits, the picture tube construction and replacement, detector stage, I-F section AGC systems, tuners, sound section and antenna types, installation and service notes.
Prerequisite: Television Service I.

**TEXTILES, CT 250** (4 hrs/wk) 3 Credits
Properties, identification, use and care of textile fibers and fabrics. Current trends and employment opportunities presented.

**TIMBER & STEEL CONSTRUCTION, 6.125**
(3 class - 3 lab hrs/wk) 4 Credits
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.

**TRACTOR, MAJOR OVERHAUL, 8.123**
(3 class - 12 lab hrs/wk) 7 Credits
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.

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

**TREE IDENTIFICATION, 6.645**
(2 class - 4 lab hrs/wk) 3 Credits
A course in the ecology and identification of trees and shrubs which will cover the Western Commercial Timber species and many of the native non-commercial trees and shrubs.

**TRIGONOMETRY, MTH 102** 4 Credits
Study and analysis of trigonometric functions and complex numbers, with topics in probability and theory of equations.
Prerequisite: Mth 101

**TUNE-UP AND DIAGNOSIS, 3.324**
(2 class hrs/wk) 2 Credits
**TUNE-UP AND DIAGNOSIS LAB, 3.325**
(5 lab hrs/wk) 2 Credits
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.

**TYPING I, 2.101** (2 class - 3 lab hrs/wk) 3 Credits
Introduction to different makes of typewriters and their operation; mastery of keyboard through alphabet typing exercises and the development of the touch system.

**TYPING II, 2.102** (1 class - 4 lab hrs/wk) 3 Credits
Development of speed and accuracy; introduction to various styles of business letter, and the typing of envelopes and tabulated material. Miscellaneous office procedures. Dictophone practice.
Prerequisite: Typing I (2.101)

**TYPING III, 2.103** (1 class - 4 lab hrs/wk) 3 Credits
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 (2.102).

**TYPING, PERSONAL, 2.104**
(2 class - 3 lab hrs/wk) 3 Credits
A course designed for beginning students desiring to acquire basic skills for personal or occupational needs, for those students desiring to extend their present typing abilities, and for those desiring to remedy typing deficiencies, with an end result of improvement in degree of typing skills according to individual interest. The course includes projects in correspondence, themes, outlines, tabulations, reports, and speed and accuracy development.

**TYPING, SS 121, 122, 123** 2 Credits
Theory and practice; drills of all kinds; punctuation and mechanical arrangements of business correspondence, legal forms; tabulating, manuscripts, modern business forms; straight copy timings; training on both manual and electrical typewriters. Students who have had one year of typing may receive credit for SS 121.

**UNIT RECORD EQUIPMENT I, 2.602**
(3 class - 2 lab hrs/wk) 4 Credits
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.

**UNIT RECORD EQUIPMENT II, 2.604**
(2 class - 6 lab hrs/wk) 4 Credits
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

**VACUUM TUBE & TRANSISTOR ANALYSIS, 6.210R**
(3 class hrs/wk) 3 Credits
**VACUUM TUBE & TRANSISTOR ANALYSIS LAB, 6.211R**
(3 lab hrs/wk) 1 Credit
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 cathodes 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.
Prerequisites: Third-term standing of approval of department head.

**WATER DISTRIBUTION SYSTEMS, 5.269**
(3 class hrs/wk) 3 Credits
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.

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

**WELDING I, 3.905** (15 hrs/wk) 9 Credits
A course covering lecture and lab experiences in the use of inert gas welding of ferrous and non-ferrous metals. Demonstration and student experiences in both T.I.G. and M.I.G. processes will be provided. Also covered will be the use of semi and full automatic welding equipment. All position welding, layout, and joint preparation of materials toward State Welding Certification is included.

**WELDING II, 3.906** (15 hrs/wk) 9 Credits
A lecture, demonstration, and laboratory course covering the simulation, diagrams, and symbols of tests for Graduation and State Certification. Laboratory experiences are continued which involve advanced welding procedures with emphasis on welds of low hydrogen quality. Tests and simulation toward certification is involved.
Prerequisite: Welding I, 3.905

**WELDING III, 3.907** (15 hrs/wk) 9 Credits
A course in Material Scheduling and Listing, Blueprint and Engineering Specification, Data Review, and Supervisory Instruction. The laboratory experiences involve the preparation of test plates. The preparation of test specimens to be sent to the testing lab approved for certification will be accomplished under supervision. State certification papers will be required.
Prerequisite: Welding II, 3.906.

**WELDING IA, 4.150** (1 class - 4 lab hrs/wk) 2 Credits
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.

**WELDING IB, 4.151** (1 class - 4 lab hrs/wk) 2 Credits
Introductory instruction in arc welding. Demonstration and practice in welding by electric arc. Application to industrial use in construction, maintenance, and repair.

**WELDING IIA, 4.156** (1 class - 4 lab hrs/wk) 2 Credits
Advanced application of oxyacetylene. Information and instruction on the manufacture of metals, advanced heat treating of metals, advanced cutting applications, technical information. Shop practice with reference to various trades and industrial applications.

**WELDING IIB, 4.158** (1 class - 4 lab hrs/wk) 2 Credits
Advanced instruction and practice in electric arc welding. Information and instruction in manufacturing of metals, advanced heat treating, cutting applications, and technical information correlated with shop practice and application to various trades and industry.

**WELDING, SENIOR PROJECTS I, 3.908**
(8 hrs/wk) 4 Credits
A lab course in project development. The layout, cutting and metal preparation from shop drawings, with emphasis on welding in journeyman-type processes from industry.

**WELDING, SENIOR PROJECTS II, 3.909**
(8 hrs/wk) 4 Credits
A lab course in advanced layout procedures, prefabrication, assembly processes, and effective utilization of manpower and equipment.
Prerequisite: Senior Project I, 3.908

**WOOD AND METAL FINISHING, 3.197**
(2 class - 4 lab hrs/wk) 3 Credits
Application of modern finishes to old and new work on wood and metal surfaces; brush and spray application of finishing materials.

**WOODWORKING TECHNOLOGY, 3.198**
(2 class - 5 lab hrs/wk) 3 Credits
Wood as a material; equipment and processes; use of non-wood materials in construction of wood furnishings.

**WORLD LITERATURE, Eng. 107, 108, 109** 3 Credits each
A sequence to acquaint the student with outstanding works of ancient, medieval, and modern writers that have had a wide appeal outside the countries in which they originate. Should be taken in sequence.

**X-RAY, PART I, 5.416** (2 class - 2 lab hrs/wk) 3 Credits
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.

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

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

# GLOSSARY OF TERMS

CREDITS are granted in recognition of work successfully completed in specific courses. For lecture courses one hour credit is granted for one hour attendance in class per week. Laboratory and activity credits are generally granted at the rate of one credit for two hours attendance. Ninety-three credits are required for an associate degree. Normally no more than 93 credit hours may be transferred to a four-year college.

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

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. Those which are transferable to four-year colleges are identified with letters and three digits. They follow closely those used by the degree-granting schools in the state.

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 and the Social Security Administration define a full-time student as one carrying 12 credit hours of work.

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 PROGRAM is a group of courses arranged to provide vocational or professional training leading toward a certificate of completion or an associate degree.

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

A TERM is an approximately eleven-week period of study. There are four terms in a college year. Fall Term begins at the end of September and lasts until Christmas vacation. Winter Term begins at the first of the year and lasts until March 15 or 20, and 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.

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