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Oregon State System
of Higher Education
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Oregon State System of Higher Education

THE Oregon State System of Higher Education, as organized in 1932 by the State Board of Higher Education following a Federal survey of higher education in Oregon, includes all the state-supported institutions of higher learning. The several institutions, located at six different places in the state, are now elements in an articulated system, parts of an integrated whole. The educational program is so organized as to distribute as widely as possible throughout the state the opportunities for general education and to center on a particular campus specialized, technical, and professional curricula closely related to one another.

The institutions of the State System of Higher Education are the University of Oregon at Eugene, Oregon State College at Corvallis, the University of Oregon Medical School at Portland, the Oregon Normal School at Monmouth, the Southern Oregon Normal School at Ashland, and the Eastern Oregon Normal School at La Grande.

Each of these institutions, except the Medical School which is on a graduate basis, provides the general studies fundamental to a well-rounded education. At the three normal schools general and professional studies are combined in the teacher-training curriculum. At the Southern Oregon Normal School and the Eastern Oregon Normal School students who do not plan to become elementary-school teachers may devote their time exclusively to studies in the liberal arts and sciences.

At the University and the State College two years of unspecialized work in liberal arts and sciences are provided on a parallel basis in the Lower Division. Beyond the lower-division level the work of the two institutions is distinctly differentiated. At the University are centered the advanced curricula in the arts, letters, and social sciences, and the professional schools resting on these fundamental fields of knowledge. At the State College are centered the advanced curricula in the physical and biological sciences and the professional schools resting on these natural sciences.

The educational program thus developed, as shown in the following insert, includes: (1) Liberal Arts and Sciences, (2) Professional and Technical Curricula, and (3) Graduate Study and Research.



University of Oregon, Eugene
University of Oregon Medical School, Portland
Eastern Oregon Normal School, La Grande

THE

LIBERAL ARTS AND SCIENCES

UNIVERSITY, Eugene

Lower Division (Junior Certificate)

Freshman and sophomore work in Liberal Arts and Sciences (La Literature, Science, and Social Science) is offered on essentially the same at the University and the State College.

College of Arts and Letters (B.A., M.A., Ph.D. degrees)

Major curricula in Arts and Letters, and in Classics, English Language and Literature (including Drama, Speech, and Preliminary options), German, and Romance Languages.

College of Social Science (B.A., B.S., M.A., M.S., Ph.D. degrees)

Major curricula in General Social Science, and in Anthropology, Geography, History, Philosophy, Political Science, Psychology, and Sociology.

PROFESSIONAL AND TECHNICAL CURRICULA

School of Architecture and Allied Arts (B.A., B.S., B.Arch., M.A., M.S., M.Arch., M.F.A., M.L.A. degrees)

Architectural Design, Interior Design, Landscape Architecture (with State College), Drawing and Painting, Sculpture, Normal Art, and Structural Design in Architecture, a joint curriculum with Engineering.

School of Business Administration (B.A., B.S., B.B.A., M.B.A. degrees)

Accounting, Advertising and Selling, Finance, Foreign Trade, General Industrial Management, Marketing and Merchandising; combined curriculum in Administration and Law.

School of Education (B.A., B.S., M.A., M.S., M.Ed., D.Ed. degrees)

General Education Courses and preparation for educational administration curricula preparing for teaching of Literature, Languages, Art, Music, Physical Education, the Social Sciences, Business Administration, and approved combined subjects. Training for teachers of atypical children. The School of Education jointly at the University and the State College.

School of Journalism (B.A., B.S., M.A., M.S. degrees)

Reporting, Editing, Advertising, Publishing, Typography and Fine Print.

School of Law (B.A., B.S., LL.B., J.D. degrees)

A professional curriculum of three years above lower division (five years leading to LL.B. degree; a professional curriculum of three years following general curriculum (six years in all), leading to baccalaureate and law degree combined curriculum in Business Administration and Law or Social Science.

School of Music (B.A., B.S., B.M., B.M.Ed., M.A., M.S., M.F.A. degrees)

Music Appreciation, Theory and Composition, Applied Music, Music Business, and Public-School Music.

School of Physical Education (B.A., B.S., B.S. in P.E., M.A., M.S. degrees)

Physical Education curriculum preparing specialists. Major and minor work for coaches and teachers of physical education.

In addition to the major professional curricula listed above, the University offers lower-division and service courses in Home Economics. In this field the University fulfills requirements for admission to upper-division standing in the major at the State College. It is recommended, however, that the student pursue his major work at the institution where major work is offered.

GRADUATE STUDY AND RESEARCH

Graduate Division

All graduate instruction in the System is administered by the interinstitutional Graduate Division.

General Research Council

Research in the System is assisted through the interinstitutional General Research Council, and through institutional agencies.

Graduate study leading to advanced degrees has been allocated to the following fields:

Arts and Letters, Social Sciences, Architecture and Allied Arts, Business Administration, Education, Journalism, Law, Music, and Physical Education.

Advanced degrees granted are listed above, following the name of the college or school.

OREGON STATE SYSTEM OF HIGHER EDUCATION

	STATE COLLEGE, Corvallis	MEDICAL
<p>languages and basis at both</p> <p>age and Lit- philosophy, and</p> <p>(S) Economics, 1927.</p>	<p>Lower Division (Junior Certificate) Freshman and sophomore work in Liberal Arts and Sciences (Language and Literature, Science, and Social Science) is offered on essentially the same basis at both the State College and the University.</p> <p>School of Science (B.A., B.S., M.A., M.S., Ph.D. degrees) Major curricula in General Science, and in Bacteriology, Botany, Chemistry, Entomology, Geology, Mathematics, Physics, and Zoology.</p>	
<p>h., B.L.A.,</p> <p>with one year General Art;</p> <p>A., M.S.,</p> <p>ral Business, in Business</p> <p>Ed., Ph.D.</p> <p>ation. Major physical Edu- binations of ion operates</p> <p>Printing.</p> <p>ears in all), a three-year ees; six-year ce and Law.</p> <p>A. degrees) e Education,</p> <p>S. degrees) minor norms</p> <p>iversity offers student may or school at lower-division</p>	<p>School of Agriculture (B.S., M.S., Ph.D. degrees) Animal Industries (Animal, Dairy, and Poultry Husbandry, Fish and Game Management, Veterinary Medicine); Agricultural Economics including Farm Management; Plant Industries (Farm Crops, Soils, Horticulture, Landscape Construction and Maintenance, Food Products Industries); Agricultural Education; Agricultural Engineering; Agricultural Technology.</p> <p>School of Education (B.A., B.S., M.A., M.S., Ed.M., Ed.D. degrees) Major curricula preparing for teaching of Biological and Physical Sciences, Mathematics, Agriculture, Home Economics, Industrial Arts, and approved combinations of subjects; Educational and Vocational Guidance, Secretarial Science. Minor norm preparing for part-time physical education teaching and coaching. The School of Education operates jointly at the University and the State College.</p> <p>School of Engineering and Industrial Arts (B.S., M.S., Ch.E., C.E., E.E., M.E. degrees) Chemical Engineering and Industrial Chemistry, Civil Engineering (General curriculum, Highway option), Electrical Engineering (Power and Communications options), Mechanical Engineering (General curriculum, Aeronautical option), Industrial Arts Education, Industrial Administration; Structural Design in Architecture, a joint curriculum with Architecture and Allied Arts.</p> <p>School of Forestry (B.S., M.S., M.F., F.E. degrees) Logging Engineering, Technical Forestry (Forest Recreation option), Wood Products.</p> <p>School of Home Economics (B.A., B.S., M.A., M.S. degrees) Clothing, Textiles, and Related Arts; Foods and Nutrition; Household Administration; Institution Economics; Home Economics Education.</p> <p>School of Pharmacy (B.S., M.S. degrees) Pharmacy, including Pharmaceutical Analysis, Pharmacology, and Pharmacog- nosy; preparation for certification as registered pharmacist.</p> <p>Secretarial Science (B.S.S. degree) Stenography, Typewriting, Office Methods.</p> <p>In addition to the major professional curricula listed above, the State College offers lower-division and service courses in Architecture and Allied Arts, Business Administration, Journalism, Music, and Physical Education. In these fields the student may fulfill requirements for admission to upper-division standing in the major school at the University. It is recommended, however, that the student pursue his lower-division work at the institution where the major work is offered.</p>	<p>Medicin The re- four year following curriculum College natural a (third-ye letters or</p> <p>Nursing B.S. Degree atory wo College 8 Medical 8 certific ing, Ort ical Nu and Nurs</p>
<p>the University</p> <p>Business Ad- cation.</p> <p>each major</p>	<p>Graduate study leading to advanced degrees has been allocated to the State College in the following fields:</p> <p>Biological Sciences, Physical Sciences (including Mathematics), Agriculture, Education, Engineering, Forestry, Home Economics, and Pharmacy.</p> <p>Advanced degrees granted are listed above, following the name of each major school.</p>	<p>Gradua- the Medi- M.A., M. the Univ- accordi-</p>

ION

Oregon State Agricultural College, Corvallis
 Oregon Normal School, Monmouth
 Southern Oregon Normal School, Ashland



MEDICAL SCHOOL
 Portland

NORMAL SCHOOLS

EXTENSION

ne (M.D. degree)
 regular curriculum embraces
 years of professional training,
 by a three-year premedical
 um offered at both the State
 (third-year emphasis on
 science) and the University
 ear emphasis on arts and
 social science).

Lower Division (Junior Certificate)
 At SOUTHERN OREGON NOR-
 MAL SCHOOL, Ashland, and at
 EASTERN OREGON NORMAL
 SCHOOL, La Grande, freshman and
 sophomore work in Liberal Arts and
 Sciences (Language and Literature,
 Science, and Social Science) is
 offered within the limits of the normal-
 school curriculum.

General Extension Division
 The General Extension Division of
 the State System extends the services
 and instruction of the System to the
 people of the state through the fol-
 lowing departments:

g Education (B.A.,
 S. degrees)
 curricula including prepar-
 work at University or State
 and professional work at
 School. Curricula leading to
 es in Public Health Nurs-
 chopædic Nursing, Obstet-
 rying, Pediatric Nursing,
 sing Supervision.

Elementary Teacher Training
 (Normal School Diploma)
 At OREGON NORMAL SCHOOL,
 Monmouth, EASTERN OREGON
 NORMAL SCHOOL, La Grande, and
 SOUTHERN OREGON NORMAL
 SCHOOL, Ashland, a three-year aca-
 demic and professional curriculum
 is offered, leading to the State Nor-
 mal School Diploma and to the State
 Teacher's Certificate, which entitles
 graduates to teach in elementary
 schools of the state.

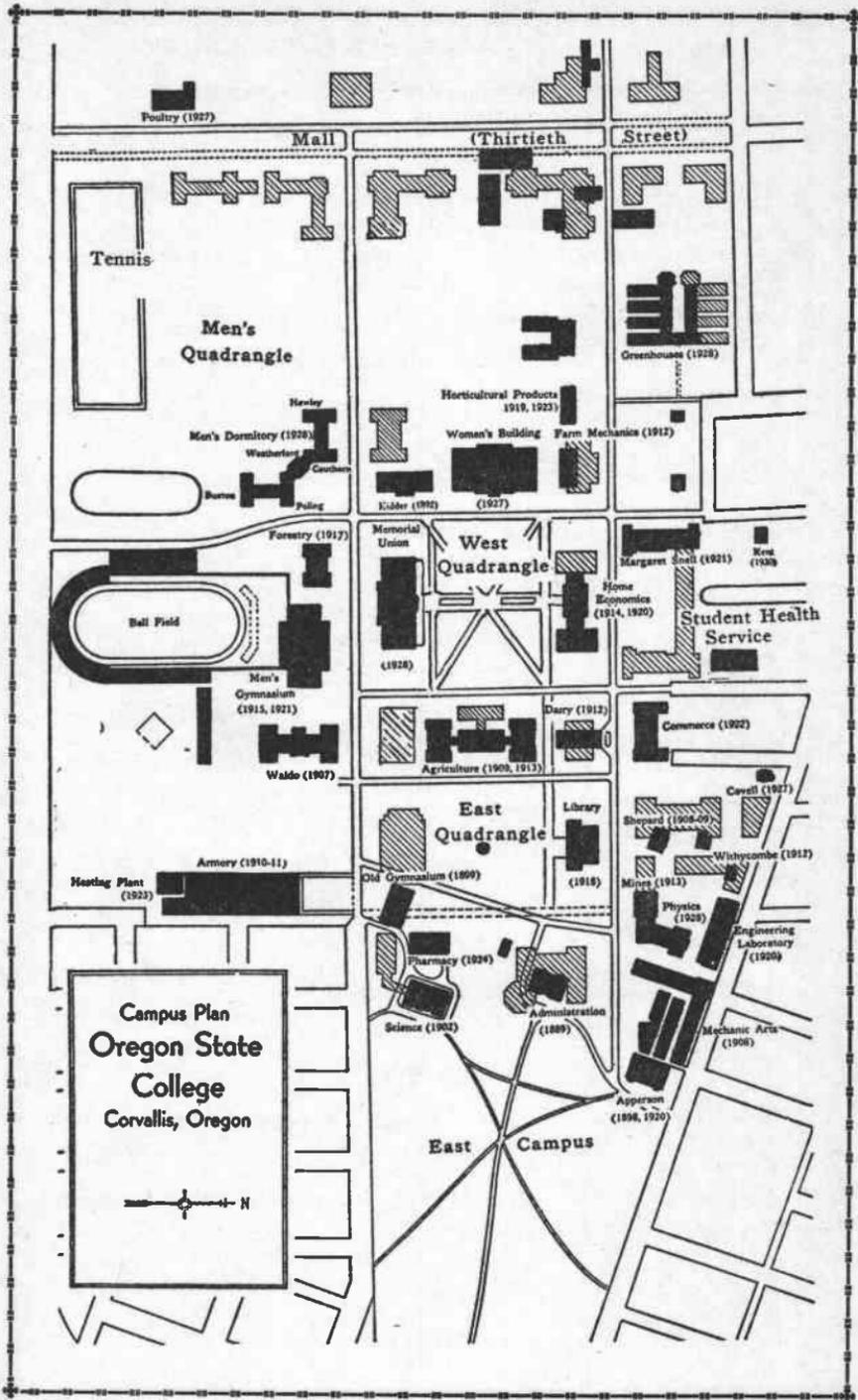
- Correspondence Study
- Municipal Service
- Portland Extension Center
- Radio
- Social Welfare
- Statewide Extension Classes
- Visual Instruction

ate work may be taken at
 ical School, leading to the
 .S., and Ph.D. degrees from
 iversity or the State College,
 g to allocations of curricula.

The work includes: (1) Training
 in the subjects to be taught, and in
 the effective teaching of those sub-
 jects. (2) Broad general education
 for the prospective teacher as indi-
 vidual and citizen.

In certain fields graduate work may
 be taken at the Portland Extension
 Center, leading to degrees from the
 University or the State College, ac-
 cording to the major subject.

**Federal Cooperative
 Extension**
 The Federal Cooperative Extension
 Service in agriculture and home eco-
 nomics of the State College is closely
 coordinated with the work of the
 General Extension Division.



1938

June

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

July

S	M	T	W	T	F	S
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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	---	---	---	---	---	---

August

S	M	T	W	T	F	S
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21	22	23	24	25	26	27
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September

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18	19	20	21	22	23	24
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October

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23	24	25	26	27	28	29
30	31	---	---	---	---	---

November

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20	21	22	23	24	25	26
27	28	29	30	---	---	---

December

S	M	T	W	T	F	S
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

ACADEMIC CALENDAR

1938 Summer Sessions

June 20, *Monday*.....First session begins

July 29, *Friday*.....First session ends

August 1, *Monday*.....Second session begins

September 2, *Friday*.....Second session ends

Fall Term 1938-39

September 23, *Friday*....First faculty meeting
(4:00 o'clock)

September 19-24, *Monday to Saturday*..Freshman Week and Registration for all students entering for the first time.

September 24, *Saturday*....Registration of students who have previously been in attendance.

September 26, *Monday*.....Classes begin

October 8, *Saturday*....Latest day for addition of new courses or new registrations

November 24-27, *Thursday to Sunday*.....Thanksgiving vacation

December 10, *Saturday*.....Classes end

December 12-16, *Monday to Friday*.....Final examinations

December 17, *Saturday*.....Winter vacation begins

SEVENTY-FIRST YEAR

Winter Term 1938-39

January 3, *Tuesday*Registration

January 4, *Wednesday*Classes begin

January 14, *Saturday*.....Latest day for addition
of new courses or new registrations

March 6, *Monday*.....Classes end

March 7-11, *Tuesday to Saturday*.....Final
examinations

March 11, *Saturday*.....Spring vacation begins

Spring Term 1938-39

March 20, *Monday*.....Registration

March 21, *Tuesday*.....Classes begin

April 1, *Saturday*.....Latest day for addition
of new courses or new registrations

May 26, *Friday*.....Classes end

May 27, *Saturday*.....Alumni Day

May 28, *Sunday*.....Baccalaureate Service

May 29, *Monday*.....Seventieth Annual
Commencement

May 29-June 3, *Monday to Saturday*.....Final
examinations

May 30, *Tuesday*.....Memorial Day; Holiday

June 3, *Saturday*.....Summer vacation begins

1939 Summer Sessions

June 20, *Monday*.....Summer session begins

1939

January

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

February

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

March

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

April

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

May

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

June

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

July

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

Part I
State College Staff

Oregon State College

Officers of Administration

FREDERICK MAURICE HUNTER, Ed.D., LL.D.....Chancellor
GEORGE WILCOX PEAVY, M.S.F., Sc.D., LL.D.....President
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RICHARD HAROLD DEARBORN, A.B., E.E. Dean of Engineering
and Industrial Arts
ULYSSES GRANT DUBACH, Ph.D..... Dean of Men
KATE WETZEL JAMESON, Ph.D..... Dean of Women
JAMES RALPH JEWELL, Ph.D., LL.D..... Dean of Education
ERWIN BERTRAN LEMON, B.S.....Registrar
LUCY MAY LEWIS, A.B., B.L.S.....Librarian
AVA BERTHA MILAM, M.A.....Dean of Home Economics
VICTOR PIERPONT MORRIS, Ph.D.....Dean in Charge of Secretarial Science
EARL LEROY PACKARD, Ph.D.....Dean of Science
GEORGE WILCOX PEAVY, M.S.F., Sc.D., LL.D.....Dean of Forestry
GEORGE REBEC, Ph.D.....Dean of Graduate Division
WILLIAM ALFRED SCHOENFELD, M.B.A.....Dean and Director of Agriculture
MAHLON ELLWOOD SMITH, Ph.D.....Dean of Lower Division; Dean of
Lower Division and Service Departments
FREDERICK COLEMAN TEST, Colonel, Infantry.....Commandant
ADOLPH ZIEFLE, M.S., Phar.D.....Dean of Pharmacy

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VIDA LYLE BOWER.....Secretary

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ARTHUR ALONZO BROOKS.....Chief Requisition Clerk
MAE JOSEPHINE NUSBAUM.....Salary Clerk
RUTH WAGNER.....Cashier

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MELISSA HUNTER, M.A. Director of Dormitories
 GEORGIA CHAPMAN BIBEE, B.S. Supervisor of Memorial Union Dining Service

STUDENT HEALTH SERVICE

DANIEL CLYDE REYNOLDS, B.S., M.D. Director of Health Service
 WILLARD JOHN STONE, A.B., M.D. Assistant Physician
 MIRIAM LUTEN, B.S., M.S., M.D. Assistant Physician
 ERNA MARGUERITE PLAGEMAN, R.N. Supervising Nurse
 ANN MAURIS, R.N. Laboratory Technician
 STELLA MEAGHER, R.N. Nurse
 MARY RICHTER, R.N. Nurse
 HELEN KIRCHOFF, R.N. Nurse
 MABEL DARELIUS, R.N. Nurse
 NELLE MARY GUNN X-Ray Technician
 ANNE MARIE TETLOW Secretary

DIVISION OF INFORMATION

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 DELMER MORRISON GOODE, B.A. Editor of Publications
 JOHN COLE BURTNER, B.S. Associate in News Service
 FRED MORRIS SHIDELER, B.S. Assistant in News Service
 ETHEL E ALLEN, B.S. Assistant Editor of Publications

LIBRARY

LUCY MAY LEWIS, A.B., B.L.S. Librarian
 LUCIA HALEY, A.B. Assistant Librarian
 ELIZABETH PROPHET RITCHIE, A.B., B.L.S. Catalog Librarian
 BERTHA EMMA HERSE, B.S., B.L.S. Reference Librarian
 ELZIE VANCE HERBERT Orders Librarian
 RUTH CAROLINE KRUEGER, M.A. Circulation Librarian
 KATHERINE WHIPPLE HUGHES, B.S. in L.S. Reference Assistant
 HARRIET JANET WARNER, A.B. Reference Assistant
 JANET CONSTANCE BEALL, B.S. Reserve Assistant
 CONSTANCE LEHDE, B.A., B.S. in L.S. Document Assistant
 HENDRINE ROZENDAL, M.A. in L.S. Reference Assistant
 MARIAN LUCILLE WABY, A.B., B.S. in L.S. Orders Assistant
 CATHARINE ANNE GARRETT, A.B., B.S. in L.S. General Assistant
 ADELE KÖHN EMERY, B.A. Orders Assistant
 EMMA LOU BOWMAN, A.B., B.S. in L.S. Periodical Assistant
 CATHERINE ENGELN BAZO-FONTANEIL, B.A. Catalog Assistant
 MARY EDITH FRY, B.A., B.S. Circulation Assistant
 THELMA RUTH MOSHER, B.A. Circulation Assistant

MARGARET ANN VILLENEUVE, B.S. in L.S.	Circulation Assistant
MARY ELIZABETH BINFORD, B.A., B.L.S.	Catalog Assistant
DORA HIMMELSBACH COSTELLO, B.Ed., B.S. in L.S.	Reference Assistant
OLGA ELIZABETH SKARTVEDT, B.S., B.S. in L.S.	Catalog Assistant
CARRIE HELEN THORY	Secretary

PHYSICAL PLANT

MARK CLYDE PHILLIPS, B.M.E.	Superintendent of Physical Plant
ELMER POLIC JACKSON, B.S.	Superintendent of Buildings
ARTHUR LEE PECK, B.S., B.A.	Superintendent of Campus
GORDON VERNON SKELTON, C.E.	Superintendent of Surveys, Maps, Roads and Walks, and Fire Protection
DONALD BRUCE STUART	Superintendent of Light and Power
CHARLES GEORGE WILTSHIRE	Superintendent of Plumbing and Steam Fitting

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GEORGE YOULLE MARTIN, B.S.	Superintendent of College Press
HELEN LUCILE HOLGATE, B.S.	Manager of Clerical Exchange

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ERWIN BERTRAN LEMON, B.S.	Registrar
EVA BLACKWELL, B.S.	Assistant to the Registrar
BESS JACKSON MCCOY	Chief Clerk
HULDA BURCHELL WRIGGLESWORTH, B.S.	Examiner
BELVA DIXON, B.S.	Schedule Clerk
MARGARET SHUPE	Recorder

STUDENT WELFARE, PERSONNEL, AND PLACEMENT

ULYSSES GRANT DUBACH, Ph.D.	Dean of Men
KATE WETZEL JAMESON, Ph.D.	Dean of Women
CARL WALTER SALSER, Ed.M.	Head of Personnel and Placement Service
ERNEST WILLIAM WARRINGTON, M.A.	Director of Religious Education
EDWARD CHRISTOPHER ALLWORTH, B.S., LL.D.	Manager and Secretary, Memorial Union
PERCY PHILIP LOCEY, M.A.	General Manager of Student Activities
LORNA COLLAMORE JESSUP, B.S.	Assistant Dean of Women
DAN WILLIAMS POLING, B.S.	Assistant to the Dean of Men
CLYTIE MAY WORKINGER	Placement Secretary
LULA M HOWARD	Employment and Housing Secretary

ALUMNI OFFICE

GEORGE THOMAS SCOTT, B.S.	Secretary, Alumni Association
EUNICE ESTHER COURTRIGHT, B.S.	Records Clerk, Alumni Association

State College Staff*

- FREDERICK MAURICE HUNTER, Ed.D., LL.D.....*Chancellor, Oregon State System of Higher Education; Professor of Education*
 A.B. (1905), Nebraska; A.M. (1919), Columbia; Ed.D. (1925), California; LL.D. (1930), Colorado College; LL.D. (1932), University of Colorado. Faculty, Nebraska (1911-12); City Superintendent of Schools, Lincoln, Neb. (1912-17), Oakland, Cal. (1917-28); Chancellor, University of Denver (1928-35); Professor (1935—), Oregon State. Chancellor, State System (1935—).
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- GEORGE WILCOX PEAVY, M.S.F., Sc.D., LL.D.....*President; Dean of the School of Forestry; Professor of Forestry*
 B.S. (1895), M.S.F. (1905), Sc.D. (1936), Michigan; LL.D. (1937), Willamette. High-School Principal (1895-96), Jackson, Michigan, (1896-1901), Flint, Michigan; Professor (1910—), Dean (1913—), President (1934—), Oregon State. Dean and Director of Forestry, State System (1932—).
-
- ORVILLE DANIEL ADAMS, M.S.....*Associate Professor of Vocational Education*
 B.S. (1932), M.S. (1932), Oregon State. Director of Vocational Education (1926—), State of Oregon; Associate Professor (1926—), Oregon State.
- RUSSEL MONROE ADAMS, M.S.....*Critic Teacher in Agricultural Education*
 B.S. (in Agr.) (1918), Washington State; M.S. (in Voc. Ed.) (1930), Oregon State. Critic Teacher (1935—), Oregon State.
- ARTHUR LEMUEL ALBERT, M.S.....*Associate Professor of Communication Engineering*
 B.S. (1923), M.S. (1926), Oregon State. Instructor (1923-29), Assistant Professor (1929-34), Associate Professor (1934—), Oregon State.
- ETHEL E ALLEN, B.S.....*Assistant Editor of Publications*
 B.S. (1916), Oregon State. Assistant in Library (1917-22), Assistant in Publications (1923-31), Assistant Editor (Assistant Professor) (1931—), Oregon State.
- LEONARD JOHN ALLEN, M.S.....*Assistant State 4-H Club Leader*
 B.S. (1914), M.S. (1915), Oregon State. Assistant State 4-H Club Leader (Associate Professor) (1915—), Oregon State.
- IRA SHIMMIN ALLISON, Ph.D.....*Professor of Geology*
 A.B. (1917), Hanover College; Ph.D. (1924), Minnesota. Faculty, Minnesota (1920-28); Professor (1928—), Oregon State.
- DELMAR ISAAC ALLMAN, Dr.P.H.....*Associate Professor of Hygiene*
 B.S. (1928), Michigan State Normal College; M.S. (1931), Dr.P.H. (1936), Michigan. Faculty, Michigan State Normal College (1928-37); Associate Professor (1937—), Oregon State.
- WILLIAM BALLANTYNE ANDERSON, Ph.D.....*Professor of Physics*
 B.S. (1901), M.S. (1903), Ph.D. (1906), Wisconsin. Faculty, Iowa State (1905-14); Professor (1914—), Oregon State.
- WINFRED MCKENZIE ATWOOD, Ph.D.....*Professor of Plant Physiology*
 A.B. (1907), A.M. (1910), Cornell; M.S. (1911), Ph.D. (1913), Chicago. Instructor (1913-15), Associate Professor (1915-25), Professor (1925—), Oregon State.
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- *State College officers of administration, instruction, and extension at Corvallis having the rank of instructor or above are listed in general as of March 1938.
 The FACULTIES of the several academic divisions are printed under the school or divisional headings.
 An INDEX of NAMES of members of the State College staff, of United States Department of Agriculture scientists at the State College, and of State System officers of administration, research, and extension, is printed on page 423.

- GLENN ALMER BAKKUM, Ph.D.....*Professor of Sociology; Chairman of Department*
 B.S. (1920), Iowa State; M.A. (1925), Columbia; Ph.D. (1928), Cornell. Faculty, University of Wichita (Department Head) (1927-35), Director of Bureau of Municipal Social Research (1930-33); Professor (1935—), Oregon State.
- LAURIN BURTON BALDWIN, A.M., D.D.....*Assistant Professor of English*
 A.B. (1895), A.M. (1897), Philomath; A.B. (1925), California; D.D. (1910), Huntington College. Faculty, Hartsville College (1896-97), Edwards College (1899-1903), Philomath (1903-05); Instructor (1906-14), Assistant Professor (1914-25), Instructor (1925-32), Assistant Professor (1932—), Oregon State.
- FRANK LLEWELLYN BALLARD, B.S.....*Vice Director, Federal Cooperative Extension Service; State County Agent Leader; Professor of Extension Methods*
 B.S. (1916), Oregon State. County Agricultural Agent, New Hampshire (1916-17); Field Agent in Marketing (1917-18), Assistant County Agent Leader (1918-23), State County Agent Leader (Professor) (1923—), Vice Director (1934—), Professor of Extension Methods (1934—), Oregon State.
- BERNICE BAND, M.A.....*Assistant Professor of Clothing, Textiles, and Related Arts*
 A.B. (1931), M.A. (1935), California. Faculty, California (1934-36); Assistant Professor (1936—), Oregon State.
- ELIZABETH MARIA BARNES, B.L.I.....*Associate Professor of Speech*
 B.L.I. (1925), Emerson College. Faculty, Idaho (Southern Branch) (1911-15); Instructor (1922-24), Assistant Professor (1924-27), Associate Professor (1927—), Oregon State.
- JAMES HERVEY BATCHELLER, B.S. (Min.E.).....*Professor of Mining Engineering; Head of Department*
 B.S. (Min.E.) (1900), Massachusetts Institute of Technology. Associate Professor (1919-28), Professor and Department Head (1928—), Oregon State.
- CATHERINE ENGELN BAZO-FONTANEIL, B.A.....*Catalog Assistant, Library*
 B.A. (1934), California at Los Angeles; Certificate of Librarianship (1936), California. Assistant (1936-37), Los Angeles Public Library Branches; Catalog Assistant (1937—), Oregon State.
- JANET CONSTANCE BEALL, B.S.....*Reserve Assistant, Library*
 B.S. (1931), Washington. Reserve Assistant (1933—), Oregon State.
- HARRY LYNDEN BEARD, M.A.....*Assistant Professor of Mathematics; Professor of Music; Conductor of R.O.T.C. Band*
 B.S. (1899), Oregon State; M.A. (1929), California. Instructor (1905-18), Assistant Professor of Mathematics (1918—), Professor of Music (1924—), Conductor (1905—), Oregon State.
- EDWARD BENJAMIN BEATY, M.A.....*Professor of Mathematics*
 B.S. (1903), Oregon State; M.A. (1916), California. Adviser of Freshmen (1916-27), Instructor (1908-12), Assistant Professor (1912-15), Associate Professor (1915-27), Professor (1927—), Oregon State.
- JAMES RALPH BECK, B.S.....*Rural Service Specialist*
 B.S. (1920), Oregon State. County Agent, Washington (1920-22); County Agent (Lincoln and Polk Counties) (1922-36), Rural Service Specialist (Professor) (1936—), Oregon State.
- BEATRICE BUTLER BEEBE, M.A.....*Instructor in English*
 A.B. (1908), Illinois; LL.B. (1912), M.A. (1925), Oregon. Instructor (1934—), Oregon State.
- NOEL LINDSAY BENNION, M.S.....*Poultry Specialist*
 B.S. (1928), Utah State; M.S. (1932), Kansas State. Poultry Specialist (Assistant Professor) (1937—), Oregon State.
- FREDERICK BERCHTOLD, A.M., Litt.D.....*Professor Emeritus of English*
 B. in Ped. (1879), State Normal, Berne, Switzerland; A.B. (1899), A.M. (1910), National University; Litt.D. (1934), Oregon State. Faculty (1884—), Professor and Department Head (1900-32), Professor Emeritus (1932—), Oregon State.

- RALPH STEPHEN BESSE, M.S. *Vice Director of Agricultural Experiment Station*
 B.S.A. (1913), M.S. (1915), Missouri. Faculty, Missouri (1913-15); State Leader of County Agents, Wyoming (1915-18); Extension Specialist in Farm Management (1922-25), Associate Professor (Research) (1926-28), Assistant to Director, Agricultural Experiment Station (1929-31), Vice Director (Professor) (1932—), Oregon State.
- GEORGIA CHAPMAN BIBEE, B.S. *Assistant Professor of Institution Economics; Supervisor of Memorial Union Dining Service*
 B.S. (1925), Washington. Assistant Manager of University Commons, Washington (1925-26); Instructor (1926-30), Assistant Director of Dormitories (1926-29), Assistant Professor and Supervisor of Memorial Union Dining Service (1930—), Oregon State.
- MARY ELIZABETH BINFORD, B.A., B.L.S. *Catalog Assistant, Library*
 B.S. (1926), Earlham College; B.L.S. (1929), Columbia. Staff (1927-30), Indiana State Library; Head Cataloger (1930-37), El Paso Public Library; Catalog Assistant (1937—), Oregon State.
- FLORENCE BLAZIER, Ph.D. *Professor of Home Economics Education; Head of Department*
 Ph.B. (1918), Chicago; M.A. (1924), Indiana; Ph.D. (1932), Minnesota. Faculty, Iowa State (1918-20), Indiana (1920-24); Associate Professor (1924-25), Professor and Department Head (1925—), Oregon State.
- FONSOE MARION BOLIN, D.V.M. *Assistant Veterinarian, Agricultural Experiment Station*
 D.V.M. (1929), Iowa State. Assistant Veterinarian (1929—), Oregon State.
- WALTER BENO BOLLEN, Ph.D. *Associate Professor of Bacteriology; Associate Bacteriologist, Agricultural Experiment Station*
 B.S. (1921), M.S. (1922), Oregon State; Ph.D. (1924), Iowa State. Assistant Chemist, Idaho (1925-29); Assistant Professor and Associate Bacteriologist (1929-37), Associate Professor (1937—), Oregon State.
- AUBREY HOODENPYL BOND, Major, Corps of Engineers, C.E. *Associate Professor of Military Science and Tactics; Director of Engineer Unit*
 B.S. (1917), C.E. (1933), Wisconsin; Graduate (1920), Engineer School; Graduate (1933), Army Industrial College; Major, Corps of Engineers, U. S. Army. Associate Professor (1935—), Oregon State.
- ARTHUR GEORGE BRISTOW BOUQUET, M.S. *Professor of Vegetable Crops; Horticulturist (Vegetable Crops), Agricultural Experiment Station*
 B.S. (1906), Oregon State; M.S. (1930), Cornell. Faculty, Cornell (1929-30); Assistant Professor (1911-15), Associate Professor (1915-16), Professor and Horticulturist (1916—), Oregon State.
- DOROTHY MAY BOURKE, B.A. *Assistant Professor of Art*
 B.A. (1925), California School of Arts and Crafts. Instructor (1928-37), Assistant Professor (1937—), Oregon State.
- FLORENCE BOWDEN, B.A. *Instructor in Cello, Violin, and Fretted Instruments; Conductor of Mandolin and Guitar Club*
 B.A. (1915), Oregon. Instructor and Conductor (1911—), Oregon State.
- EMMA LOU BOWMAN, A.B., B.S. in L.S. *Periodical Assistant, Library*
 A.B. (1929), Colorado College; B.S. in L.S. (1936), Denver. Catalog Assistant (1937—), Oregon State.
- WILLIAM PINGRY BOYNTON, Ph.D., Sc.D. *Professor Emeritus of Physics*
 A.B. (1890), A.M. (1893), Dartmouth; Ph.D. (1897), Clark; Sc.D. (1937), Oregon. Faculty, Southern California (1890-93), California (1897-1901); Dean and Professor, California College (1901-03); Faculty (1930-32), Department Head (1906-32), Oregon; Professor (1932-37), Professor Emeritus (1937—), Oregon State.
- JAMES JOSEPH BRADY, Ph.D. *Assistant Professor of Physics*
 B.A. (1927), Reed College; M.A. (1928), Indiana; Ph.D. (1931), California. Faculty, St. Louis (1932-37); Assistant Professor (1937—), Oregon State.

- VERA HASKELL BRANDON, Ph.D.**.....*Professor of Child Development; Acting Head of Department of Household Administration*
 B.S. (1911), B.S. (1927), M.S. (1929), Oregon State; Ph.D. (1936), Iowa. Instructor (1928-34), Assistant Professor (1934-36), Associate Professor (1936-37), Professor (1937—), (Acting Department Head 1934-36, 1937—), Oregon State.
- PHILIP MARTIN BRANDT, A.M.**.....*Professor of Dairy Husbandry; In Charge, Division of Animal Industries; Head of Department of Dairy Husbandry; Acting Head of Department of Animal Husbandry; Dairy Husbandman, Agricultural Experiment Station*
 B.S. (1910), A.M. (1913), Missouri. Faculty, Missouri (1911-14), Assistant to Dean and Director (1914-17); Professor (Department Head) and Dairy Husbandman (1917—), Division Head (1933—), Oregon State.
- CLARENCE IVAN BRANTON, B.S.**.....*Assistant Agricultural Engineer, Agricultural Experiment Station*
 B.S. (1933), Oregon State. Assistant Agricultural Engineer (1933—), Oregon State.
- JEANNETTE ALICE BRAUNS, B.S.**.....*Instructor in Physical Education for Women*
 B.S. (1930), Battle Creek College. Instructor (1930—), Oregon State.
- LE ROY BREITHAUP, B.S.**.....*Extension Agricultural Economist*
 B.S. (1910), Oregon State. Superintendent (1911-18), Harney Branch Experiment Station; County Agricultural Agent (1920-26), Malheur County; Extension Agricultural Economist (Professor) (1926—), Oregon State.
- DORRIS JACQUELINE BRIER, B.S.**.....*Instructor in Household Administration*
 B.S. (1934), Oregon State. Instructor (1937—), Oregon State.
- LEWIS CLEMENCE BRITT, Ph.D.**.....*Assistant Professor of Pharmaceutical Analysis; In Charge of Department; Director of the Drug Laboratory of the Oregon State Board of Pharmacy*
 Ph.C. (1925), B.S. (1926), Oregon State; M.S. (1929), Ph.D. (1937), Washington. Instructor (1926-28), Assistant Professor (1930—), Oregon State.
- WALTER SHELDON BROWN, M.S., D.Sc.**.....*Professor of Horticulture; Head of Department; Horticulturist, Agricultural Experiment Station*
 A.B. (1899), D.Sc. (1931), Alfred; B.S.A. (1904), Cornell; M.S. (1906), Wisconsin. Faculty, Wisconsin (1904-06); Head of Department of Horticulture and Forestry, Winona Agricultural Institute (1906-08); Extension Specialist (1913-19), Pomologist (1919-20), Professor (Department Head) and Horticulturist (1920—), Oregon State.
- JESSE FRANKLIN BRUMBAUGH, A.M.**.....*Professor of Psychology*
 A.B. (1894), DePauw; LL.B. (1911), South Dakota; A.M. (1902), Chicago. Faculty, Dakota Wesleyan (S.D.) (1897-1901), DePauw (1902-06), State Law School of South Dakota (1909-13); Professor (1915—), Oregon State.
- CLARENCE JOSEPH BUDELIER, B.S.**.....*Instructor in Logging Engineering*
 B.S. (1917), Oregon State. Instructor (1935—), Oregon State.
- DELOSS EVERETT BULLIS, M.S.**.....*Associate Chemist (Small Fruit and Hop Investigations), Agricultural Experiment Station*
 B.S. (1917), M.S. (1929), Oregon State. Assistant Chemist (1917-34), Associate Chemist (Associate Professor) (1934—), Oregon State.
- ARNOLD STEWART BURRIER, M.S.**.....*Professor of Farm Management; Head of Department; Economist (Farm Management), Agricultural Experiment Station*
 B.S. (in Agri.) (1924), Missouri; M.S. (1925), Oregon State. Assistant (1925-29), Associate Economist (1932-36); Professor (Department Head) and Economist (1936—), Oregon State.
- URIEL SELLERS BURT**.....*Extension Specialist in Visual Instruction*
 Assistant in Information and Exhibits (1919-30), Assistant Professor (1925); Extension Specialist in Visual Instruction (Associate Professor and Department Head) (1930—), Oregon State.
- JOHN COLE BURTNER, B.S.**.....*Associate in News Service*
 B.S. (1923), Oregon State. Instructor in Journalism (1924-28), Associate Director of News Service and Agricultural Press Editor (Associate Professor) (1929-32), Associate in News Service (1932—), Extension Editor (1933—), Oregon State.

- EILEEN PERDUE BUXTON, B.S. *Acting Extension Specialist in Clothing and Textiles*
B.S. (1928), Iowa State. Extension Agent-at-Large (1936-37), Acting Specialist (1937—), Oregon State.
- WILLIAM ELMER CALDWELL, Ph.D. *Assistant Professor of Chemistry*
Met.E. (1924), Montana School of Mines; B.S. (1928), Ph.D. (1930), Wisconsin. Faculty, Wisconsin (1929); Assistant Professor (1930—), Oregon State.
- EDWARD CLEVELAND CALLAWAY, M.S. *Instructor in Chemistry*
B.S. (1909), M.S. (1911), M.S. (1931), Oregon State. Faculty, North Pacific College (1918-27); Dean of Pharmacy, Des Moines University (1927-29); Instructor (1929—), Oregon State.
- PAUL CARPENTER, B.S. *Extension Agricultural Economist (Marketing)*
B.S. (1932), Minnesota. Extension Economist, Montana State (1928-34), Extension Economist (Professor) (1934—), Oregon State.
- LUCY ADA CASE, M.A. *Extension Specialist in Nutrition; Associate Professor of Foods and Nutrition*
B.A. (1911), Wisconsin; M.A. (1912), Columbia; B.S. (1924), Minnesota. Nutrition Specialist, Wisconsin (1922-24); Extension Specialist (Assistant Professor 1924-35), Associate Professor (1935—), Oregon State.
- WILLARD JOSEPH CHAMBERLIN, Ph.D. *Associate Professor of Entomology*
B.S. (1915), M.S. (1921), Oregon State; Ph.D. (1930), Stanford. Instructor (1916-21), Assistant Professor (1921-28), Associate Professor (1928—), Oregon State.
- OTHNIEL ROBERT CHAMBERS, Ph.D. *Professor of Psychology; In Charge of Department*
A.B. (1922), M.A. (1922), Indiana; Ph.D. (1926), Ohio State. Faculty, Ohio State (1923-26), Texas (1926-29); Professor (1929—), Oregon State.
- HERBERT ELLSWORTH CHILDS, Ph.D. *Instructor in English*
A.B. (1926), Oberlin College; Ph.D. (1932), Washington. Faculty, Washington (1929-33), Boise Junior College (1933-35); Instructor (1935—), Oregon State.
- BERT EINAR CHRISTENSEN, Ph.D. *Assistant Professor of Chemistry*
B.S. (1927), Washington State; Ph.D. (1931), Washington. Instructor (1931-34), Assistant Professor (1934—), Oregon State.
- LOIS KNAPP CHRISTIAN, B.S. *Critic Teacher in Home Economics Education*
B.S. (1937), Oregon State. Critic Teacher (1937—), Oregon State.
- JOHN MYERS CLIFFORD *Extension Secretary*
Secretary to Dean and Director of Agriculture (1918-20), Extension Secretary (Assistant Professor) (1933—), Oregon State.
- RILEY JENKINS CLINTON, Ed.D. *Professor of Education*
A.B. (1922), B.S. (in Ed.) (1922), M.A. (1925), Missouri; Ed.D. (1933), Stanford. Cubberley Teaching Fellow and Research Assistant in Psychology, Stanford (1927-28); Associate Professor (1928-33), Professor (1933—), Oregon State.
- HAROLD COCKERLINE, B.S. *Assistant Professor of Electrical Engineering*
B.S. (in E.E.) (1912), Oregon. Instructor (1921-23), Assistant Professor (1923—), Oregon State.
- RALPH COLBY, Ph.D. *Associate Professor of English*
B.A. (1916), M.A. (1917), Minnesota; Ph.D. (1928), Illinois. Faculty, Illinois (1919-28); Assistant Professor (1928-37), Associate Professor (1937—), Oregon State.
- RALPH ORVAL COLEMAN, M.A. *Professor of Physical Education; Director of Intramural Sports; Head Coach of Baseball*
B.S. (1918), Oregon State; M.A. (1929), Columbia. Instructor (1919-25), Associate Professor (1925-30), Director of Intramural Sports (1929—), Professor (1930—), Oregon State.
- HOWARD NOTSON COLMAN, B.A., B.S. *Assistant Professor of Dairy Husbandry*
B.A., B.S. (1915), Nebraska. Faculty, Nebraska (1915-18), Washington State (1918-20); Instructor (1920-25), Assistant Professor (1925—), Oregon State.

- EDWARD HURSHAL COMBS, Sergeant.....*Instructor in Military Science and Tactics (Field Artillery Unit)*
Assistant Instructor (1932—), Oregon State.
- WILBUR TARLETON COONEY, B.S.....*Instructor in Poultry Husbandry*
B.S. (1937), Oregon State. Instructor (1937—), Oregon State.
- GODFREY VERNON COPSON, M.S.....*Professor of Bacteriology; Head of Department; Bacteriologist in Charge, Agricultural Experiment Station*
B.S. (1911), M.S. (1913), Oregon State. Assistant Professor (1915-18), Acting Department Head (1918-20), Professor (Department Head) and Bacteriologist in Charge (1920—), Oregon State.
- HUBERT ELMER COSBY.....*Professor of Poultry Husbandry; Head of Department; Poultry Husbandman, Agricultural Experiment Station*
Extension Poultryman (1917-19), United States Department of Agriculture; Extension Poultryman, Missouri Poultry Experiment Station (1919-20); Extension Poultryman (1920-36), Associate Professor (1924-36), Professor (Department Head) and Poultry Husbandman (1936—), Oregon State.
- DORA HIMMELSBACH COSTELLO, B.Ed., B.S. in L.S.....*Reference Assistant, Library*
B.Ed. (1921), B.S. in L.S. (1938), Washington. Library Assistant, Louisiana State (1925-26); California State Library (1926-33); Yakima Public Library (1934-37); Library Assistant (1923-25), Reference Assistant (1937—), Oregon State.
- HELEN JULIA COWGILL, M.A.....*Assistant State 4-H Club Leader*
B.S. (1913), B.S. (1916), Oregon State; M.A. (1931), Washington. Assistant State Club Leader (Associate Professor) (1914—), Oregon State.
- GEORGE BRYAN COX, B.S.....*Professor of Industrial Arts; Professor of Industrial Education; Head of Department; Director of Engineering Shops*
B.S. (1919), Missouri. Faculty, Missouri (1916-19), Huntsville (Texas) State Teachers College (1920-21), Wisconsin (1921-27); Professor (Department Head) and Director of Engineering Shops (1927—), Oregon State.
- JOHN EARL CRAWFORD, Sergeant.....*Instructor in Military Science and Tactics (Infantry Unit and Rifle Marksmanship)*
Instructor (1937—), Oregon State.
- FREDERICK ALEXANDER CUTHBERT, M.L.D.....*Associate Professor of Landscape Architecture*
A.B. (1926), M.L.D. (1928), Michigan. Faculty, Oregon (1932—); Instructor (1928-30), Assistant Professor (1930-34), Associate Professor (1934—), Oregon State.
- ROBERT HORNIMAN DANN, M.A.....*Associate Professor of Economics; Associate Professor of Sociology*
B.A. (1917), Pacific College; M.A. (1918), Haverford College. Faculty, Guilford College (1920-24); Instructor (1927-28), Assistant Professor (1928-35), Associate Professor (1935—), Oregon State.
- MABEL DARELIUS, R.N.....*Nurse, Health Service*
R.N. (1912), Eugene Hospital School of Nursing; Graduate work (1917) Los Angeles County Hospital. Nurse (1921—), (Instructor 1937—), Oregon State.
- LAURENCE EDWIN DARLINGTON, Staff Sergeant (Captain, Quartermaster, Officers' Reserve Corps), M.S.....*Instructor in Military Science and Tactics (Engineer Unit)*
B.S. (1932), M.S. (1934), Oregon State. Assistant (1921—), Oregon State.
- EVERETT HENRY DAVIS, B.S.....*Specialist in Agricultural Engineering*
B.S. (1934), Oregon State. Assistant County Agent (Coos and Curry Counties) (1934), Extension County Agent (Jefferson County) (1935), Extension Specialist (1936—), Oregon State.
- MERLE BONNEY DAVIS, B.S.....*Critic Teacher in Home Economics Education*
B.S. (1926), Oregon State. Critic Teacher (1926—), Oregon State.

- RICHARD HAROLD DEARBORN, A.B., E.E. *Dean of the School of Engineering and Industrial Arts; Director of the Engineering Experiment Station*
A.B. (1895), Willamette; E.E. (1900), Cornell. Faculty, Oregon (1901-14), Department Head (1903-14); Professor and Department Head (1914-37), Acting Dean and Director (1933-35), Dean and Director (1935—), Oregon State. Dean and Director of Engineering, State System (1935—).
- DANIEL BARTON DELOACH, Ph.D. *Assistant Professor of Business Administration*
B.S. (1927), Oregon State; M.A. (1932), Ph.D. (1935), California. Faculty, Oregon Normal School (1928-31); Research Assistant, Giannini Foundation in Agricultural Economics, California (1934-35); Assistant Professor (1935—), Oregon State.
- JAMES DEMITH, Sergeant, Field Artillery. *Instructor in Military Science and Tactics (Field Artillery Unit)*
Instructor (1937—), Oregon State.
- ERNEST MILTON DICKINSON, M.S. *Associate Professor of Veterinary Medicine*
D.V.M. (1927), Ohio State; M.S. (1935), Oregon State. Junior Veterinarian, California at Los Angeles (1936-38); Assistant Poultry Pathologist (1927-36), Associate Professor (1938—), Oregon State.
- ROLAND EUGENE DIMICK, M.S. *Professor of Fish and Game Management; Head of Department; Wildlife Conservationist in Charge, Agricultural Experiment Station*
B.S. (1926), M.S. (1931), Oregon State. Assistant (1929-31), Assistant Professor (1931-36), Professor (Department Head) and Wildlife Conservationist in Charge (1936—), Oregon State.
- JAMES VICTOR DIXON, B.S. *Instructor in Physical Education; Assistant Coach of Football*
B.S. (1931), Oregon State. Instructor and Assistant Coach (1927—), Oregon State.
- HAROLD ARTHUR DOHERTY, Captain, Field Artillery. *Assistant Professor of Military Science and Tactics (Field Artillery Unit)*
Graduate (1918) Shattuck Military College; Graduate (1928), Field Artillery School, Battery Officers Course. Assistant Professor (1937—), Oregon State.
- SAMUEL MICHAEL DOLAN, C.E. *Associate Professor of Civil Engineering*
C.E. (1910), Notre Dame. Instructor (1910-14), Assistant Professor (1914-20), Associate Professor (1920—), Oregon State.
- NOBLE CLARK DONALDSON, B.S. *Executive Secretary, Agricultural Conservation Program*
B.S. (1912), Montana State. County Agent (Assistant Professor) (1930-34), Executive Secretary, Agricultural Conservation Program, (Associate Professor) (1934—), Oregon State.
- ROBERT WATSON DOUGHERTY, B.S., D.V.M. *Instructor in Veterinary Medicine; Assistant Veterinarian, Agricultural Experiment Station*
B.S. (1927) Iowa State; D.V.M. (1936) Ohio State. Instructor (1937—), Oregon State.
- WILLIAM HENRY DREESEN, Ph.D. *Professor of Economics; Agricultural Economist, Agricultural Experiment Station*
A.B. (1907), Greenville College (Illinois); M.A. (1916), Ph.D. (1918), Illinois. Faculty, Greenville College (1908-14), Illinois (1914-18); Assistant Professor (1918-22), Associate Professor (1922-29), Professor and Agricultural Economist (1929—), Oregon State.
- ULYSSES GRANT DUBACH, Ph.D. *Dean of Men; Professor of Political Science; Head of Department*
A.B. (1908), Indiana University; M.A. (1909), Harvard; Ph.D. (1913), Wisconsin. Professor and Department Head (1913—), Dean of Men (1924—), Oregon State.

- WILLIS PIERRE DURUZ, Ph.D.....*Professor of Pomology; Horticulturist
(Plant Propagation), Agricultural Experiment Station*
B.S. (1917), Rutgers; M.S. (1922), California; Ph.D. (1929), Stanford. Fruit Specialist, New Jersey Department of Agriculture (1917); County Club Leader, Wyoming (1919-20); Faculty, California (1920-29); Professor (1929—), Horticulturist (1933—), Oregon State.
- LILLY NORDGREN EDWARDS, M.A.....*Instructor in Secretarial Science*
B.S. (1924), Oregon State; M.A. (1931), Stanford. Faculty, Yuba County Junior College (California) (1927-29); Assistant (1924-25), Instructor (1929—), Oregon State.
- WILLIAM DONALD EDWARDS, M.S.....*Assistant Entomologist,
Agricultural Experiment Station*
B.S. (1931), M.S. (1936), Oregon State. Assistant (1931-37), Assistant Entomologist (Assistant Professor) (1937—), Oregon State.
- THERON HARMS EGBERT, B.Arch.....*Instructor in Art and Architecture*
B.Arch. (1936), Oregon. Instructor (1936—), Oregon State.
- JOSEPH WALDO ELLISON, Ph.D.....*Professor of History*
A.B. (1917), M.A. (1919), Ph.D. (1923), California. Instructor (1924-27), Assistant Professor (1927-34), Associate Professor (1934-37), Professor (1937—), Oregon State.
- ROBERT AUGUSTUS ELLSWORTH, Captain, Field Artillery, B.S.....*Assistant
Professor of Military Science and Tactics (Field Artillery Unit)*
B.S. (1924), U.S. Military Academy; Graduate (1929) Field Artillery School Battery Officers' Course; Graduate (1931) Advance Equitation Course, Fort Sill, Oklahoma. Assistant Professor (1936—), Oregon State.
- ADELE KÖHN EMERY, B.A.....*Orders Assistant, Library*
B.A. (1935), California. Order Assistant, (1936—), Oregon State.
- CLARK MIXON EMERY, M.A.....*Instructor in English*
B.A. (1932) Whitman College; M.A. (1933) Washington University, St. Louis. Instructor (1936—), Oregon State.
- JOHN WALTER ERICKSON, B.S.....*Instructor in Secretarial Science*
B.S. (1931), Oregon State. Instructor (1935—), Oregon State.
- DON ESSIG, M.A.....*Instructor in Secretarial Science*
B.S. (1931) State Teachers College, Warrenburg, Missouri; M.A. (1937), Colorado State College of Education. Instructor (1937—), Oregon State.
- ROBERT MURRAY EVENDEN, M.S.....*Assistant Professor of Wood Products*
B.S. (1931), M.S. (1932), Oregon State. Assistant Professor (1937—), Oregon State.
- FREDERICK ALTON EVEREST, E.E.....*Instructor in Electrical Engineering*
B.S. (1932) Oregon State; E.E. (1936) Stanford. Instructor (1936—), Oregon State.
- HAROLD PLYMPTON EWALT, B.S.....*Instructor in Dairy Husbandry*
B.S. (1932), Oregon State. Instructor (1937—), Oregon State.
- JOHN LEO FAIRBANKS.....*Professor of Art and Architecture;
Head of Department*
Cert. (1906), Beaux Arts, Paris; Cert. (1909), Academie Julien, Paris; Cert. (1909), Colorossi, Paris. Extension Instructor, Utah and Utah State (1918-22); Professor and Department Head (1923—), Oregon State.
- NATHAN FASTEN, Ph.D.....*Professor of Zoology; Head of Department*
B.S. (1910), College of the City of New York; Ph.D. (1914), Wisconsin. Head of Biology Department, Marshall College (1910-11); Faculty, Wisconsin (1911-14), Washington (1914-20); Associate Professor (1920-21), Professor and Department Head (1921—), Oregon State.
- JAMES WILLIAMS FERGUSON, Ph.D.....*Instructor in Chemistry*
A.B. (1929), Miami; A.M. (1931), Oberlin; Ph.D. (1934), Michigan. Instructor (1936—), Oregon State.

- MARGARET LOUISE FINCKE, Ph.D. *Associate Professor of Foods and Nutrition*
A.B. (1921), Mount Holyoke; A.M. (1932), Ph.D. (1935), Columbia. Associate Professor (1935—), Oregon State.
- HAROLD ETHAN FINNELL, M.S. *Assistant Professor of Farm Crops*
B.S. (1934), M.S. (1936), Oregon State. Assistant Extension Specialist (1936-37), Assistant Professor (1937—), Oregon State.
- ROBERT ESTES FORE, Ph.D. *Assistant Professor of Farm Crops;*
Assistant Agronomist, Agricultural Experiment Station
B.S. (1929), Iowa State; M.S. (1931), Ph.D. (1935), Illinois. Assistant Professor and Assistant Agronomist (1935—), Oregon State.
- RUTH MORRIS FOREST, M.S. *Assistant State Supervisor in Vocational*
Home Economics
B.S. (1929), M.S. (1935), Oregon State. Critic Teacher (1931-37), Assistant State Supervisor in Vocational Home Economics (1937—), Oregon State.
- FRANK LLOYD FRANCE, M.S. *Instructor in Industrial Education*
B.S. (in Ed.) (1922), State Teachers College, Kirksville, Mo.; B.S. in Industrial Arts (1924), Stout Institute (Wisconsin); M.S. (1937), Oregon State. Director of Industrial Education, Kirksville (Mo.) State Teachers College (1921-24); Director of Industrial Education, Berea College (1924-25); Instructor (1927—), Oregon State.
- MINNIE DEMOTTE FRICK, B.S. *Associate Professor of Secretarial Science*
B.S. (1929), Oregon State. Instructor (1920-29), Assistant Professor (1929-35), Associate Professor (1935—), Oregon State.
- LEO FRIEDMAN, Ph.D. *Assistant Professor of Chemistry*
B.S. (1925), Maine; Ph.D. (1928), Wisconsin. Faculty, Oregon (1928-32); Assistant Professor (1932—), Oregon State.
- ALMA CATHERINE FRITCHOFF, M.A. *Professor of Clothing, Textiles,*
and Related Arts; Head of Department
B.A. (1917), Nebraska; M.A. (1925), Columbia. Faculty, Nebraska (1923-25); Instructor (1918-22, 1925-29), Professor and Department Head (1929—), Oregon State.
- MARY EDITH FRY, B.A., B.S. *Circulation Assistant, Library*
B.A. (1934), Goucher College; B.S. (1937), Columbia. Circulation Assistant (1937—), Oregon State.
- JOHN FULTON, M.S. *Professor of Chemistry; Head of Department*
B.S. (1892), M.S. (1900), Oregon State. Instructor (1893-95), Acting Station Chemist (1896), Assistant Professor (1897), Associate Professor (1899), Professor (1901—), Department Head (1907—), Oregon State.
- JOHN CLIFTON GARMAN, Ph.M. *Assistant Professor of Physics*
B.S. (in E.E.) (1922), Oregon State; Ph.M. (1933), Wisconsin. Instructor (1923-34), Assistant Professor (1934—), Oregon State.
- CATHARINE ANNE GARRETT, A.B., B.S. *General Assistant, in*
Charge of McDonald Room, Library
A.B. (1926), Grinnell College; B.S. in L.S. (1932), Denver. Periodical Assistant, Library (1935), Nebraska; Assistant, Library (1935—), Oregon State.
- EVRA ALTA GARRISON, M.A. *Assistant Professor of Foods and Nutrition*
B.S. (1923), Nebraska; M.A. (1930), California. Instructor (1930-33), Assistant Professor (1933—), Oregon State.
- HEBER HOWARD GIBSON, A.M. *Professor of Agricultural Education;*
Head of Department
A.B. (1909), Denison University (Ohio); A.M. (1912), Columbia. Faculty, Kearney (Nebraska) State Normal School (1914-15), Iowa State (1915-17); State Supervisor of Agricultural Education, Vermont (1917-19); Faculty, Arizona (1919-21); Professor and Department Head (1921—), Oregon State.
- EARL C GILBERT, Ph.D. *Professor of Physical Chemistry*
B.S. (1916), M.S. (1917), Hiram College; Ph.D. (1922), Chicago. John Simon Guggenheim Fellowship, Polytechnic Institute, Copenhagen, and University of Berlin (1928-29); Instructor (1917-21), Assistant Professor (1922-25), Associate Professor (1925-30), Professor (1930—), Oregon State.

- FRANCOIS ARCHIBALD GILFILLAN, Ph.D.....*Professor of Pharmacy;*
Head of Department
 B.S. (1918), Ph.G. (1918), Ph.C. (1920), Oregon State; Ph.D. (1921), Yale. Faculty, Florida (1925-27); Instructor (1918), Assistant Professor (1922-25), Associate Professor (1927-30), Professor and Department Head (1930—), Oregon State.
- HELEN MARGARET GILKEY, Ph.D.....*Associate Professor of Botany;*
Curator of Herbarium
 B.S. (1907), M.S. (1911), Oregon State; Ph.D. (1915), California. Faculty, California (1915-16); Assistant (1907-09), Instructor (1909-11), Assistant Professor (1918-27), Associate Professor (1927—), Oregon State.
- AMORY TINGLE GILL, B.S.....*Head Coach of Basketball;*
Instructor in Physical Education
 B.S. (1925), Oregon State. Instructor and Coach (1926—), Oregon State.
- WILLIAM JAMES GILMORE, B.C.E., B.S.....*Professor of Agricultural*
Engineering; Head of Department
 B.C.E. (1909), B.S. (in A.E.) (1911), Iowa State. Faculty, Manitoba Agricultural (1911-15); Professor and Department Head (1915—), Oregon State.
- GEORGE WALTER GLEESON, Ch.E.....*Professor of Chemical Engineering;*
Acting Head of Department
 B.S. (in Ch.E.) (1928), M.S. (in M.E.) (1934), Ch.E. (1936), Oregon State. Engineering Experiment Station Fellow (1928-29), Instructor in Mechanics and Materials (1929-32), Assistant Professor of Chemical Engineering (1932-36), Associate Professor in Charge of Department (1936-37), Professor and Acting Head (1937—), Oregon State.
- BURDETTE GLENN, M.S.....*Professor of Highway Engineering*
 B.S. (1919), Michigan; M.S. (1931), Iowa State. Faculty, Michigan (1918-19); Instructor (1919-22), Assistant Professor (1922-34), Associate Professor (1934-37), Professor (1937—), Oregon State.
- DELMER MORRISON GOODE, B.A.....*Editor of Publications*
 B.A. (1916), Minnesota. Assistant (1919-20), Assistant Editor (1920-22), Associate Editor (Associate Professor) (1922-35), Editor (Professor) (1935—), Oregon State.
- KENNETH LLEWELLYN GORDON, Ph.D.....*Assistant Professor of Zoology*
 A.B. (1923), Colorado College; M.A. (1925), Missouri; Ph.D. (1936), Cornell. Instructor (1927-29), Assistant Professor (1929—), Oregon State.
- WILLIAM WINFIELD GORTON, M.S.....*Research Assistant in Farm Management*
 B.S. (1931), Idaho; M.S. (1936), Oregon State. Research Assistant (Instructor) (1937—), Oregon State.
- SAMUEL HERMAN GRAF, M.E., M.S.....*Professor of Mechanical Engineering;*
Head of Department; Director of Engineering Research
 B.S. (in E.E.) (1907), E.E. (1908), B.S. (in M.E.) (1908), M.E. (1909), M.S. (in E.E.) (1909), Oregon State. Assistant in Mechanical Engineering (1908-09), Instructor (1909-12), Assistant Professor of Experimental Engineering and Department Head (1912-14), Professor (1914-20), Professor of Mechanics and Materials (Department Head) (1920-34), Professor of Mechanical Engineering (1934—), (Acting Department Head 1934-35, Department Head 1935—), Associate Director of Engineering Experiment Station (1927-28), Director of Engineering Research (1928—), Oregon State.
- IDA GRANBERG, M.S.....*Critic Teacher in Commercial Education*
 B.S. (1926), Oregon State; M.S. (in Bus. Ed.) (1936), Southern California. Critic Teacher (1936—), Oregon State.
- IRIS GRAY, B.Mus.....*Instructor in Piano*
 B.Mus. (1933), Cincinnati Conservatory of Music. Instructor (1933—), Oregon State.
- KENNETH WIESNER GRAY, M.S.....*Assistant Entomologist,*
Agricultural Experiment Station
 B.S. (1930), M.S. (1935), Oregon State. Assistant (1930-37); Assistant Entomologist (Assistant Professor) (1937—), Oregon State.

- JAMES RINALDO GRIFFITH, C.E.**.....*Professor of Structural Engineering*
B.S. (in C.E.) (1916), C.E. (1922), Purdue. Faculty, Washington State (1920-23),
Armour Institute of Technology (1925-29); Professor (1929—), Oregon State.
- FRANCIS PRIDAY GRIFFITHS, Ph.D.**.....*Instructor in Fish and Game
Management; Assistant Economic Biologist,
Agricultural Experiment Station*
B.S. (1927), Washington; M.S. (1933), Ph.D. (1935), Massachusetts State. Faculty
(1927-30), Massachusetts State; Instructor (1936—), Oregon State.
- ALVIN EUGENE GROSS, M.S.**.....*Research Assistant in Farm Crops*
B.S. (1932), M.S. (1935), Oregon State. Research Assistant (Instructor) (1937—),
Oregon State.
- NOEL HARDEN GROSS, M.A.**.....*Instructor in Bacteriology*
B.S. (1935), M.A. (1937), Oregon State. Instructor (1937—), Oregon State.
- JOSEPH ROY HAAG, Ph.D.**.....*Chemist (Animal Nutrition),
Agricultural Experiment Station*
B.S. (1918), M.S. (1923), Pennsylvania State; Ph.D. (1926), Minnesota. Assistant
Chemist, Rhode Island Agricultural Experiment Station (1919-20); Assistant, Mary-
land Agricultural Experiment Station (1920-21); Faculty, Pennsylvania State (1921-
23, 1926-27), Minnesota (1923-26); Chemist (Professor) (1927—), Oregon State.
- LUCIA HALEY, A.B.**.....*Assistant Librarian*
A.B. (1911), Washington; Graduate (1912), Pratt Institute. Reference and Circulation
Librarian, Montana (1919-20), Acting Librarian (1920-21); Head of Continuations
Department (1921—), Assistant Librarian (Associate Professor) (1925—), Oregon
State.
- GAINEFORD HALL, M.A.**.....*Instructor in English*
B.A. (1929), Gonzaga; M.A. (1934) Washington. Faculty, Gonzaga, (1929-30); In-
structor (1936—), Oregon State.
- RUTH GILL HAMMOND, M.A.**.....*Assistant Professor of
Household Administration*
B.S. (1926), Oregon State; M.A. (1929), Columbia. Faculty, Buffalo State Teachers
College of New York University (1929-30); Lingnan University, Canton, China
(1930-32); Assistant Professor (1936—), Oregon State.
- EDITH HANSEN, M.A.**.....*Instructor in Zoology*
B.S. (1928), M.A. (1929), Northwestern. Instructor (1929—), Oregon State.
- ELMER HANSEN, M.S.**.....*Assistant Horticulturist (Pomology),
Agricultural Experiment Station*
B.S. (1934), M.S. (1935), Oregon State. Assistant Horticulturist (Assistant Profes-
sor) (1935—), Oregon State.
- C WINIFRED HARLEY**.....*Associate Professor of Child Development*
N.F.U. Higher Certificate (1916), Maria Grey College, London; Graduate (1935), Child
Development, University of London. Superintendent, Union Jack Nursery School,
London (1917-21); Superintendent, Rommany Road Nursery School, England (1920-
22); Faculty (1922-33, 1933-34), Merrill-Palmer School; Faculty (1931-32), Dartington
Hall, England; Faculty (1935-36), Maria Grey College, London; Associate Professor
(1937—), Oregon State.
- LINDEN ELI HARRIS, M.S.**.....*Assistant Professor of Farm Crops;
Assistant Agronomist, Agricultural Experiment Station*
B.S. (1930), Utah State; M.S. (1932), Oregon State. Instructor (1933-34), Assistant
County Agent (Malheur County) (1934-36); Assistant Professor (1936—), Oregon
State.
- ORVILLE GOODWIN HARROLD, JR., Ph.D.**.....*Instructor in Mathematics*
A.B. (1931), M.A. (1932), Ph.D. (1936), Stanford. Faculty, Stanford (1933-37);
Instructor (1937—), Oregon State.
- HENRY HARTMAN, M.S.**.....*Professor of Horticulture; Horticulturist
(Pomology), Agricultural Experiment Station*
B.S. (1917), Washington State; M.S. (1922), Iowa State. Faculty, Iowa State
(1917-18); Pomologist, United States Department of Agriculture (1931-32); Instruc-
tor, Assistant Professor, Associate Professor (1919-29), Professor and Horticulturist
(1929—), Oregon State.

- MILES BRAYTON HATCH, M.S. *Assistant Chemist,
Agricultural Experiment Station*
B.S. (1930), Washington State; M.S. (1934), Oregon State. Assistant Chemist (Assistant Professor) (1931—), Oregon State.
- ELZIE VANCE HERBERT *Orders Librarian*
Secretary and Orders Clerk (1920-27), Head of Orders Department (1927—), Oregon State. Head of Orders Department (Assistant Professor), State System (1932—).
- BERTHA EMMA HERSE, B.S., B.L.S. *Reference Librarian*
B.S. (1910), B.S. (1928), Oregon State; B.L.S. (1924), New York State Library School. Reference Librarian (Assistant Professor) (1924—), Oregon State.
- *JACK ERNEST HEWITT, M.A. *Assistant Professor of Physical Education*
A.B. (1928), California; M.A. (1932), Oregon. Faculty, Oregon (1929-32); Assistant Professor (1932—), Oregon State.
- DONALD DAVID HILL, Ph.D. *Associate Professor of Farm Crops;
Associate Agronomist, Agricultural Experiment Station*
B.S. (1925), Oregon State; M.S. (1927), Kansas State; Ph.D. (1937), Cornell. Faculty, Cornell (1933-34, 1935-36); Instructor (1927-28), Assistant Professor (1928-30), Associate Professor (1930—), Oregon State.
- EDWIN THOMAS HODGE, Ph.D. *Professor of Economic Geology*
B.A. (1913), M.A. (1914), Minnesota; Ph.D. (1916), Columbia. William Bayard Cutting Traveling Fellowship, Columbia (1915-16); Department Head, University of British Columbia (1917-20); Faculty, Oregon (1920-32); Professor (1932—), Oregon State.
- PAUL GERHARD HOEL, Ph.D. *Instructor in Mathematics*
B.A. (1926), Luther College; M.A. (1929), Ph.D. (1935), Minnesota. Faculty, Minnesota (1932-35); Rose Polytechnic Institute (1935-37); Instructor (1937—), Oregon State.
- GLENN WILLIS HOLCOMB, M.S. *Associate Professor of Civil Engineering;
Chairman of General Engineering*
B.S. (in C.E.) (1919), Michigan; M.S. (1931), Oregon State. Instructor (1920-26), Assistant Professor (1927-34), Associate Professor (1934—), Oregon State.
- HELEN LUCILE HOLGATE, B.S. *Manager of Clerical Exchange*
B.S. (1895), Oregon State. Instructor (1900-05), Secretary to Director of Agricultural Experiment Station (1906-14), Manager of Clerical Exchange (Assistant Professor 1917) (1914—), Oregon State.
- WILLIAM HAMILTON HORNING *Assistant Professor of Industrial Arts*
Instructor (1920-37), Assistant Professor (1937—), Oregon State.
- KATHERINE WHIPPLE HUGHES, B.S. *Reference Assistant, Library*
B.S. (in L.S.) (1928), Washington. Reference Assistant (1929—), Oregon State.
- MARY BOWMAN HULL *Assistant Curator, Horner Museum of the
Oregon Country*
Secretary to the President (1910-32); Secretary to the Chancellor, State System (1932-36); Assistant Curator (Assistant Professor) (1936—), Oregon State.
- MELISSA HUNTER, M.A. *Professor of Institution Economics;
Head of Department; Director of Dormitories*
A.B. (1917), Indiana; M.A. (1925), Chicago. Faculty, Utah State (1918-19); Special Adviser to the Director of Dormitories, Miami (1925-26); Instructor and Assistant Director of Dormitories (1919-23), Professor (Department Head) and Director of Dormitories (1926—), Oregon State.
- FLORENCE LOUISE HUPPRICH, M.A. *Instructor in Physical Education
for Women*
B.S. (1923), M.A. (1926), Wisconsin. Faculty, Lake Forrest College (1923-25); Texas State College for Women (1926-37); Instructor (1937—), Oregon State.

*On leave of absence.

- GEORGE ROBERT HYSLOP, B.S.....*Professor of Farm Crops; Head of Department; In Charge, Division of Plant Industries; Agronomist, Agricultural Experiment Station*
 B.S. (1907), Ohio State. Special Investigator, Bureau of Agricultural Economics, United States Department of Agriculture; Instructor, Assistant Professor, Associate Professor (1908-16), Professor (Department Head) and Agronomist (1916—), Division Head (1933—), Oregon State.
- ELEANOR CALDWELL INGALLS, M.A.....*Instructor in English*
 B.L. (1902), Ohio Wesleyan University; B.S. (1904), Illinois; M.A. (1927), Columbia. Instructor (1923-32; 1934—), Oregon State.
- THYRZA ELIZABETH IVERSON, M.S.....*Instructor in Physical Education for Women*
 B.E. (1935), Central State Teachers College (Wisconsin); M.S. (1937), Wisconsin. Instructor (1937—), Oregon State.
- EDWIN RUSSELL JACKMAN, B.S.....*Extension Crop Specialist*
 B.S. (1920), Oregon State. County Agricultural Agent, Wasco County (1920-22); Extension Specialist (Professor 1929) (1922—), Oregon State.
- ELMER POLIC JACKSON, B.S.....*Superintendent of Buildings*
 B.S. (in E.E.) (1904), Oregon State. Instructor (1903-04), Professor (1908-12), Superintendent of Buildings (Associate Professor) (1912—), Oregon State.
- KATE WETZEL JAMESON, Ph.D.....*Dean of Women*
 A.B. (1905), A.M. (1910), Ohio Wesleyan; A.M. (1914), Ph.D. (1916), Wisconsin. Faculty, Wisconsin (1914-16); Professor of German and Dean of Women, Montana (1916-20); Head of German Department and Dean of Women, Arizona (1920-23); Professor and Dean (1923—), Oregon State.
- LAWRENCE COATS JENKINS, B.S.....*Assistant Extension Specialist in Farm Crops*
 B.S. (1935), Oregon State. Assistant Extension Specialist (1936—), Oregon State.
- IZOLA DOROTHY JENSEN, M.A.....*Extension Specialist in Community Social Organization*
 B.S. (1921), Brigham Young; M.A., (1936), New York. District Extension Agent (1930-34), Home Agent-at-Large (1936), Utah State. Extension Specialist (1937—), Oregon State.
- WILLIAM ARTHUR JENSEN, M.S.....*Executive Secretary*
 M.S. (1932), Oregon State. Faculty, Utah State (1904-07); Secretary (1907-15), Executive Secretary (Professor and Dean) (1915—), Oregon State.
- LORNA COLLAMORE JESSUP, B.S.....*Assistant Dean of Women*
 B.S. (1923), Oregon State. Head of Home Economics Department, Flagstaff (Arizona) State Teachers College (1923-27); Assistant Dean of Women (1927—), Oregon State.
- JAMES RALPH JEWELL, Ph.D., LL.D.....*Dean of the School of Education*
 A.B. (1903), Coe; M.A. (1904), Ph.D. (1906), Clark; LL.D. (1927) Arkansas. Director of Training, South West Louisiana Industrial Institute (1906-07); Faculty, Kansas State Teachers (1907-09, 1911-13); Dean, College of Education, Arkansas (1913-27); Dean and Professor (1927—), Oregon State. Dean of Education, Director of High School Teacher Training, State System (1932—).
- CHARLES LESLIE JOHNSON, B.S.....*Professor of Mathematics*
 B.S. (1892), Oregon State. Instructor (1905-07), Professor (Department Head 1907-32) (1907—), Oregon State.
- RAY GEORGE JOHNSON, B.S.....*Professor of Animal Husbandry; Animal Husbandman, Agricultural Experiment Station*
 B.S. (1924), Oregon State. County Agricultural Agent, Grant County (1928-35); Professor and Animal Husbandman (1935—), Oregon State.
- IDWAL RALPH JONES, Ph.D.....*Associate Professor of Dairy Husbandry; Associate Dairy Husbandman, Agricultural Experiment Station*
 B.S. (1920), Pennsylvania State; M.S. (1921), Rutgers; Ph.D. (1925), Minnesota. Faculty, Clemson College (1921-23); Caleb Dorr Fellow, Minnesota (1923-25); Assistant Professor (1925-29), Associate Professor and Associate Dairy Husbandman (1929—), Oregon State.

- J SHIRLEY JONES, M.S.A.....*Professor of Agricultural Chemistry; Chemist in Charge, Agricultural Experiment Station*
 B.S. (1903), California; M.S.A. (1914), Cornell. Agricultural Experiment Station Chemist, Idaho (1906-18). Faculty, (1908-18), Director of Idaho Agricultural Experiment Station (1914-18); Professor and Chemist in Charge (1919—), Oregon State.
- SIDNEY CARROLL JONES, M.S.....*Assistant Entomologist, Agricultural Experiment Station*
 B.S. (1926), Oregon State; M.S. (1928), Iowa State. Assistant Entomologist (Assistant Professor) (1930—), Oregon State.
- RICHARD SENG KEARNS, M.S.....*Assistant Professor of Forestry*
 B.S. (1930), M.S. (1931), Oregon State. Instructor (1935-36), Assistant Professor (1936—), Oregon State.
- HUGH BROADUS KEEN, Lieutenant Colonel, Infantry.....*Associate Professor of Military Science and Tactics; Director of Infantry Unit*
 Graduate (1909), Virginia Military Institute; Graduate (1926), Infantry School; Graduate (1927) Command and General Staff School. Associate Professor (1937—), Oregon State.
- CUPTIS KELLEY, M.B.A.....*Associate Professor of Business Administration; Acting Head of Department*
 A.B. (1925), M.B.A. (1927), Washington. Faculty, Washington (1926-27); Assistant (1927-28), Instructor (1928-29), Assistant Professor (1929-36), Associate Professor (1936—), Oregon State.
- JOHN M KIERZEK, Ph.D.....*Professor of English*
 B.A. (1913), Carleton College; M.A. (1917), Ph.D. (1925), Minnesota. Faculty, Iowa State (1919-20), Minnesota (1920-24); Assistant Professor (1924-28), Associate Professor (1928-37), Professor (1937—), Oregon State.
- ARTHUR SOLOMON KING, M.S.....*Extension Soil Conservationist*
 B.S. (1928), M.S. (1930), Oregon State. District Agent (Baker, Union, and Wallowa Counties) (1929), Extension Specialist (Assistant Professor 1935) (1930—), Oregon State.
- HELEN MARGARET KIRCHOFF, R.N.....*Nurse, Health Service*
 R.N. (1933), St. Vincent's School of Nursing. Nurse (1936—), (Instructor 1937), Oregon State.
- *WILLIAM JOHN KIRKHAM, Ph.D.....*Assistant Professor of Mathematics*
 A.B. (1927), A.M. (1928), Ph.D. (1935), Indiana. Instructor (1929-36), Assistant Professor (1936—), Oregon State.
- PAUL XENOPHON KNOLL, M.S.....*Assistant Professor of Speech*
 B.S. (1923), M.S. (1930), Oregon State. Faculty, Oregon (1933-34); Instructor in Economics and Sociology (1927-28), Instructor in Speech (1928-33), Assistant Professor (1934—), Oregon State.
- FRANK LESTER KNOWLTON, M.S.....*Professor of Poultry Husbandry; Poultry Husbandman, Agricultural Experiment Station*
 B.S. (1919), Cornell; M.S. (1932), Wisconsin. Research Assistant (1920-23), Assistant Poultry Husbandman (1923-25), Poultry Husbandman (Professor) (1925—), Oregon State.
- BERTHA KOHLHAGEN, B.S.....*State Supervisor and Teacher Trainer in Vocational Home Economics*
 B.S. (1929), Oregon State. State Supervisor and Teacher Trainer (1935—), Oregon State.
- *AGNES KOLSHORN, M.A.....*Assistant Professor of Foods and Nutrition*
 B.S. (1913), Oklahoma State; B.S. (1918), Columbia; M.A. (1919), Denver. Faculty, Colorado Women's College (1914-17), Mississippi State (1918-21), Minnesota (1921-28), Washington (1928-29); Assistant Professor (1929—), Oregon State.

*On leave of absence.

- RUTH CAROLINE KRUEGER, M.A. *Circulation Librarian*
 B.S. (in Ed.) (1925), Eastern State Teachers College, South Dakota; B.S. (in L.S.) (1927); M.A. (1936), Illinois. Cataloger (1927-28), Illinois; Librarian (1928-36), Eastern State Teachers College, South Dakota; Librarian (1936-37), Western State College of Colorado; Instructor (Summers 1931, 1933, 1936), University of Illinois Library School; Loan Librarian (1937—), Oregon State.
- *GUSTAV WESLEY KUHLMAN, M.S. *Associate Professor of Farm Management; Associate Economist (Farm Management), Agricultural Experiment Station*
 B.S. (1925), South Dakota State; M.S. (1926), Illinois. Faculty, Illinois (1925-27); Assistant Professor (1927-32), Associate Professor and Associate Economist (1932—), Oregon State.
- EDITH CARTER KUNEY, A.M. *Associate Professor of Modern Languages*
 A.B. (1909), Willamette; A.M. (1925), Stanford. Instructor (1910-15), Assistant Professor (1925-29), Associate Professor (1929—), Oregon State.
- CLAIR VAN NORMAN LANGTON, Dr.P.H. *Director of the Division of Physical Education; Professor of Physical Education; Professor of Hygiene; Technical Counselor in Sanitary Engineering, Engineering Experiment Station*
 B.S. (1923), M.S. (1925), Dr. P.H. (1928), Michigan. Faculty, Michigan (1923-26), Director of Hygiene Laboratory (1926-28); Dean of the School of Health and Physical Education (1929-32), Professor and Director (1928—), Oregon State.
- HERBERT REYNOLDS LASLETT, Ph.D. *Professor of Educational Psychology; Director of Supervised Teaching*
 A.B. (1918), Kansas; A.M. (1923), Ph.D. (1926), Stanford; Certificat (1919), Université Montpellier. Faculty, Colorado State (1923-24), Whitman College (1926-28); Associate Professor (1928-29), Professor (1929—), Director of Supervised Teaching (1930—), Oregon State.
- WILLIAM EVANS LAWRENCE, B.S. *Associate Professor of Plant Ecology*
 B.S. (1904), Earham College. Faculty, Michigan State (1906-09), Oklahoma A. & M. (1909-10); Instructor (1910-15), Assistant Professor (1915-20), Associate Professor (1920—), Oregon State.
- WILLIAM DORR LEGG, M.L.D. *Assistant Professor of Landscape Architecture*
 A.B. (1926), B.M., M.L.D. (1928) Michigan. Assistant Professor (1935—), Oregon State.
- CONSTANCE LEHDE, B.A., B.S. *Document Assistant, Library*
 B.S. (in L.S.) (1930), B.A. (1932), Washington. Acquisitions Assistant, Washington (1930-35); Document Assistant (1935—), Oregon State.
- JEROME LLOYD LEMASTER, M.A. *Associate Professor of Business Administration*
 LL.B. (1923), Illinois; Cert.d' A. en Droit Civile (1924), Bordeaux; M.A. (1925), Colorado. Oregon Bar (1930); American Bar Association (1935). Faculty, Illinois (1925-28); Assistant Professor (1928-29), Associate Professor (1929—), Oregon State.
- ERWIN BERTRAN LEMON, B.S. *Registrar*
 B.S. (1911), Oregon State. Statistician, State Statistical Bureau, Oregon (1911-12); Instructor in Accounting (1912-18), Assistant Professor (1918-20), Associate Professor (1920-22), Registrar (Professor and Dean) (1922—), Oregon State.
- LUCY MAY LEWIS, A.B., B.L.S. *Librarian*
 A.B. (1905), B.L.S. (1906), Illinois. Librarian, New Mexico State (1906-11); Assistant Librarian and Cataloger (1911-18), Assistant Librarian and Reference Librarian (1918-20), Acting Librarian (1920), Librarian (Department Head) (1920-32), Librarian (Professor and Dean) (1932—), Oregon State. Director of Libraries, State System (1932—).
- MARY EUNICE LEWIS, M.A. *Associate Professor of Modern Languages*
 B.S. (1906), Pacific College; A.B. (1907), Penn College; M.A. (1918), California. Faculty, Pacific College (1910-26); Instructor (1928-30), Assistant Professor (1930-33), Associate Professor (1933—), Oregon State.

* On leave of absence.

- MORTIMER REED LEWIS, C.E.**.....*Irrigation and Drainage Engineer,
Agricultural Experiment Station*
B.S. (1906), C.E. (1925), Utah. Faculty, Idaho (1922-28), Head of Department (1925-28); Irrigation and Drainage Engineer (Professor) (1928—), Oregon State.
- HARRY ARTHUR LINDGREN, B.S.**.....*Extension Animal Husbandman*
B.S. (in Agric.) (1911), Oregon State. Superintendent, John Jacob Astor Experiment Station (1913-15), Agriculturist (Reclamation Projects) (1915-19), Extension Animal Husbandman (Associate Professor) (1920-37), Professor (1937—), Oregon State.
- PERCY PHILIP LOCEY, M.A.**.....*Director of Intercollegiate Athletics*
B.S. (1924), Oregon State; M.A. (1935), California. Faculty, Denver (1934-36); Assistant Professor (1936—), Oregon State.
- EDWARD GIBSON LOCKE, Ph.D.**.....*Assistant Professor of Chemical
Engineering*
B.S. (in Ch.E.) (1928), Oregon State; M.S. (1930), Ph.D. (1932), Ohio State. Faculty, Ohio State (1928-32); Assistant Professor (1936—), Oregon State.
- WALTER THOMAS LUND, M.S.**.....*Instructor-Technician in Botany*
B.S. (1930), M.S. (1932), Oregon State. Instructor-Technician (1937—), Oregon State.
- RALPH NICHOLAS LUNDE, B.S.**.....*Assistant Professor of Agricultural
Engineering*
B.S. (1926), Oregon State. Instructor (1930-34), Assistant Professor (1934—), Oregon State.
- MIRIAM LUTEN, M.D.**.....*Assistant Physician*
B.S. (1922), M.S. (1923), Washington; M.D. (1935), Oregon. Assistant Physician (1936—), (Assistant Professor) (1937—), Oregon State.
- EDWARD HIRAM MCALISTER, A.M., Sc.D.**.....*Professor Emeritus of Mathematics*
A.B. (1890), A.M. (1893), Sc.D. (1937), Oregon. Tutor (1891-95), Faculty, Oregon (1895-1902), Dean of the College of Engineering (1902-15), Head of Department of Mechanics and Astronomy (1915-32); Professor (1932-37), Professor Emeritus (1937—), Oregon State.
- LAURA CORNELIA MCALLESTER, B.S.**.....*Assistant Professor of Physical Education
for Women*
Diploma (1906), Boston Normal School of Gymnastics; B.S. (1932), Oregon State. Faculty, North Carolina College for Women (1909-17), Oregon (1920-21); Instructor (1926-33), Assistant Professor (1933—), Oregon State.
- ANN MCCLEW, B.S.**.....*Critic Teacher in Home Economics Education*
B.S. (1929), Oregon State. Critic Teacher (1937—), Oregon State.
- WALTER FRASER MCCULLOCH, M.S.**.....*Assistant Professor of Forestry*
B.A. (1925), British Columbia, M.S. (1936), Syracuse (School of Forestry). Director, Forest Experiment Station (1936-37), Michigan State; Assistant Professor (1937—), Oregon State.
- GERTRUDE ELIZABETH MCELFRISH, A.M.**.....*Assistant Professor of English*
B.S. (1902), Oregon State; A.B. (1909), Cornell; A.M. (1924), Columbia. Instructor (1909-22), Assistant Professor (1922—), Oregon State.
- *CHARLES JARVIS MCINTOSH, B.S., B.S.D.**.....*Professor of Industrial Editing*
B.S. (1893), Christian College; B.S.D. (1893), Oregon State Normal. Instructor (1914-18), Assistant Professor (1919-20), Professor (1920—), Oregon State.
- WILLIAM W MCKALIP, B.S.**.....*Instructor in Physical Education;
Freshman Coach*
B.S. (1931), Oregon State. Faculty, Colorado School of Mines (1932-33); Instructor and Freshman Coach (1937—), Oregon State.
- FRED ORVILLE McMILLAN, M.S.**.....*Professor of Electrical Engineering;
Head of Department*
B.S. (in E.E.) (1912), Oregon State; M.S. (in E.E.) (1919), Union College. Assistant Professor (1920-23), Associate Professor (1923-30), Research Professor (1930—), Department Head (1937—), Oregon State.

*Will teach part time 1938-39.

- FRANK PADEN MCWHORTER, Ph.D. *Plant Pathologist, Agricultural Experiment Station*
 B.S. (1917), Vanderbilt; M.S. (1920), Chicago; Ph.D. (1928), Cornell. Faculty, University of the Philippines (1920-23), Pathologist, Virginia Truck Experiment Station (1924-29); Associate Pathologist (1929-32), Pathologist (Professor) (1932—), Oregon State.
- OVID TULLIUS MCWHORTER, B.S. *Extension Horticulturist*
 B.S. (1912), Washington State. County Agent, Washington State (1915-20); County Agent (1920-30), Professor (1929), Extension Horticulturist (Professor) (1930—), Oregon State.
- FRANK ABBOTT MAGRUDER, Ph.D. *Professor of Political Science*
 A.B. (1905), Washington and Lee; Ph.D. (1911), Johns Hopkins. Faculty, Princeton (1911-17); Assistant Professor (1917-21), Associate Professor (1921-25), Professor (1925—), Oregon State.
- PAUL WHITTEN MAPES, Major, Infantry. *Assistant Professor of Military Science and Tactics (Infantry Unit)*
 Graduate (1923), Infantry School; Graduate (1930), Command and General Staff School. Assistant Professor (1932—), Oregon State.
- BUENA MARGASON MARIS, A.B. *Instructor in Household Administration*
 B.A. (1916), College of Puget Sound. Instructor (1937—), Oregon State.
- MELISSA MARGARET MARTIN, A.M. *Professor of Modern Languages; Chairman of Department*
 A.B. (1912), Oregon; B.S. (1915), Oregon State; A.M. (1920), Columbia. Instructor (1915-24), Assistant Professor (1924-30), Associate Professor (1930-37), Professor (1937—), Oregon State.
- WALLACE HOPE MARTIN, M.E., M.S. *Professor of Heat Engineering*
 M.E. (1910), Minnesota; M.S. (1930), Iowa State. Faculty, Minnesota (1911-17), Pennsylvania State (1919-20); Professor (1920—), Oregon State.
- EARL GEORGE MASON, M.F. *Professor of Forestry; Assistant to the Dean, School of Forestry*
 B.S. (1920), Oregon State; M.F. (1923), Yale. Instructor (1920-24), Assistant Professor (1924-32), Associate Professor (1932-34), Professor (1934—), Assistant to Dean (1935—), Oregon State.
- IDA MARTHA MATSEN, A.M. *Associate Professor of Art*
 Diploma (1920), Pratt Institute; B.F.A. (1925), Washington; A.M. (1926), Columbia. Instructor (1927-34), Assistant Professor (1934-37), Associate Professor (1937—), Oregon State.
- ANN MAURIS, R.N. *Nurse, Health Service*
 R.N. (1932), St. Vincent's School of Nursing. Nurse (1936—), (Instructor 1937), Oregon State.
- OTTO CHRISTIAN MAUTHE. *Assistant Professor of Physical Education*
 G.G. (1920), Normal College of American Gymnastic Union. Faculty, Stout Institute (1909-16), Dunn County Normal (Menomonie, Wisconsin) (1910-16); Instructor (1929-30), Assistant Professor (1930—), Oregon State.
- STELLA MEAGHER, R.N. *Nurse, Health Service*
 R.N. (1932), St. Vincent's School of Nursing. Nurse (1935—), (Instructor 1937), Oregon State.
- JOSEPH PARKE MEHLIG, Ph.D. *Associate Professor of Analytical Chemistry*
 B.S. (1908), M.S. (1910), Ph. D. (1931), Purdue. Instructor (1920-24), Assistant Professor (1924-34), Associate Professor (1934—), Oregon State.
- FRED MERRYFIELD, M.S. *Associate Professor of Civil Engineering*
 B.S. (1923), Oregon State; M.S. (1930), North Carolina. Faculty, North Carolina, (1929-30); Instructor (1927-29), Assistant Professor (1930-37), Associate Professor (1937—), Oregon State.

- *ANN MESSICK, B.S. *Circulation Assistant, Library*
 B.S. (1930), College of William and Mary; Certificate in Library Science (1933), California. Technician in Pepper Laboratory, Pennsylvania (1930-32); Circulation Assistant (1934—), Oregon State.
- CURTIS ERDMUND MEYER, Ph.D. *Assistant Professor of Chemistry*
 B.S. (1931), M.S. (1932), Ph.D. (1935), University of Illinois. Faculty, University of Illinois (1935-37); Assistant Professor (1937—), Oregon State.
- EDWIN DAVID MEYER, B.S. *Assistant Professor of Industrial Arts*
 B.S. (1927), Stout Institute. Instructor (1925-34), Assistant Professor (1934—), Oregon State.
- AVA BERTHA MILAM, M.A. *Dean of the School of Home Economics*
 Ph.B. (1910), M.A. (1911), Chicago. Faculty, Iowa State (1911); Director of Home Economics and Visiting Professor, Yenching University (Peiping, China) (1922-24, 1931-32); Visiting Professor, Lingnan University (Canton), Kwassui College (Nagasaki, Japan), Ewha College (Seoul, Korea) (1931-32); Assistant Professor (1911-16), Professor (1916—), Dean (1917—), Oregon State. Dean and Director of Home Economics, State System (1932—).
- JOHN A MILBRATH, B.S. *Research Assistant in Horticulture*
 B.S. (1934), Washington State. Research Assistant (Instructor) (1937—), Oregon State.
- WILLIAM EDMUND MILNE, Ph.D. *Professor of Mathematics;*
Head of Department
 A.B. (1912), Whitman College; A.M. (1913), Ph. D. (1915), Harvard. Faculty, Bowdoin College (1915-18), Oregon (1919-32); Professor and Department Head (1932—), Oregon State.
- CHARLES BUREN MITCHELL, M.A. *Professor of Speech; Head of Department*
 B.A. (1911), DePauw; M.A. (1912), Michigan. Faculty, Michigan State (1912-20); Professor and Department Head (1920—), Oregon State.
- CHARLES ARTHUR MOCKMORE, C.E., Ph.D. *Professor of Civil Engineering;*
Head of Department
 B.E. (1920), C.E. (1926), M.S. (1932), Ph.D. (1935), Iowa. Research Associate, Iowa (1931-32); Instructor (1921-24), Assistant Professor (1925-28), Associate Professor (1929-32), Professor (1932—), Acting Department Head (1933-34), Department Head (1934—), Oregon State.
- HAROLD WILLIAM MOE, B.S. *Assistant Coach of Football; Instructor in*
Physical Education
 B.S. (1934), Oregon State. Assistant Coach (1934—), Instructor (1937—), Oregon State.
- DELBERT WARREN MOORE, B.A. *Professor of Stringed Instruments;*
Conductor of Orchestras
 B.A. (1933), Oregon. Professor (1935—), Oregon State.
- FRED BUCKNER MORGAN, M.S. *Assistant Professor of Physics*
 B.Ped. (1910), Kirksville State Normal (Missouri); A.B. (1915), B.S. (1915), Missouri; M.S. (1930), Pittsburgh. Faculty, Oregon (1932-34); Instructor (1921-30), Assistant Professor (1930-32, 1934—), Oregon State.
- HENRIETTA MORRIS, Sc.D. *Associate Professor of Hygiene*
 A.B. (1923), Goucher College; Sc.D. in Hygiene (1927), Johns Hopkins. Faculty, University of Oregon Medical School (1932-35); Associate Professor (1935—), Oregon State.
- VICTOR PIERPONT MORRIS, Ph.D. *Dean in Charge of Secretarial Science*
 B.A. (1915), M.A. (1920), Oregon; Ph.D. (1930), Columbia. Faculty, Grinnell (1922-24), Oregon (1919-20, 1926—); Instructor (1924-26), Dean in Charge (1936—), Oregon State. Dean and Director of Business Administration, State System (1936—).
- HUGH ENGLE MORRISON, M.S. *Assistant in Entomology*
 B.S. (1927), Franklin and Marshall; M.S. (1936), Ohio. Faculty (1932, 1936, 1937), Ohio State. Assistant (1937—), Oregon State.

*On leave of absence.

- MAUD MUELLER MORSE, M.S. *Assistant Professor and Extension Specialist in Child Development and Parent Education*
B.S. (1927), M.S. (1932), Oregon State. Assistant Professor and Extension Specialist (1935—), Oregon State.
- ROGER WILLIAM MORSE, B.S. *Extension Dairyman*
B.S. (1916), Washington State. County Agricultural Agent, Wyoming (1921-23); County Agricultural Agent (1923-30), Extension Dairyman (Professor) (1930—), Oregon State.
- THELMA RUTH MOSHER, B.A. *Circulation Assistant, Library*
B.A. (1936), Redlands; Certificate of Librarianship (1937), California. Acting Librarian, Ukiah Public Library (1937); Circulation Assistant (1937—), Oregon State.
- DON CARLOS MOTE, Ph.D. *Professor of Entomology; Head of Department; Entomologist in Charge, Agricultural Experiment Station*
B.S. (1911), M.S. (1912), Ph.D. (1928), Ohio State. Associate Entomologist (1923-24), Assistant and Acting Head (1924-25), Professor (Department Head) and Entomologist in Charge (1925—), Oregon State.
- OTTO HERBERT MUTH, D.V.M., M.S. *Associate Professor of Veterinary Medicine*
D.V.M. (1929), M.S. (1934), Michigan State. Veterinary Pathologist, Wisconsin (1936-37); Assistant Veterinarian (1926-36), Associate Professor (1937—), Oregon State.
- RAYMOND GEORGE NEBELUNG, Dr.P.H. *Associate Professor of Hygiene*
B.S. (1929), M.S. (1931), Dr.P.H. (1935), Michigan. Faculty, Michigan (1934-35); Associate Professor (1937—), Oregon State.
- HERBERT BENJAMIN NELSON, M.A. *Assistant Professor of English*
A.B. (1926), M.A. (1927), Colorado. Instructor (1927-34), Assistant Professor (1934—), Oregon State.
- MILTON NELS NELSON, Ph.D. *Professor of Economics; Head of Department; Professor of Agricultural Economics*
A.B. (1915), M.A. (1917), Ph.D. (1921), Illinois. Faculty, Minnesota (1921-22), Illinois (1922-23), Ohio State (1923-26); Professor (Department Head) and Agricultural Economist (1926—), Oregon State.
- ORAN MILTON NELSON, M.S. *Professor of Animal Husbandry; Animal Husbandman, Agricultural Experiment Station*
B.S. (1913), M.S. (1930), Wisconsin. Instructor (1913-17), Assistant Professor (1917-18), Associate Professor (1918-21), Professor and Animal Husbandman (1921—), Oregon State.
- HARRY IRA NETTLETON, M.F. *Assistant Professor of Forestry*
B.S. (1921), Oregon State; M.F. (1928), Idaho. Faculty, Idaho (1923-30); Instructor (1936-37), Assistant Professor (1937—), Oregon State.
- BEN HODGE NICHOLS, M.S. *Assistant Professor of Electrical Engineering*
B.S. (in M.E.) (1919), M.S. (in E.E.) (1932), Oregon State. Instructor in Mechanical Engineering (1919-20), Instructor in Electrical Engineering (1921-34), Assistant Professor (1934—), Oregon State.
- HOLGER PETER CARL NIELSEN. *Instructor in Dairy Manufacturing*
Instructor (1937—), Oregon State.
- ALFRED WEAVER OLIVER, M.S. *Assistant Professor of Animal Husbandry; Assistant Animal Husbandman, Agricultural Experiment Station*
B.S. (1918), Oregon State; M.S. (1928), Wisconsin. Faculty, Idaho (1918-19); Instructor (1919-22), Assistant Professor and Assistant Animal Husbandman (1922—), Oregon State.
- THOMAS ONSDORFF, M.S. *Assistant Professor of Food Products Industries; Assistant Horticulturist (Food Products Industries), Agricultural Experiment Station*
B.S. (1924), Oregon State; M.S. (1935), Massachusetts State. Instructor (1928-31), Assistant Professor and Assistant Horticulturist (1931—), Oregon State.

- DANIEL THOMAS ORDEMAN, Ph.D.....*Associate Professor of English*
A.B. (1920), M.A. (1922), Washington and Lee; Ph.D. (1927), Maryland. Assistant Professor (1927-37), Associate Professor (1937—), Oregon State.
- LOUISE JACKMAN ORNER, B.S.....*Instructor in Secretarial Science*
B.S. (1922), Oregon State. Instructor (1936—), Oregon State.
- JOHN LYNN OSBORN, A.M.....*Assistant Professor of Zoology*
Ph.C. (1915), Michigan; A.B. (1922), Kansas; A.M. (1923), Nebraska. Faculty, Nebraska (1922-23); Instructor (1923-34), Assistant Professor (1934—), Oregon State.
- C JEANETTE OSWALD, M.A., R.N.....*Associate Professor of Nursing Education*
Diploma (1916), Lankenau Hospital School of Nursing; R.N. (1916), Pennsylvania, New York, Ohio, Wisconsin, California, Michigan, Oregon; B.S. (1923), Teachers College, Columbia; M.A. (1937), Michigan. Army Nurse Corps (1918-20); Faculty, Mt. Sinai Hospital School of Nursing and Western Reserve (1923-25), Madison General Hospital (Wisconsin) (1925-29), Merritt Hospital School of Nursing (Oakland, Calif.) (1929-30), Michigan (1930-37); Associate Professor (1937—), Oregon State.
- JAMES CAREY OTHUS, M.E., M.S.....*Associate Professor of Mechanical Engineering*
M.E. (1917), Cornell; M.S. (1932), Illinois. Instructor (1921-26), Assistant Professor (1926-37), Associate Professor (1937—), Oregon State.
- CHARLES ELMER OWENS, Ph.D.....*Professor of Botany and Plant Pathology; Head of Department; Plant Pathologist, Agricultural Experiment Station*
A.B. (1910), A.M. (1911), Indiana; Ph.D. (1934), Wisconsin. Instructor (1912-16), Assistant Professor (1916-20), Associate Professor (1920-30), Professor (1930—), Acting Department Head (1934-35), Department Head (1935—), Oregon State.
- EARL LEROY PACKARD, Ph.D.....*Dean of the School of Science; Director of the Institute of Marine Biology; Professor of Geology; Head of Department*
A.B. (1911), M.A. (1912), Washington; Ph.D. (1915), California. Faculty, Washington (1915-16), Mississippi A. & M. (1917-18) (Department Head 1917-18), Oregon, (1916-32) (Department Head 1930-32); Dean and Professor (Department Head) (1932—), Oregon State. Dean and Director of Science, State System (1932—).
- FRANK WINTHROP PARR, Ph.D.....*Professor of Secondary Education*
B.S. (1925) Illinois; M.A. (1926), Ph.D. (1929), Iowa. Associate Professor (1929-30), Professor (1930—), Oregon State.
- HENRY RICHARD PATTERSON, JR., B.S.....*Professor of Logging Engineering; Head of Department*
B.S. (in C.E.) (1909), Oregon. Associate Professor (1920-23), Professor and Department Head (1923—), Oregon State.
- JOAN PATTERSON, B.Arch.....*Instructor and Extension Specialist in Home Furnishing*
B.Arch. (1931), Oregon. Faculty, Oregon (1933-34); Instructor and Extension Specialist (1936—), Oregon State.
- WILLIAM HOWARD PAUL, M.S.....*Assistant Professor of Mechanical Engineering*
B.S. (1924), M.S. (1935), Oregon State. Instructor (1926-35), Assistant Professor (1935—), Oregon State.
- CHARLES S PEASE, Ph.D.....*Assistant Professor of Organic Chemistry*
B.S. (1918), Denison University; Ph.D. (1928), Ohio State. Faculty, Ohio State (1919-25); Instructor (1925-30), Assistant Professor (1930—), Oregon State.
- ARTHUR LEE PECK, B.S., B.A.....*Professor of Landscape Architecture; Head of Department*
B.S. (1904), Massachusetts State; B.A. (1904), Boston. Faculty, Kansas State (1907-08), Oregon (1932—); Instructor (1908-09), Assistant Professor (1909-10), Associate Professor (1912-17), Professor (1917—), Department Head (1932—), Oregon State.

- SIGURD HARLAN PETERSON, Ph.D.**.....*Professor of English; Head of Department*
A.B. (1910), Minnesota; Ph.D. (1931), Washington. Instructor (1911-14), Assistant Professor (1914-21), Associate Professor (1921-33), Department Chairman (1932-33), Professor and Department Head (1933—), Oregon State.
- LILLIAN JEFFREYS PETRI**.....*Professor of Piano and Music Theory*
Professor (1924—), Oregon State.
- PAUL PETRI**.....*Director of Music; Professor of Singing and Conductor of Choruses; Head of Department*
Faculty, Oregon (1933—); Director and Professor (Department Head) (1924—), Oregon State.
- MARK CLYDE PHILLIPS, B.M.E.**.....*Professor of Mechanical Engineering*
B.M.E. (1896), Oregon State. Instructor (1897-1909), Associate Professor (1909-37), Professor (1937—), Oregon State.
- ERNA MARGUERITE PLAGEMAN, R.N.**.....*Supervising Nurse, Health Service*
R.N. (1926), Michigan. Supervising Nurse (1929—), (Instructor 1937), Oregon State.
- DAN WILLIAMS POLING, B.S.**.....*Assistant to Dean of Men; Assistant Professor of Political Science*
B.S. (1928), Oregon State. Assistant to Dean of Men, Assistant Professor (1937—), Oregon State.
- ERMINE LAWRENCE POTTER, M.S.**.....*Professor of Agricultural Economics; In Charge, Division of Agricultural Economics; Agricultural Economist, Agricultural Experiment Station*
B.S. (1906), Montana State; B.S.A. (1908), M.S. (1920), Iowa State. Instructor (1908-10), Assistant Professor (1910-11), Professor (1911—), Department Head (1913-33), In Charge of Division of Agricultural Economics (1933—), Oregon State.
- GARLAND MARIE POWELL, M.S.**.....*Assistant Curator of Herbarium*
B.S. (1928), M.S. (1937), Oregon State. Assistant Curator (1937—), Oregon State.
- WILBUR LOUIS POWERS, Ph.D.**.....*Professor of Soils; Head of Department; Soil Scientist in Charge, Agricultural Experiment Station*
B.S. (1908), M.S. (1909), New Mexico Agricultural; Ph.D. (1926), California. Instructor (1909-12), Assistant Professor (1912-14), Associate Professor (1914-15), Professor (1915—), Department Head and Soil Scientist in Charge (1918—), Oregon State.
- *SARA WATT PRENTISS, M.A.**.....*Professor of Child Development and Parent Education; Head of Department of Household Administration*
B.S. (1917), Oregon State; M.A. (1929), California. Faculty, California (1934-36); Instructor (1917-21), Assistant Professor (1921-31), Professor (1931—) (Acting Department Head 1932-34, Department Head 1936—), Oregon State.
- FREDERICK EARL PRICE, B.S.**.....*Professor of Agricultural Engineering; Assistant Dean, School of Agriculture; Agricultural Engineer, Agricultural Experiment Station*
B.S. (1922), Oregon State. Extension Agronomist, Montana State (1922); Extension Specialist in Soils and Agricultural Engineering (1922-28), Professor and Agricultural Engineer (1929—) (Acting Department Head 1935-37), Assistant to Dean (1935—), Oregon State.
- JOHN HADLEY PRYOR, B.S.**.....*Research Assistant in Botany*
B.S. (1937), California. Research Assistant (Instructor) (1937—), Oregon State.
- HOWARD WILLIAM RAABE, B.S.**.....*Instructor in Physical Education*
B.S. (1935), Oregon State. Instructor (1935—), Oregon State.
- GEORGE REBEC, Ph.D.**.....*Dean of the Graduate Division*
A.B. (1891), Ph.D. (1896), Michigan. Faculty, Michigan (1891-1909), Reed (1920-21, 1931-32), Oregon (1912—), (Department Head 1912—), Director of Portland Extension (1918-22), Dean (1920—); Professor (Department Head) (1933-35), Dean (1933—), Oregon State. Dean and Director of Graduate Division, State System (1933—).

*On leave of absence.

- EDWIN THOMAS REED, B.S., A.B.—*Editor of Publications; Head of Department*
B.S. (1895), Minnesota; A.B. (1896), Harvard. Head of English Department, Moorhead (Minnesota) State Teachers College (1901-12); Editor (Professor and Department Head) (1912—), Oregon State. Editor of Publications, State System (1932—).
- NATALIE REICHART, M.A.—*Assistant Professor of Physical Education for Women*
B.S. (1924), Columbia; M.A. (1929), New York. Faculty, Washington State (1924-25); Instructor (1925-37), Assistant Professor (1937—), Oregon State.
- ROBERT RAY REICHART, M.S.—*Instructor in English*
B.S. (1917), M.S. (1937), Oregon State. Instructor (1926-32, 1934—), Oregon State.
- WILLIAM CURTIS REID, M.S.—*Instructor in Physics*
B.A. (1929), Willamette; M.S. (1932), New York; Camp Educational Adviser C.C.C. (1934-37); Part-time Instructor (1937—), Oregon State.
- DANIEL CLYDE REYNOLDS, M.D.—*Professor of Hygiene; Director of Health Service*
B.S. (1916), M.D. (1918), Michigan. Director Health Service, Michigan State (1920-22); Physician, Health Service, Michigan (1918-20, 1922-29); Professor and Director (1929—), Oregon State. Assistant Director of Health Services, State System (1933—).
- EDITH RHYNE, M.A.—*Associate Professor of Clothing, Textiles, and Related Arts*
B.S. (1918), Texas State College for Women; M.A. (1926), Washington. Faculty, Montana (1927-28), Montana State (1929-35); Associate Professor (1935—), Oregon State.
- ROBERT CHARLES RHYNEARSON, M.S.—*Assistant Professor of Industrial Arts*
B.S. (1928), M.S. (1932), Purdue. Instructor (1933-36), Assistant Professor (1936—), Oregon State.
- CLARENCE WILFRED RICHEN, B.S.—*Instructor in Forestry*
B.S. (1935), Oregon State. Instructor (1937—), Oregon State.
- MARY E RICHTER, R.N.—*Nurse, Health Service*
R.N. (1925), St. Joseph's School of Nursing. Nurse (1935—), (Instructor 1937), Oregon State.
- ELIZABETH PROPHET RITCHIE, A.B., B.L.S.—*Catalog Librarian*
A.B. (1900), Cotner College; B.L.S. (1909), Illinois. Head Cataloger (Assistant Professor) (1920—), Oregon State.
- AUDRED ROBERTS, A.B.—*Assistant in English*
A.B. (1924), Willamette. Assistant (1936—), Oregon State.
- VIVIAN MAE ROBERTS, M.S.—*Instructor in Foods and Nutrition*
B.S. (1928), Rockford College; M.S. (1933) University of Chicago. Faculty, Carolina New College (Burnsville, North Carolina) (1928-29); Connecticut College (1934-37); Instructor (1937—), Oregon State.
- FRANK LESLIE ROBINSON, M.Acct.—*Associate Professor of Accounting*
M.Acct. (1894), Upper Iowa University. Instructor (1919-22), Assistant Professor (1923-27), Associate Professor (1928—), Oregon State.
- HELEN PEER ROBINSON—*Instructor in Clothing, Textiles, and Related Arts*
Instructor (1914-18, 1936—), Oregon State.
- REGINALD HEBER ROBINSON, M.S.—*Chemist (Insecticides and Fungicides), Agricultural Experiment Station*
A.B. (1909), Pacific; M.S. (1912), California. Assistant Chemist (1911-18), Associate Chemist (1918-24), Chemist (Professor) (1924—), Oregon State.
- FRED GRANT ROBLEY, B.S.—*Instructor in Civil Engineering*
B.S. (1931), Oregon State. Assistant (1935-36), Instructor (1936—), Oregon State.
- BENJAMIN WILLIAM RODENWOLD, M.S.—*Assistant Professor of Animal Husbandry*
B.S. (1920), Nebraska; M.S. (1929), Iowa State. Assistant Professor (1920—), Oregon State.

- ZELTA FEIKE RODENWOLD, M.S. *Director of Women's Radio Programs, Station KOAC; Assistant Professor of Home Economics Extension*
 B.S. (1919), Oregon State; M.S. (1929), Iowa State. Secretary, School of Home Economics (1919-21); Secretary Alumni Association (1921-26), Extension Economist in Home Management (1930-32), Director and Assistant Professor (1932—), Oregon State.
- DONALD PHILIP ROGERS, Ph.D. *Instructor in Botany*
 B.A. (1929), Oberlin; Ph.D. (1935), Iowa. National Research Fellow, Harvard (1935-36); Instructor (1936—), Oregon State.
- ARNOLD SAMUEL ROSENWALD, B.S., D.V.M. *Instructor in Veterinary Medicine; Assistant Poultry Pathologist*
 B.S. (1930), California; D.V.M. (1936) Kansas State. Agent, (1930-31), Arizona and New Mexico, Junior Veterinarian (1936) California (1936-37) Minnesota, U. S. Bureau of Animal Industry; Instructor (1937—), Oregon State.
- EDWARD JAMES ROXBURY, Captain, Field Artillery, A.B. *Assistant Professor of Military Science and Tactics*
 A.B. (1917), Michigan; Graduate (1926) Field Artillery School; Graduate Saumur Artillery School (1918). Faculty, Colorado State (1928-34); Assistant Professor (1935—), Oregon State.
- HENDRINE ROZENDAL, M.A. *Reference Assistant, Library*
 B. A. (1925), Dakota Wesleyan; B.S. in L.S. (1932), M.A. in L.S. (1936), Illinois. Periodicals Assistant, Illinois (1933-35); Reference Assistant (1935—), Oregon State.
- BENJAMIN FRANKLIN RUFFNER, Aero.E., M.S. *Associate Professor of Aeronautical Engineering*
 B.S. (in M.E.) (1929), Aero.E. (1930), M.S. (1935), New York University. Faculty, New York University (1929-36); Assistant Professor (1936-37), Associate Professor (1937—), Oregon State.
- CHARLES VLADIS RUZEK, M.S. *Professor of Soil Fertility; Soil Scientist (Fertility), Agricultural Experiment Station*
 B.S.A. (1909), M.S. (1929), Wisconsin. Faculty, Arkansas (1909-14); Assistant Professor (1914-17), Associate Professor (1917-22), Professor and Soil Scientist (1922—), Oregon State.
- AZALEA LINFIELD SAGER, M.A. *State Home Demonstration Leader Professor and State Leader of Home Economics Extension*
 B.S. (1919), Montana State; M.A. (1921), Columbia. Extension Specialist, South Dakota State (1921-24); Home Demonstration Agent, California (1926-30); Extension Specialist (Associate Professor) (1932-36), Professor and State Leader (1936—), Oregon State.
- CARL WALTER SALSER, Ed.M. *Professor of Education; Head of Department; Head of Placement; Assistant Dean of the School of Education*
 A.B. (in Ed.) (1911), Kansas State Teachers (Emporia); Ed.M. (1926), Harvard. Faculty, Kansas State Teachers (Emporia) (1911-29), Director of Extension Division (1914-29), Head of Appointment Bureau (1911-14); Professor and Department Head (1929—), Assistant to the Dean (1932-34), Assistant Dean (1934—), Oregon State.
- ETHEL IDA SANBORN, Ph.D. *Associate Professor of Botany*
 B.S. (1903), South Dakota State; B.A. (1904), M.A. (1907), South Dakota; Ph.D. (1928), Stanford. Faculty, Oregon (1914-32), Curator of Herbarium (1914-17); Assistant Professor (1932-33), Associate Professor (1933—), Oregon State.
- HENRY SCHEFFÉ, Ph.D. *Instructor in Mathematics*
 B.A. (1931), M.A. (1933), Ph.D. (1935), University of Wisconsin; Faculty (1931-37), Wisconsin; Instructor (1937—), Oregon State.
- WILLIAM ALFRED SCHOENFELD, M.B.A. *Dean of the School of Agriculture; Director of the Agricultural Experiment Station; Director of Federal Cooperative Extension*
 B.S. (1914), Wisconsin; M.B.A. (1922), Harvard. Faculty, Wisconsin (1912-14), Secretary of Experiment Station (1914); Faculty, Texas (1914-15); Assistant and Acting Director of Extension, Tennessee (1915-20); Lecturer, Massachusetts Institute of Technology (1921); Professor, Dean, and Director (1931—), Oregon State. Dean and Director of Agriculture, State System (1932—).

- GEORGE HARWOOD SCHROEDER, M.S. *Instructor in Forestry*
B.S. (in L.E.) (1935), B.S. (in Tech. For.) (1935), M.S. (1936), Oregon State. Instructor (1936—), Oregon State.
- JOE SCHUH, M.S. *Instructor in Entomology*
B.S. (1932), M.S. (1936), Oregon State. Instructor (1937—), Oregon State.
- ROLAND SCOTT, D.V.M. *Instructor and Research Assistant,*
Veterinary Medicine
D.V.M. (1936), Michigan State, Michigan Producers Dairy Company (1936-38); Instructor and Research Assistant (1938—), Oregon State.
- HENRY DESBOROUGH SCUDDER, B.S. *Professor of Farm Management*
B.S. (1902), Illinois. Faculty, Kansas State (1906-07); (Department Head and Economist in Charge 1907-36), Professor (1907—), Oregon State.
- HERMAN AUSTIN SCULLEN, Ph.D. *Associate Professor of Entomology*
B.A. (1910), M.A. (1927), Oregon; Ph.D. (1934), Iowa State. Faculty, Iowa State (1912-18); Instructor (1921-22), Assistant Professor (1922-29), Associate Professor (1929—), Oregon State.
- OWEN LESTER SEARCY, B.S. *Technician (Veterinary Medicine)*
B.S. (1928), Oregon State. Technician (1928—), Oregon State.
- EVA M SEEN, Ed.D. *Professor of Physical Education for Women;*
Head of Department
B.S. (1922), Knox College; M.A. (1926), Wisconsin; Ed.D. (1937), New York University. Director of Physical Education for Women, Central State Teachers College (Stevens Point, Wisconsin) (1927-35); Professor (Department Head) (1935—), Oregon State.
- HARRY CASE SEYMOUR. *State Leader of 4-H Club Work*
State Leader of 4-H Club Work (Professor) (1916—), Oregon State.
- JAMES NIVEN SHAW, B.S., D.V.M. *Associate Professor of Veterinary*
Medicine; Associate Veterinarian, Agricultural Experiment Station
B.S. (1915), Oregon State; B.S., D.V.M. (1917), Washington State. Instructor (1919-21, 1926-27), Assistant Professor (1927-34), Associate Professor (1934—), Oregon State.
- FRANK SYLVESTER SHERMAN, Sergeant, Field Artillery. *Instructor in Military*
Science and Tactics (Field Artillery Unit)
Instructor (1937—), Oregon State.
- FRED MURIEL SHIDELER, B.S. *Assistant Professor of Journalism; In*
Charge of Department; Assistant in News Service
B.S. (1927), Kansas State. Instructor (1929-32), Assistant Professor (1932—), Oregon State.
- JOSEPH ELLSWORTH SIMMONS, M.S. *Associate Professor of Bacteriology;*
Associate Bacteriologist, Agricultural Experiment Station
B.S. (1916), M.S. (1918), Wisconsin. Faculty, Ontario Agricultural (1916), Wisconsin (1916-17); Instructor (1919-20), Assistant Professor (1920-26), Associate Professor and Associate Bacteriologist (1926—), Oregon State.
- BENNETT THOMAS SIMMS, D.V.M. *Professor of Veterinary Medicine; Head of*
Department; Veterinarian in Charge, Agricultural Experiment Station
D.V.M. (1911), Alabama Polytechnic Institute. Faculty, North Carolina State (1911-13); Assistant Professor (1913-14), Professor (Department Head) and Veterinarian in Charge (1914—), Oregon State.
- HERBERT REEVES SINNARD, M.S., R.A. *Associate Professor of Agricultural*
Engineering; Associate Professor of Architecture; Associate
Agricultural Engineer (Farm Structures),
Agricultural Experiment Station
B. S. (1927), M.S. (1929), Iowa State. Faculty, Oregon (1932-34); Instructor (1929-32), Assistant Professor (1934-35), Associate Professor and Associate Agricultural Engineer (1935—), Oregon State.

- OLGA ELIZABETH SKARTVEDT, B.A., B.S. *Catalog Assistant, Library*
 B.A. (1921), St. Olaf College; B.S. in L.S. (1930), Illinois. Library School Assistant, Illinois (1930-34); Catalog, U.S. Department of Labor (1935-38); Catalog Assistant (1938—), Oregon State.
- GORDON VERNON SKELTON, C.E. *Professor of Highway Engineering*
 B.S. (1891), C.E. (1894), Arkansas. Professor of Mathematics and Civil Engineering (1892-95), Coe College; Professor of Mathematics and Department Head (1895-1907), Professor of Civil Engineering and Department Head (1900-13), Professor of Highway Engineering (Department Head 1913-34) (1913—), Oregon State.
- CHARLES WESLEY SMITH, B.S. *Assistant County Agent Leader*
 B.S. (1921), Washington State. County Agent (Assistant Professor) (1927-34), Assistant County Agent Leader (1934—), (Associate Professor 1935-37), Professor (1937—), Oregon State.
- EDWIN MONROE SMITH, B.S.D. *Business Manager*
 B.S.D. (1891), Oregon Normal School. Requisition and Order Clerk (1915-18), Chief Clerk (1918-20), Assistant Manager (1920-25), Manager (Professor and Department Head) (1925—), Oregon State. Assistant Comptroller, State System (1934—).
- FRANK HERSCHEL SMITH, Ph.D. *Instructor in Botany*
 B.S. (1929), Arkansas; M.S. (1930), Washington State; Ph.D. (1932), Wisconsin. Faculty, St. Lawrence (1935-36); Instructor (1936—), Oregon State.
- MAHLON ELLWOOD SMITH, Ph.D. *Dean of Lower Division; Dean of Lower Division and Service Departments; Professor of English*
 A.B. (1906), Syracuse; M.A. (1909), Ph.D. (1912), Harvard. Faculty, Syracuse (1906-08, 1912-19), Director of Summer Session (1917-19), Director of Evening Session (1918-19); Dean of School of Basic Arts and Sciences (1919-32), Director of Summer Session (1919—), Professor of English (1919—), Dean of Lower Division and Service Departments (1934—), Oregon State; Dean (1932—), Oregon State and Oregon. Dean and Director of Lower Division, State System (1932—).
- WILLIAM SPENCE, Lieutenant Colonel, Field Artillery, B.S. *Associate Professor of Military Science and Tactics; Director of Field Artillery Unit*
 B.S. (1916), U. S. Military Academy; Graduate (1924), Field Artillery School; Graduate (1930), Command and General Staff School. Faculty, United States Military Academy (1919-23), Harvard (1924-28), Associate Professor (1934—), Oregon State.
- ELEANOR MAY SPIKE, M.S. *Assistant Professor of Household Administration; Director of Home Management Houses*
 B.S. (1925), M.S. (1933), Oregon State. Instructor (1932-36), Assistant Professor (1936—), Oregon State.
- CATHERINE HEDWIG STAINKEN, B.S. *Instructor in Foods and Nutrition*
 B.S. (1936), Cornell. Faculty, Cornell (1936-37); Instructor (1937—), Oregon State.
- THURMAN JAMES STARKER, B.S. *Professor of Forestry; Head of Department*
 B.S. (1910), Oregon State. Assistant Professor (1922-23), Associate Professor (1923-24), Professor and Department Head (1924—), Oregon State.
- EUGENE CARL STARR, B.S. *Associate Professor of Electrical Engineering*
 B.S. (1923), Oregon State. Instructor (1927-30), Assistant Professor (1930-37), Associate Professor (1937—), Oregon State.
- ROBERT A STEINER, M.B.A. *Instructor in Business Administration*
 B.B.A. (1933), M.B.A. (1936), Washington. Faculty, Washington (1934-36); Instructor (1937—), Oregon State.
- ROSCOE ELMO STEPHENSON, Ph.D. *Associate Professor of Soils; Associate Soil Scientist, Agricultural Experiment Station*
 B.S. (1915), Purdue; M.S. (1917), Illinois; Ph.D. (1920), Iowa State. Faculty, West Virginia (1918-20), Kentucky (1920-23); Associate Professor and Associate Soil Scientist (1923—), Oregon State.
- EDWARD ALMERON STEVENS, LL.B. *Instructor in Physical Education; Coach of Rowing*
 LL.B. (1909), Cornell. Assistant Coach of Rowing, Cornell (1911-12); Head Coach of Rowing, Harvard (1923-26); Instructor (1931—), Oregon State.

- ALONZO L STINER, B.S. *Head Coach of Football; Instructor in Physical Education*
 B.S. (1927), Nebraska. Faculty, Colorado (1927-28); Instructor, Track Coach, and Assistant Football Coach (1928-33), Head Coach of Football (1933—), Oregon State.
- WILLARD JOHN STONE, M.D. *Assistant Physician*
 A.B. (1928), M.D. (1931), Oregon. Assistant Physician (1935—), (Assistant Professor 1937), Oregon State.
- GERTRUDE STRICKLAND, B.S. *Assistant Professor of Clothing, Textiles, and Related Arts*
 B.S. (1935), Texas State College for Women. Faculty, Denton (Texas) College of Industrial Arts (1912-18), Washington State (1918-19); Instructor (1920-36), Assistant Professor (1936—), Oregon State.
- DONALD BRUCE STUART. *Superintendent of Light and Power*
 Superintendent (Assistant Professor) (1914—), Oregon State.
- ERNST THEODORE STUHR, M.S. *Associate Professor of Pharmacology and Pharmacognosy; In Charge of Department*
 Ph.G. (1922), Ph.C. (1922), B.S. (1925), Nebraska; M.S. (1927), Florida. Faculty, Nebraska (1920-22), Florida (1925-27); Assistant Professor (1927-30), Associate Professor (1930—), Oregon State.
- BERTHA WHILLOCK STUTZ, M.S. *Associate Professor of Secretarial Science*
 B.Ped. (1910), Missouri State Teachers College; B.S. (1918), M.S. (1927), Oregon State. Instructor (1918-27), Assistant Professor (1927-29), Associate Professor (1929—), Oregon State.
- ROBERT EDWARD SUMMERS, M.S. *Assistant Professor of Mechanical Engineering*
 B.S. (1924), M.S. (1933), Oregon State. Faculty, Kansas State (1924-25); Instructor (1925-30), Assistant Professor (1930—), Oregon State.
- GRANT ALEXANDER SWAN, B.S. *Assistant Professor of Physical Education*
 B.S. (1922), Oregon State. Instructor (1926-30), Assistant Professor (1930—), Oregon State.
- NICHOLAS TARTAR, B.S. *Associate Professor Emeritus of Mathematics*
 B.S. (1907), Oregon State. Instructor (1904-09), Assistant Professor (1909-29), Associate Professor (1929-32), Associate Professor Emeritus (1932—), Oregon State.
- ALFRED TAYLOR, Ph.D. *Instructor in Zoology*
 B.A. (1932), Oregon; M.A. (1934), Ph.D. (1935), Oregon State. Instructor (1935—), Oregon State.
- LILLIAN CATHERINE TAYLOR, M.A. *Assistant Professor of Foods and Nutrition*
 B.S. (1916), Illinois; M.A. (1927), Columbia. Instructor (1919-37), Assistant Professor (1937—), Oregon State.
- COLONEL FREDERICK COLEMAN TEST, Infantry, B.S. *Commandant; Professor of Military Science and Tactics*
 Colonel, Infantry, United States Army; B.S. (1905), U. S. Military Academy; Graduate (1922), Army School of the Line; Graduate (1923), General Staff School; Graduate (1924), Army War College. Faculty, Syracuse (1928-34); Commandant and Professor (1936—), Oregon State.
- WILLIAM LEROY TEUTSCH, B.S. *Assistant County Agent Leader*
 B.S. (1920), Oregon State. County Agricultural Agent (1920-23), District Agricultural Agent (1924-27), Assistant County Agent Leader (Professor 1935) (1927—), Oregon State.
- CHARLES EDWIN THOMAS, M.M.E. *Associate Professor of Engineering Materials*
 M.E. (1913), M.M.E. (1931), Cornell. Faculty, Cornell (1914-17); Assistant Professor (1918-22), Associate Professor (1922—), Oregon State.
- MARION DAWS THOMAS, B.S. *Assistant Extension Economist*
 B.S. (1937), Oregon State. Assistant Extension Economist (1937—), Oregon State.

- BENJAMIN GARRISON THOMPSON, M.S. *Assistant Entomologist,
Agricultural Experiment Station*
B.S. (1918), M.S. (1924), Oregon State. Assistant Entomologist (Assistant Professor)
(1924—), Oregon State.
- BETTY LYND THOMPSON, M.A. *Assistant Professor of Physical
Education for Women*
A.B. (1923), Illinois Wesleyan; M.A. (1926), Wisconsin. Faculty, Illinois Wesleyan
(1924-25); Instructor (1927-30), Assistant Professor (1930—), Oregon State.
- ELNORA ELVIRA THOMSON, R.N. *Professor of Nursing Education;
Director of Department*
R.N. (1910), State of Illinois; R.N. (1920), State of Oregon. Executive Secretary and
Director, Illinois Society for Mental Hygiene (1911-18); Director, Department of
Public Health Nursing, Chicago School of Civics and Philanthropy (1917-18, 1919-20);
Director, Public Health Nursing Education, American Red Cross Tuberculosis Com-
mission to Italy (1918-19); Director, Far-Western Office, American Child Health
Association (1923-25); Professor (1920-23, 1925—), Director of Public Health
Nursing (1920-23), Director of Health and Nursing Education (Portland School
of Social Work) (1925-32), Director, Nursing Education, Medical School (1932—),
Oregon State.
- EDWARD FRITCHOFF TORGERSON, B.S. *Associate Professor of Soils; Associate
Soil Scientist (Soil Survey), Agricultural Experiment Station*
B.S. (1914), Illinois. Faculty, Illinois (1914-18); Assistant Professor and Assistant
Soil Scientist (1918-36), Associate Professor and Associate Soil Scientist (1936—),
Oregon State.
- HERBERT TOWNSEND VANCE, M.S. *Professor of Secretarial Science;
Head of Department*
B.S. (1924), M.S. (1927), Oregon State. Assistant Professor (1916-17), Professor and
Department Head (1919—), Oregon State.
- JOHN ALBERT VAN GROOS, M.S. *Assistant Professor of Mathematics*
B.S. (1899), Oregon State; M.S. (1903), Yale. Instructor (1919-22), Assistant Pro-
fessor (1922—), Oregon State.
- WILLIAM ROY VARNER, M.S., E.E. *Assistant Professor of Physics*
B.S. (1912), M.S. (1932), Oregon State; E.E. (1914), Westinghouse. Faculty, Oregon
(1933-34); Instructor (1929-33, 1934-36), Assistant Professor (1936—), Oregon State.
- EARNEST VANCOURT VAUGHN, Ph.D. *Professor of History;
In Charge of Department*
B.L. (1900), M.A. (1904), Missouri; Ph.D. (1910), Pennsylvania, Faculty, Missouri
(1905-11); Department Head, Delaware (1911-22); Associate Professor (1924-37),
Professor (1937—), Oregon State.
- HENRY JAMES VAUX, M.S. *Instructor in Forestry*
B.S. (1933), Haverford College; M.S. (1935), California. Instructor (1937—), Oregon
State.
- MARGARET ANN VILLENEUVE, B.S. *Circulation Assistant, Library*
B.S. in L.S. (1933), Washington. Circulation Assistant (1935-37), Seattle Public Li-
brary; Circulation Assistant (1937—), Oregon State.
- GLENN VOORHIES, M.S. *Instructor in Wood Products*
B.S. (1929), M.S. (1930), Oregon State. Instructor (1936—), Oregon State.
- MARIAN LUCILLE WABY, A.B., B.S. *Orders Assistant, Library*
A.B. (1934), California at Los Angeles; B.S. in L.S. (1935), Illinois. Order Assistant
(1935—), Oregon State.
- CLYDE WALKER, M.S. *Associate Professor of Agricultural Engineering*
B.S. (1924), M.S. (1930), Nebraska. Instructor (1928-29), Assistant Professor (1929-
32), Associate Professor (1932—), Oregon State.
- RUPERT ALRED WANLESS, B.S. *Assistant Professor of Civil Engineering*
B.S. (in C.E.) (1923), Oregon State. Instructor (1929-32), Assistant Professor
(1935—), Oregon State.

- GLEN CHASE WARE, M.S. *Instructor in Chemistry*
B.S. (1918), M.S. (1928), Kansas State. Instructor (1928—), Oregon State.
- HARRIET JANET WARNER, A.B. *Reference Assistant, Library*
A.B. (1919), California. Reference Assistant (1930—), Oregon State.
- ERNEST WILLIAM WARRINGTON, M.A. *Professor of Philosophy; Professor
of Religion; Head of Department*
A.B. (1905), Delaware; M.A. (1907), Princeton. Faculty, Oregon (1933—); General
Secretary, Student Y.M.C.A. (1921-26), Professor and Department Head (1928—),
Oregon State.
- IVAN FREDERIC WATERMAN, C.E. *Associate Professor of Civil Engineering*
B.S. (1910), John B. Stetson University; C.E. (1912), Wisconsin. Faculty, John B.
Stetson University (1912-16); Instructor (1919-21), Assistant Professor (1921-37),
Associate Professor (1937—), Oregon State.
- HARRY HERSCHEL WEINSTOCK, JR., Ph.D. *Research Associate in Chemistry*
B.Chem. (1933) Cornell, Ph.D. (1937), Illinois. Research Associate (Assistant Pro-
fessor) (1936—), Oregon State.
- EARL WILLIAM WELLS, J.D. *Associate Professor of Speech*
A.B. (1921), Iowa; M.A. (1927), Wisconsin; J.D. (1928), Iowa. Faculty, Wisconsin
(1926-27); Instructor (1921-26), Assistant Professor (1927-30), Associate Professor
(1930—), Oregon State.
- WILLIBALD WENIGER, Ph.D. *Assistant Dean of the Graduate Division;
Professor of Physics; Head of Department*
B.A. (1905), M.A. (1906), Ph.D. (1908), Wisconsin. Instructor (1908-09), Assistant
Professor (1909-10), Professor and Department Head (1910-14, 1920—), Assistant
Dean (1933—), Oregon State.
- HAZEL KELSEY WESTCOTT, B.S. *Administrative Assistant, President's Office*
B.S. (1920), Oregon State. Secretary-Statistician (1926-36), Administrative Assistant
(Assistant Professor) (1936—), Oregon State.
- BAYARD O WHEELER, M.A. *Assistant Professor of Business Administration
and Economics*
A.B. (1928), California; M.A. (1930), Washington. Faculty, Washington (1929-33),
California (1934-36); Instructor, (1936-37), Assistant Professor (1937—), Oregon
State.
- RUTH VEE WHEELOCK, M.A., R.N. *Associate Professor of Nursing Education*
B.A. (1911), M.A. (1915), Michigan; Diploma (1920), Bellevue Hospital School of
Nursing; R.N. (1920), States of New York, Michigan, California, Oregon. Faculty,
Michigan (1921-26); Department Director, Riverside Junior College (1927-33); Assis-
tant Professor (1933-35), Associate Professor (1935—), Oregon State.
- HAROLD H WHITE, B.S. *Associate Extension Economist*
B.S. (1920), Oregon State. Instructor in Agricultural Education (1923-27), Associate
Extension Economist (Assistant Professor) (1931—), Oregon State.
- ERNEST HERMAN WIEGAND, B.S.A. *Professor of Food Products Industries;
Horticulturist (Food Products Industries), Agricultural
Experiment Station*
B.S.A. (1914), Missouri. Poultry Specialist, United States Department of Agriculture
(1917-19); Professor and Horticulturist (1919—), Oregon State.
- ELIZABETH CECELIA WILEY, A.M. *Associate Professor of Clothing,
Textiles, and Related Arts*
A.B. (1924), A.M. (1926), California. Faculty, Alabama College (1928-32), Millikin
(1933-35), Montana State (1935-37); Associate Professor (1937—), Oregon State.
- WILLIAM DONALD WILKINSON, Ph.D. *Assistant Professor of Geology*
B.A. (1923), Ph.D. (1932), Oregon. Faculty, Oregon (1930-32); Instructor (1932-33),
Assistant Professor (1933—), Oregon State.
- EARL CLARK WILEY, B.S. *Assistant Professor of Mechanical Engineering*
B.S. (1921), Oregon State. Instructor (1922-37), Assistant Professor (1937—), Ore-
gon State.

- GEORGE ALFRED WILLIAMS, A.M. *Assistant Professor of Mathematics*
A.B. (1918), Illinois; A.M. (1926), California. Instructor (1920-27), Assistant Professor (1927—), Oregon State.
- JESSAMINE CHAPMAN WILLIAMS, M.A. *Professor of Foods and Nutrition;*
Head of Department
B.S. (1906), M.A. (1921), Columbia. Head, Home Economics Department, Sweet Briar College (Virginia) (1906-11); Head, Home Economics Department, Oklahoma State (1912-13); Faculty, Arizona (1914-23); Professor and Department Head (1923—), Oregon State.
- ROGER JOHN WILLIAMS, Ph.D., D.Sc. *Professor of Chemistry*
B.S. (1914), D.Sc. (1934), University of Redlands; M.S. (1918), Ph.D. (1919), Chicago. Faculty, Oregon (1920-32); Professor (1932—), Oregon State.
- MAUD MATHES WILSON, A.M. *Home Economist, Agricultural Experiment Station; Professor in Charge of Home Economics Research*
B.S. (1913), Nebraska; A.M. (1931), Chicago. Faculty, Nebraska (1913-15), In Charge of Home Economics Extension, Nebraska (1915-18); State Leader of Home Economics Extension, Washington State (1918-22), Assistant Director of Extension (1922-25); Home Economist and Professor (1925—), Oregon State.
- GUSTAV HANS WILSTER, Ph.D. *Professor of Dairy Manufacturing*
B.S. (1920), M.S. (1921), Ph.D. (1928), Iowa State. Faculty, Utah State (1921-25, 1927-28); Professor and Dairy Husbandman (1929—), Oregon State.
- CHARLES GEORGE WILTSHIRE. *Superintendent of Plumbing and Steam Fitting*
Superintendent (Assistant Professor) (1911—), Oregon State.
- LOUIS RUSSELL WIRAK, First Lieutenant, Corps of Engineers, C.E. *Assistant Professor of Military Science and Tactics (Engineer Unit)*
B.S. (1931), U. S. Military Academy; C.E. (1934), Princeton; Graduate (1935), Army Engineer School; First Lieutenant, U. S. Army. Assistant Professor (1937—), Oregon State.
- CLARENCE CALVIN WOODBURY, Staff Sergeant (Captain, Infantry, Officers' Reserve Corps) *Instructor in Military Science and Tactics (Infantry Unit)*
Instructor (1920—), Oregon State.
- JOHN CARSON WOODBURY, Staff Sergeant. *Assistant to Professor of Military Science and Tactics (Sergeant-Major)*
Assistant (1920—), Oregon State.
- LAWRENCE FISHER WOOSTER, M.S. *Professor of Applied Electricity*
B.S. (in E.E.) (1906), Illinois; M.S. (1931), Oregon State. Instructor (1910-14), Assistant Professor (1914-19), Superintendent of Light and Power (1914-19), Professor (1919—), Oregon State.
- CLYTIE MAY WORKINGER. *Placement Secretary*
Secretary of School of Agriculture (1911-18), Secretary of School of Vocational Education (1918-23), Placement Secretary (Assistant Professor) (1923—), Oregon State.
- LEMUEL DARY WRIGHT, M.S. *Assistant Chemist, Agricultural Experiment Station*
B.S. (1936), New Hampshire; M.S. (1937), Pennsylvania State. Assistant Chemist (Instructor) (1937—), Oregon State.
- ROSALIND WULZEN, Ph.D. *Assistant Professor of Zoology*
B.S. (1904), M.S. (1910), Ph.D. (1914), California. Department Head, Mills (1909-13); Faculty, California (1914-28), Oregon (1928-34); Assistant Professor (1933—), Oregon State.
- CHARLES THEODORE YERIAN, M.S. *Assistant Professor of Secretarial Science*
B.S. (1932), Oregon State; M.S. (1936), Iowa. Assistant Professor (1937—), Oregon State.
- DELOSS PALMER YOUNG, B.S. *Assistant Professor of Speech and Dramatics*
B.S. (1926), Oregon State. Instructor (1927-35), Assistant Professor (1935—), Oregon State.

- *EDWIN ARTHUR YUNKER, Ph.M. *Assistant Professor of Physics*
 A.B. (1924), California; Ph.M. (1930), Wisconsin. Instructor (1925-33), Assistant
 Professor (1933—), Oregon State.
- SANFORD MYRON ZELLER, Ph.D. *Plant Pathologist, Agricultural*
Experiment Station
 B.S. (1909), Greenville College; A.B. (1912), A.M. (1913), Washington; Ph.D.
 (1917), Washington University (St. Louis). Faculty, Seattle Pacific College (1909-
 12), Washington (1912-14); Assistant Professor and Assistant Plant Pathologist
 (1919-20), Associate Professor and Associate Plant Pathologist (1920-24), Professor
 and Plant Pathologist (1924—), Oregon State.
- ADOLPH ZIEFLE, M.S., Phar.D. *Dean of the School of Pharmacy;*
Professor of Pharmacy
 Ph.C. (1904), B.S. (1907), M.S. (1919), Michigan; Phar.D. (1928), Pittsburgh. Fac-
 ulty, Michigan (1905-07), Kansas (1907-09), North Dakota State (1909-14); Professor
 (Department Head) and Dean (1914—), Oregon State. Dean and Director of Phar-
 macy. State System (1932—).

*On leave of absence.

Part II

General Information

Organization and Facilities

History

HISTORY of the State College dates from Oregon's territorial beginnings. In 1856 a building was begun at the corner of Fifth and Madison Streets, Corvallis, to house a coeducational community school which in 1858 was incorporated under the name of Corvallis College. In 1865 the college passed under the control of the Methodist Episcopal Church, South. While in its inception a private enterprise, the institution from the beginning served a public purpose. It was destined to become, not only a state college, but one of a national system of universities and colleges.

A National College. The Federal Land-Grant Act, approved by President Lincoln on July 2, 1862, provided Federal aid, derived from what is known as the Land-Grant Fund, for each state that should avail itself of the benefits of the Act for the support and maintenance of a "college where the leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

Ninety thousand acres of land were appropriated to Oregon; and by an Act approved October 9, 1862, the Legislative Assembly of Oregon accepted the provisions of the Congressional law. The legislature of 1868 provided for the location of the land received under the Act of 1862, and as there were no state colleges in Oregon at that time "designated and adopted" Corvallis College as the state's agricultural college and the recipient of the income from the land-grant funds.

A State College. The history of Oregon State College as a state institution thus dates from 1868. The first class was graduated in 1870. The legislature in 1870 "permanently adopted" Corvallis College "as the agricultural college of the State of Oregon." During subsequent years the catalog of the institution bore various designations, including "Corvallis State Agricultural College" (1872-1875), "Corvallis College" (1881-82), "Corvallis and Oregon State Agricultural College" (1885-86). In 1885, the State assumed entire control of the institution. During the summer of 1887, the cornerstone of a building erected by the citizens of Benton county on the present campus was laid by the Governor of Oregon. The structure is the present Administration Building.

The annual enrollment did not reach a total of one hundred students until 1889, but in the nineties it steadily increased and by 1906-07 was eight hundred and thirty-three. Since then the growth in attendance has been rapid. For the first thirty years most of the students came from Benton and neighboring counties; today, all counties in Oregon, many other states, and a number of foreign countries are represented. The teaching faculty has increased from a maximum of five in 1884 to three hundred, in addition to many other staff members.

"Liberal and Practical Education." In accordance with the acts of Congress under which it is maintained, the purpose of the State College is to provide "liberal and practical education"—education for cultured living and intelligent citizenship, as well as for efficient service in some occupation requiring collegiate training. Technical education must be offered, but "other scientific and classical studies" are not to be excluded. While special attention is given to the natural sciences and their applications in professional and technical fields, thorough general education is recognized as of primary importance in all the work of the institution.

Curricula. The curriculum of the earlier years was composed chiefly of the academic and classical subjects originally taught by Corvallis College—mathematics, sciences, history, English, Latin, Greek, philosophy, logic, and political economy. Other subjects were mensuration, mechanics, surveying and navigation, and bookkeeping.

From 1872 to 1885 the instruction was organized into seven coordinate divisions, each constituting a major group of studies leading to a degree, and each called a "school," as follows: Physics, Mathematics, Moral Science, Language, History and Literature, Engineering, Agriculture. In 1885 a single four-year "course of study prescribed by the State" was established for all students, including mathematics, science, English, languages, philosophy, agriculture, and military training.

The first instruction in agriculture, announced in 1869 as a two-year curriculum, was given principally in the Chemistry Department; the studies included soil analysis, fertility, drainage, stock raising, fruit culture, and farm buildings. The earliest actual instruction in engineering was about 1888-89, in connection with the Department of Mathematics.

The departments of Agriculture and Engineering were the first of their kind in any college in the Pacific Northwest. The same was true of the Department of Household Economy established in 1889. In the field of business training the State College was also among the pioneers, having taught economics and accounting from the time of its establishment. These and allied subjects were organized in 1900 into the Department of Business, offering a two-year curriculum. By 1900, therefore, definite establishments had been made that were to develop by 1908 into full degree-granting schools of Agriculture, Commerce, Engineering, and Home Economics.

Other schools soon followed. Forestry, first developed in the Department of Botany, was organized as a school in 1913. Pharmacy, established as a department in 1898 on petition of the druggists of the state, was organized as a school in 1917. Education, first established as a Department of Industrial Pedagogy in 1909, became the School of Vocational Education in 1918, and in 1932, in the reorganization of State higher education, was organized as a coordinate division of the School of Education, which operates jointly at the University and the State College.

As the professional schools were developed, the basic departments in some cases became part of the school organization. The social sciences were in the School of Commerce, geology was in the School of Mines, psychology in the School of Vocational Education. Other similar departments were included in the nonmajor School of Basic Arts and Sciences. In the reorganization of 1932, when the School of Commerce was consolidated with the School of Business Administration at the University, the School of Science of the State System of Higher Education was established at the State College, offering undergraduate and graduate work in all the biological and physical sciences.

In the same year, the Lower Division was established on a parallel basis at the University and the State College, offering freshman and sophomore work in the liberal arts and sciences. The primary purpose of the Lower Division is to give the general education needed by men and women without respect to the careers that they may follow.

Graduate work, which since 1910 had been administered through the faculty committee on graduate study and advanced degrees, in 1933 was included in the interinstitutional Graduate Division.

The State College is on the accredited list of the Association of American Universities, the Northwest Association of Secondary and Higher Schools, the American Association of University Women, and other authoritative rating organizations.

Income

THE state law creating the Board of Higher Education specified that this body was to "have and exercise control of the use, distribution and disbursement of all funds, appropriations and taxes, now or hereafter in possession, levied, and collected, received or appropriated for the use, benefit, support and maintenance of institutions of higher education." By virtue of this act, and beginning July 1, 1931, the Board has administered all funds for all state-supported higher educational activities, including Oregon State College, on the basis of a unified budget.

Funds for the support of higher education in Oregon are derived primarily from the following sources: a millage appropriation equal to 2.04 mills on all taxable property; certain continuing appropriations from the State for definite purposes; specified sums from the National Government assigned for definite purposes by Congressional acts; income from student tuition and fees; and other sources such as sales, service charges, gifts, and miscellaneous.

During the year 1937-38, the income of all the institutions under the control of the Board totaled approximately \$4,097,383. Of this total \$2,641,296 came from state sources, \$374,957 from Federal sources, \$96,333 from county sources, \$766,210 from student fees, and \$218,581 from gifts and other sources. The state support of \$2,641,296 was derived largely from millage, this amounting to \$2,040,296. The balance accrued through continuing appropriations for agricultural extension and research work, and from an appropriation of \$400,000 for general educational purposes.

Location

CORVALLIS (population 7,585), situated at the head of navigation on the Willamette River, 85 miles south of Portland, is a healthful city with a remarkably equable climate. The average annual temperature is about 52 degrees Fahrenheit; rainfall averages about 42 inches annually, falling mostly during the winter. Corvallis has excellent paved streets, good schools, churches, attractive residences, a modern sewer system, and a first-class water system supplied from mountain springs. The Coast Range mountains and the distant splendor of the Cascades present a constant panorama of mountain scenery.

Campus

DEVELOPMENT of the State College campus during the past twenty-five years has been in accordance with a permanent plan prepared for the institution by consulting landscape architects of national recognition. The late John C. Olmsted visited the institution in 1908 and prepared the fundamental plan. In 1925 Mr. A. D. Taylor, following a visit to the campus, revised and enlarged the Olmsted plan, embodying recommendations for future development.

The campus proper, exclusive of farm and forest lands, includes 189 acres. It extends from near Ninth Street westward between Monroe and Jefferson Streets in a wedge shape to Sixteenth Street, thence in a rectangular shape to the Mall (Thirtieth Street). The area from Ninth to Fourteenth Streets, known as the East Campus, is a spacious, attractively planted recreation park. Directly west is the East Quadrangle. The Engineering Quadrangle is immediately to the north. The West Quadrangle is the heart of the present campus. Between it and the Mall are the men's and women's quadrangles, devoted to halls of residence and recreation areas. To the north are the greenhouses with adjacent gardens. Across the Mall, facing east, are a number of agricultural buildings. Between this row of buildings and the farms are areas assigned to barns and stables.

Each quadrangle is planted with both native and exotic ornamental trees and shrubs, which not only contribute to the beautification of the campus but also serve as living laboratory material for students pursuing landscape and horticultural studies.

Farm and Forest Lands

FOR instruction and research in agriculture and forestry, the State holds title to farm and forest lands, not only at Corvallis but also at various points throughout the state. In addition to the lands west of the Mall, the South Farm, including horticultural and poultry tracts, lies just south of the city limits of Corvallis. The main campus and adjoining lands total 566 acres, in addition to which 133.55 acres of farm land in Benton County, owned by the State College, is used largely for agricultural research and experimentation. The Peavy Arboretum, the McDonald Forest, the Blodgett tract, the Spaulding Woodlot, and other forest lands owned by the institution total 6,536 acres. For branch experiment station use, the State College owns 620 acres in Union County and 20 acres in Umatilla County. The aggregate total of land owned by the institution is 7,875.55 acres.

The State College has additional land under lease as follows: for instructional use by the School of Agriculture, 488 acres; for research and experimentation in agriculture by the Central Experiment Station, 258.61 acres; for the Eastern Oregon Branch Experiment Station, 1,920 acres of grazing land; for the Squaw Butte Range Branch Experiment Station, 1,280 acres of grazing land; for the Hood River Branch Experiment Station, 10 acres; for the Division of Physical Education for rowing club purposes, 1 acre. The total amount of land thus under lease is 3,957.61 acres.

Buildings

WITH the exception of four or five of the older buildings which date from 1889 to 1902, all of the principal buildings of the State College have been erected within the past thirty years and are of harmonious construction and design. The following brief descriptions, arranged alphabetically, will convey a general idea of the buildings and the purpose for which they are used. In each case the date of erection is indicated; in case a building was erected by units, the dates of erection for the respective units are indicated in order. The location of the various buildings is shown on the map of the campus on page 9. In addition to the buildings listed, various service buildings are found on the campus, and the several branch experiment stations have buildings adapted to the research and experimental work carried on.

The Administration Building (1889), the gift of the citizens of Benton County, is a three-story brick structure, 90 by 120 feet, containing the office of the Registrar, the Business Office, the office of the Comptroller and Director of Business Offices of the Oregon State System of Higher Education, the office of the Director of Music, the studios of the music faculty, the Workshop Theater, and recitation rooms. On the second floor is a memorial tablet erected in 1894 by the Alumni Association in honor of Benjamin Lee Arnold, A.M., President from 1871 to 1892.

Agriculture Hall (1909, 1913), constructed of brick and sandstone, consists of the central section with wings. The central section, 66 by 140 feet, with four stories and basement, contain the offices of the School of Agriculture, the Agricultural Experiment Station, the Federal Cooperative Extension Service, the State Leader of 4-H Clubs; various other offices of the Extension Service; the soils research laboratories of the Experiment Station; offices, classrooms, and laboratories of the Department of Botany, and the offices, classrooms, laboratories, and museums of the departments of Zoology and Entomology. The fourth floor is occupied by the Department of Bacteriology. The north wing, 72 by 130 feet, three stories high, is occupied by the departments of Soils, Farm Management, and Farm Crops, including the cooperative seed-testing laboratory. The third floor is occupied by the Department of Entomology. The south wing, 72 by 130 feet, with its basement and three floors, accommodates the central offices and various activities of the Department of Horticulture, the Visual Instruction Department of the Extension Service, and some of the laboratories, museums, lecture rooms, and offices of the departments of Botany and Zoology.

Apperson Hall (1898, 1920), named in honor of the late Honorable J. T. Apperson, regent of the State College from 1888 until his death in 1917, is 90 by 120 feet in size, three stories high, constructed of Oregon gray granite, sandstone, and terra cotta. During the summer of 1920 the third story was added and the interior completely remodeled. The first floor contains offices and laboratories for the Department of Electrical Engineering. The second floor contains offices of the Dean of the School of Engineering and various offices, classrooms, and laboratories of the Department of Electrical Engineering. The third floor contains offices for the Department of Civil Engineering, four drawing rooms, and five class and lecture rooms.

The Armory (1910, 1911), of concrete and steel construction, 126 by 355 feet, contains offices, store rooms, and classrooms used by the Military Department. The drill hall, with a floor of earth 36,000 square feet in area, is used for the military instruction of the R.O.T.C., for practices of the football and track teams during inclement weather, and for various other events. At the northwest corner is a tablet in memory of the late General Ulysses Grant McAlexander, known as "The Rock of the Marne" during the world war, who was Commandant at Oregon State College from 1907 to 1911.

Commerce Hall (1922), constructed of brick and terra cotta, is of "U" shape, 186 feet long and 67 feet wide, with wings 28 by 107 feet, and has entrances from both north and south. The building contains the offices of the President and the Executive Secretary, the Dean of the Lower Division, the Dean of Men, the Dean of Women, and the Editor of Publications. It provides offices, classrooms, and laboratories for the departments of Agricultural Economics, Secretarial Science, and Social Science. On the ground floor are located the Clerical Exchange, the College Press, and the Department of Agricultural Economics Extension.

Crew House. The Crew House, 42 by 105 feet, is located about twelve blocks from the campus on the Willamette River. The building contains storage space for 15 shells, locker room for 250 men, concrete shower room and lavatories, and a completely equipped repair and construction shop. Present equipment includes 7 shells, a 16-position training barge, a 21-foot coaching launch, and 2 four-oared barges. Nearly one acre of ground surrounds the Crew House, including the approach to the river floats. The Willamette River affords one of the best rowing courses in the United States. Rowing is carried on throughout practically the whole year.

The Dairy Building (1912) in both outside and inside finish is of architecture similar to that of Agriculture Hall. The structure is 54 by 141 feet, three stories high. On the first floor are the laboratories for buttermaking, cheesemaking, and market milk instruction. On the second floor are student and research laboratories and offices of the Division of Animal Industries and the departments of Animal Husbandry and Dairy Husbandry. The third floor is occupied by the Department of Mathematics.

The Engineering Laboratory (1920) is a brick and concrete building 63 by 220 feet in dimensions and three stories high. The main laboratory is 40 by 220 feet and includes three principal divisions: (a) a materials laboratory occupying about one third of the building at the east end; (b) a hydraulics laboratory occupying the middle third; and (c) a steam- and gas-engine laboratory occupying the west end of the building. All are served by a five-ton electric traveling crane. The south part of the building contains offices, recitation rooms, drafting rooms, and special laboratories.

The Farm Mechanics Building (1912), of brick and stone, 50 by 120 feet and two stories high, provides drafting rooms, classrooms, and laboratories for the work in agricultural engineering. Facilities are provided for teaching and experimental work dealing with farm power, farm machinery, farm water supply and irrigation equipment, farm shop, farm building, automobile mechanics, and rural electrification.

The Forestry Building (1917), three stories high, 80 by 136 feet, constructed of brick, contains roomy laboratories for work in silviculture, dendrology, mensuration, forest protection, technology, mapping, logging engineering, timber testing, and wood products. Space is devoted to a collection of manufactured wood products, showing the various uses to which wood may be put, and to a forest museum containing large specimens of all commercial woods of the United States.

The Foundry (1899), a brick structure approximately 40 by 180 feet, houses the foundry, the sheet-metal shop, a cabinet shop for construction and repair service, operated by the Superintendent of Buildings, and the finishing laboratory. The foundry proper, approximately 40 by 85 feet in size, is equipped with a 22-inch cupola, brass-melting furnaces, core ovens, cranes, molding machines, and ladles of ample capacity for commercial production. The sheet-metal shop is 40 by 40 feet, with the machines and processing equipment on the main floor and the planning and drafting equipment on a balcony floor. The finishing laboratory is fully equipped with a spray booth and auxiliary apparatus for industrial finishing and for laboratory use.

The Greenhouses, constructed with steel frame and curved eaves, provide approximately 27,000 square feet under glass. This area is divided among the various branches of the work as the needs develop. One house, 33 by 100 feet, is especially designed and equipped for the class work of the different departments in the School of Agriculture. Ample space is used for instruction in vegetable crops and subtropical fruits. Interior glass partitions and a control of heat make it possible to grow any of the crops generally handled by florists and vegetable forcers. In addition, any plant material required by research men can be grown in the spaces assigned to them.

The Heating Plant (1923), 52 by 80 feet in dimensions and one story high, is constructed of brick and concrete, with concrete tunnel and conduits leading to the various buildings of the campus. The plant is equipped with outside coverage for fuel storage and a conveyor system of moving fuel to the three 500-horse-power boilers that are set with dual furnaces permitting the burning of either fuel oil or the Oregon mill refuse known as hogged fuel. The radial brick chimney is 175 feet high and 10 feet inside diameter, having an outside ladder and platforms permitting student work on temperature of flue gases. The present plant, which joins the south end of the Armory, is designed to permit enlargement.

The Home Economics Building (1914, 1920) measures about 215 feet in length and 120 feet in total width. It consists of three stories above a high basement, and is built of brick and terra cotta. Heating, lighting, and ventilating systems of thoroughly modern type are installed, and every provision—including an electric elevator, rest room, reading room, lockers, and dressing rooms—is made for the comfort and convenience of the young women pursuing work in home economics. Lecture rooms, laboratories, and offices for all phases of home economics are provided in this building. A large, well-equipped auditorium is located on the third floor of the central unit. A number of classrooms and offices are temporarily used by the Department of English, and offices, laboratories, and classrooms are provided for the Department of Fish and Game Management.

The Home-Management Houses are campus residences used as laboratories in family living and home-management practice for upper-division and advanced students in home economics. Kent House (purchased 1930)

was formerly the residence of the late Frederick Charles Kent, professor of mathematics at the State College from 1917 until his death in 1928. Withycombe House (purchased 1918) was the Corvallis residence of the late Honorable James Withycombe, from 1902 to 1914 director of the Agricultural Experiment Station, and from 1915 until his death in 1919 Governor of Oregon and ex-officio regent of the State College. The third home-management house, Dolan House, is a private dwelling rented by the year.

The Horticultural Products Building (1919, 1923), constructed of brick, 46 by 72 feet, three stories high, with a one-story wing 46 by 60 feet, contains offices, lecture rooms, and instructional and research laboratories designed and equipped for work in food products industries. The building is arranged for experimental research and technical investigations in the fields of commercial canning, frozen products, fruit juices, vinegar, carbonated beverages, dehydration, and all food manufacturing processes.

The Industrial Arts Building (1908), a well-lighted brick structure, includes a central portion, 52 feet square and 2 stories high, flanked by a one-story wing on the east, 40 by 220 feet, and a similar wing on the south, 40 by 200 feet. The central portion contains the office of the Department of Mechanical Engineering and the office and classrooms of the Department of Industrial Arts, a general drafting room, a seminar room, and a recitation room. The south wing contains the main woodworking shop, 40 by 97 feet. The east wing contains the machine shop, 40 by 80 feet, the blacksmith shop, 40 by 100 feet, and a store room.

Kidder Hall (1892), originally known as Cauthorn Hall and used as a hall of residence, first for men and later for women students, has been renovated and remodeled for instructional purposes. The four floors are devoted to studios, classrooms, and offices, affording accommodations for the Federal Rural Rehabilitation Division and Soil Conservation Service, and for the Departments of Art and Architecture, History, Journalism, and Modern Languages. The lobby of the building forms an attractive and commodious hall for the exhibition of loan collections, paintings, and other works of art. The building is named in honor of Ida Angeline Kidder, librarian of the State College from 1908 until her death in 1920.

The Library Building (1918), constructed of brick and gray terra cotta, consists of three stories and basement. An electric elevator and a book-lift connect all five decks of the fireproof stack room. The basement is used for storage of documents, newspapers, unbound periodicals, and duplicates, and for binding preparation and mending. On the first floor are the Reserve-Book room, the Periodical Reading room, and the Order and Catalog departments. The second floor houses the main reference room, with seating capacity of three hundred and fifty, a faculty reading room, and the office of the Director of Libraries. The third floor consists of small rooms designed ultimately for seminar purposes, at present used for offices and laboratories of the Department of Speech and Dramatics. A special room is devoted to the Mary J. L. McDonald collection of rare books.

Margaret Snell Hall (1921), dormitory for women, is 96 by 235 feet in size, built of brick and terra cotta, three stories high above a basement. On the first floor are located the reception rooms and the dining room and kitchens, together with a few student rooms. The laundry and freight room in the basement are connected by elevator with a trunk-storage room on each floor. Seventy-one rooms, most of them designed to accommodate two

students, are equipped with individual closets, running water, steam heat, and electric lights. Compartment bathrooms, with showers in addition, a hair-dressing room, and a clothes-pressing room, are provided on each floor. The building is named in honor of the late Dr. Margaret Comstock Snell, by whom the first work in home economics at the State College was established during the period from 1889 to 1907.

The Memorial Union (1928), center of student and campus life, was financed from funds subscribed by students, alumni, faculty members, and other friends of the State College as a memorial to the men and women of the institution who gave their lives in service to their country during the Spanish-American and World wars. The cost to date has been \$712,005. In addition to accommodating the numerous social events of students and faculty, and institutional affairs, the building affords offices for student publications, honor organizations, the Associated Students, the Associated Women Students, the Alumni Association, accommodations for student religious groups, the Students' Cooperative Bookstore including the campus post office, and the Memorial Union headquarters. Institutional activities accommodated in the building include the offices of the College News Service, the Department of Journalism, the offices of the Student Loan Committee, and the office of the Director of Student Educational Activities and of Intercollegiate Athletics. The College Herbarium has fire-proof quarters in the Union. The state administrative and engineering offices of the Federal Agricultural Conservation Program are located in this building. Consolidation of these many activities in the Memorial Union has released space in other buildings much needed for instructional work.

The Men's Dormitory Building (1928), including five halls of residence for men, accommodates 340 students. Built of brick and stone with tile roof, three stories above a basement and with a central tower five stories in height, the building is arranged on the unit plan. Each unit constitutes a separate hall accommodating from 48 to 76 men, with a social room, electric elevator, trunk storage room, laundry and pressing rooms. Each floor unit, accommodating approximately twenty-four men, has its own telephone booth, tiled lavatory and shower rooms, and sleeping hall. The study rooms, arranged for two men each, average ten by twelve feet in size. Modern heating and lighting are provided, and floors are covered with linoleum. The central hall, Weatherford, faces northeast, with Buxton and Poling extending as wings to the south and Cauthorn and Hawley to the west. At the base of Weatherford tower are a general reception room, guest room, general offices for the manager-hostess, and council room. Four of the halls honor the memory of former regents of the State College: James Knox Weatherford (B.S. 1872, LL.D. 1923, Oregon State), regent from 1885 to 1929; Austin T. Buxton (B.S. 1895, Oregon State), regent from 1905 to 1909; Curtis L. Hawley, regent from 1909 to 1923; and Thomas E. Cauthorn, regent from 1888 to 1893. Poling Hall is named in honor of Dr. D. V. Poling, Y. M. C. A. secretary at Oregon State during the war and post-war period from 1917 to 1920.

The Men's Gymnasium (1915, 1921) provides modern equipment for physical education and recreation. The main, central unit contains locker and shower rooms, lobby and offices, restricted exercise room, and the great gymnasium hall with a floor ninety by one hundred and fifty feet in dimensions, with three basketball courts across the main floor. A balcony encircling the main hall seats nearly a thousand persons. The south unit

contains the natatorium, one of the finest on the Coast, with a white-tile pool fifty by one hundred feet in size, and a surrounding gallery seating 1,500 spectators. High and low modern diving boards are part of the equipment. Pressure filters and automatic chlorinators are used in keeping the water sterile. Daily tests for bacteria, residual chlorine, and pH (alkalinity-acidity) values are conducted to determine that the pool water is in a satisfactory condition. The natatorium meets all requirements of the State Board of Health for a Grade A pool. The east wing has an auxiliary gymnasium for volleyball and apparatus work. The physical education offices and lecture rooms are also located in this wing of the building. The west wing contains four handball courts, one wrestling and one boxing room.

The **Mines Building** (1913), 65 by 81 feet in dimensions, is a four-story building, constructed of brick, trimmed with stone, and similar in type to all the newer buildings on the campus. The basement and first floors are occupied by the Department of Chemical Engineering, excepting two laboratories devoted to work in assaying and mining engineering. The second and third floors contain the classrooms, offices, and laboratories of the Department of Geology and the office of the Department of Mining Engineering. On the second floor are the General Geology, Paleobotany, and Paleontology laboratories. On the third floor are the Mineralogy, Petrography, Structural Geology, Sedimentary Geology, and Economic Geology laboratories, and the office of the Geology Department.

The **Museum Building** (1899) is 70 by 120 feet in size, constructed of stone and wood. Located on a slope at the southeast corner of the East Quadrangle, the building has direct entrances at two levels. The east entrance admits to the Horner Museum of the Oregon Country. The west entrance admits to Museum Hall, with its adjoining offices and balcony, used for concerts and assemblies, as headquarters for the R. O. T. C. Band and the Oregon State Symphony Orchestra, and for instruction of various kinds.

The **Nursery School**, in Covell House (purchased 1927), has large, pleasant rooms for play and experimental observations. Adjoining is a playshed and an enclosed playground for outdoor activities of the school. The house and yard are fully equipped with furnishings and play apparatus adapted to the needs of preschool children. Covell House was formerly the home of President Gatch and later of Dean Grant Adelbert Covell, dean of the School of Engineering from 1889 until his death in 1927.

The **Pharmacy Building** (1924) is a three-story brick structure, 62 by 123 feet. In addition to the regular classrooms and laboratories, special features of the building include a model drug store for instructional work, a drug museum, a sign-card and window trimming department, dark room, fireproof vault, stock rooms, and an amphitheater seating two hundred persons and provided with modern equipment for motion pictures. The Oregon State Board of Pharmacy maintains in this building the State Drug Laboratory with a competent staff for enforcing the pure drug law of Oregon. The lighting, heating, and ventilating systems are all modern.

The **Physics Building** (1928) is a three-story red brick structure that architecturally forms the east wing of the Mines Building, though the two buildings have no inside connection. The building is somewhat irregular in shape, conforming in part to the Engineering buildings parallel with Monroe Street and in part with the East Quadrangle, upon which the Mines Building faces. The structure has a maximum length of 169 feet north and

south and 85 feet east and west, with a total floor area of approximately 32,700 square feet.

The ground floor is designed for laboratory and service purposes. There are two laboratories for courses in general physics, two more for advanced courses, and several for research. There are also a main switch-board room, a storage battery and chemical room, a substation, a fan room, and an instrument shop. The second floor of the building is occupied by the photographic laboratories, a suite of rooms for the Department of Surveys, Maps, Roads and Walks, and Fire Protection; the office of the Dean of the School of Science; the general offices of the Department of Physics and the Graduate Division; a number of classrooms. The third floor provides three lecture rooms, laboratories for instruction in radio, and a suite of rooms for the State-owned broadcasting station KOAC. The suite includes the general offices, an operating room, a motor-generator room, a large studio, a small studio, an announcer's room, and a waiting room. The roof of the building is utilized as a special laboratory for the teaching of astronomy.

The Poultry Building (1927) is a modern three-story brick and stone building 53 by 128 feet. Equipped with the necessary laboratories for judging, incubating, fattening, dressing, egg grading and candling, it has excellent facilities for instruction in these poultry subjects. The building has modern cold-storage equipment. In addition to classrooms the building provides laboratories and offices for the departments of Veterinary Medicine and Poultry Husbandry.

President's House. The President's House is a frame residence located on spacious lawns midway between Shepard Hall and Withycombe House. The house was purchased by the State College in 1920 and remodeled for use as the official residence of the President.

Science Hall (1902), chemistry building, constructed of gray granite and sandstone, covers a ground space of 85 by 125 feet, has four stories, and contains fifty-five rooms. Within it are located the principal laboratories, stock rooms, dark rooms, recitation rooms, and lecture halls, of the Department of Chemistry, together with the laboratories of the Rockefeller Research Institute, and the offices and laboratories of the Agricultural Experiment Station chemists. In addition, a small building between Science Hall and Administration, formerly used for the Student Health Service, is used for certain advanced work in chemistry.

Shepard Hall (1908-09), so named as a tribute to the memory of Clayborne Shepard, who as a student devoted himself to the cause of the highest Christian living and leadership, is a center for the student Y. M. C. A. and of much of the religious life of the campus. At present the building houses the offices of the School of Education, the departments of Philosophy and Religion, and of the Housing and Employment Secretary. The first floor contains a large lobby, which is used as a reading and lounge room.

The Stables and Barns are located in the western part of the campus. All recent barns have been built west of the Mall. The barns and farm service buildings are arranged in seven or eight groups according to their use, such as military stables, horse, beef-cattle, dairy, hog, and sheep barns, veterinary barn, and poultry buildings. Two new barns, located on the farm proper, close to the land which the livestock use, are the new hog

barn south and west of the present barn group, and the new dairy barn about a mile west of the campus, close to the irrigated pastures.

The Stadium. The covered stands and bleachers around Bell Field, adjacent to the Men's Gymnasium, seating approximately 20,000 people, have been built from student fees and from the receipts of athletic contests held in the Stadium and elsewhere.

The Stock Judging Pavilion (1912) provides quarters for all of the demonstration work with livestock.

The Student Health Service (1936) is a three-story fireproof brick building, 46 by 127 feet, located directly northwest of Commerce Hall. On the ground floor are the dining room, kitchen, heating plant, and refrigeration plant. On the second floor is the dispensary, including the registration office, waiting room, secretary's office, clinical laboratory, pharmacy, minor surgery, X-ray laboratory, and physicians' consultation and examining rooms. On the third floor there are 30 beds in two-bed and four-bed wards for students requiring confinement for general medical care or isolation for contagious and communicable diseases. At the entrance is a bronze tablet in memory of the late Dr. Wendell James Phillips, organizer and first director of the Oregon State College Health Service, 1916-1918.

The Veterinary Clinic Building (1918), a frame structure 56 by 65½ feet, used for both instructional and research work, contains two principal rooms, lighted by skylights and large windows. One of the rooms is a small amphitheater, having a seating capacity of about one hundred and twenty, with an arena sufficiently large for casting animals for surgical work. The opposite room is used for dissection and for holding autopsies. In addition, the building contains dressing and shower-bath rooms, and a drug and instrument room.

Waldo Hall (1907), dormitory for women, is constructed with a concrete foundation and basement wall, and a cream-colored, pressed-brick superstructure, three stories high. The building is 96 by 240 feet, and contains one hundred and nineteen student rooms. On the entrance floor are the dining rooms and kitchens and a student laundry. On the first floor are reception rooms and a number of student rooms. The upper floors are given up entirely to student rooms. Each room has closets, running water, steam heat, and electric lights. Each floor has a trunk room, baths and showers. The hall is named in honor of the late Dr. Clara Humason Waldo, regent of the State College from 1905 to 1919.

The Women's Building (1927), 150 by 254 feet in dimensions, serves as a campus center for women's interests. The large gymnasium, games room, dance room, two corrective rooms, and the pool provide space for a varied program of physical activities that may be carried on simultaneously. The pool, 35 by 75 feet, meets the requirements of the State Board of Health for a Grade A pool. The facilities of the dressing room and showers are ample to care for large incoming and outgoing classes. Three social rooms and kitchenette, furnished by the Women's Athletic Association and the Physical Education club, help to meet the social needs of different student groups. The beauty of the building is outstanding and is a source of pride and enjoyment to all who work within its walls.

Library

THE Library, described in detail under BUILDINGS, occupies a central location in the East Quadrangle. The various reading rooms provide seating accommodation for 570 readers.

The main working collection of the Library includes the scientific and technical books provided for the instructional and research activities of the different schools and of the experiment stations. The State College is a designated depository for the publications of the United States government and the Carnegie Institution of Washington, and for official publications of the State of Oregon. The Library contains a practically complete file of the publications of the United States Department of Agriculture and of the agricultural experiment stations of the various states, as well as agricultural literature from foreign governmental and educational institutions. A considerable collection of duplicates is available for lending to students and faculty. The Library owns a collection of more than 2,000 documents received as a gift of the late U. S. Senator Dolph.

The book collection numbered 153,446 volumes on March 1, 1938. Exclusive of the United States government documents, 1,408 periodicals are currently received, the titles of which include the best scientific and technical magazines, selected on recommendation of the specialists on the campus. Back files of these journals and science proceedings form the background for research and advanced study. Newspapers received by subscription, gift, or exchange total 104. In addition, through unified library administration, all the books (totaling 508,887 on March 1, 1938) in the libraries of the several state institutions of higher education are made available to the students and faculties of all the institutions.

The collection of books on the history of horticulture is notable, and that on home economics is unusually complete for a library of this size. A good foundation has been laid for research work in botany and plant pathology, entomology, horticultural products, chemistry, and pharmacy, and the present program calls for emphasis in the development of all fields of science in which graduate work is given. Over a period of years the Library has built up a map collection that is particularly well adapted to the needs of work in geology, soils, and engineering. During the past year this collection was made more accessible by housing in more ample quarters near the reference room. A picture collection of 31,861 pictures has been especially selected to meet the needs of classes in art, household arts, and advertising. There is an excellent file of herd-books. A well balanced collection of dictionaries, encyclopedias, yearbooks, and other standard reference books is found on open shelves in the main reading room. Departmental libraries are at present limited to the few books needed for laboratory purposes.

In addition to professional and technical literature, an effort is made to buy some of the best current and standard books for general and recreational reading. Small circulating collections are sent on request to residence halls and organized houses.

The Mary J. L. McDonald collection of fine books numbers 3,036 volumes in fine bindings and special editions. Some of the items, such as a Caxton leaf, a Hebrew scroll, and Antiphonal, and many others, are rare and of unusual interest. The present collection is largely the gift or bequest of the late Mrs. McDonald, but it is planned that notable gifts from other sources may be added from time to time.

Service. The Library is open daily except Sundays from 7:45 a.m. to 10:00 p.m. It is closed during official convocations and lyceum programs, and on legal holidays. The reference room, periodical reading room, and McDonald room are open Sundays from 2 to 5, for reading purposes only.

The circulation desk is in the main reading room. Books may be taken for home use by any one connected with the State College. Students may keep books for two weeks, with privilege of renewal. Officers may borrow for more extended periods if their work requires it. Graduate students and seniors are admitted to the stacks by permission of the Librarian, on recommendation of their dean or major professor. Tables for these readers are placed on all stack floors. Similarly, a limited number of tables are available for faculty study, in a room adjoining the third floor of the stacks.

A system of interlibrary loans is maintained with other libraries on the Coast, especially within the state. The Library is also able to borrow for advanced students from the United States Department of Agriculture Library and other governmental bureaus, and from certain specialized libraries in the East.

The reference desk is in the main reading room, where technical and general reference questions are handled. The staff is ready to assist students in using books and catalogs, and in identifying references. Any adult is welcome to use the Library for reference purposes.

The periodical reading room, opened in the fall of 1937 on the first floor, contains current magazines and newspapers, and unbound numbers of recent general periodicals.

The reserve-book reading room contains the books that have been set aside at the request of the faculty for assigned reading. Although intended for reading in the building, these books may be borrowed for overnight use.

The Mary J. L. McDonald room on the third floor, beautifully furnished in Jacobean style, contains the Mary J. L. McDonald collection of rare books. This room, devoted to leisure-hour reading, is in charge of a member of the library staff, and is open several afternoons and one evening each week.

A debate seminar room is maintained as a workshop for the intercollegiate and interclass debate teams. It is expected that other seminar rooms will be established as soon as space now used for other than library purposes can be released.

Catalogs and Indexes. A general catalog of all library books on the campus, arranged alphabetically by author, title, and subject, is accessible to the public. The library is classified according to the Library of Congress system, except for part of the collection not yet changed from the Dewey Decimal system. There is also a card catalog of the publications of the United States Department of Agriculture arranged in the same manner; and card indexes of essays, plays, and short stories are regularly increased as new volumes are added to the library. Special indexes are maintained of material of local interest, including various campus publications, the *Oregon Voter*, *Oregon Historical Quarterly*, and faculty publications. At the reference desk is a card list of periodicals and journal holdings, and a subject list of current periodicals received. The current subject list is duplicated in the periodical reading room, with a visible index of all titles in alphabetical order. In the Reference Room are found many standard indexes, including such notable examples as: the *Reader's Guide*, *Chemical Abstracts*, *Engineering Index*, *Biological Abstracts*, *Industrial Arts Index*, and *Education Index*.

Library Fines and Charges. The following regulations govern Library fines and charges:

(1) A fine of 5 cents per day is charged for all overdue books borrowed from the Circulation Department.

(2) The following fines are charged for violation of the rules of the Reserve Department: (a) for overdue books, 25 cents for the first hour and 5 cents for each succeeding hour, or fraction thereof, until the book is returned (or reported lost); a maximum charge of \$1.00 per hour may be made if the circumstances justify; (b) for failure to recheck books at stated times, a fine of 25 cents; (c) for failure to return books to proper department desk, a fine of 25 cents.

(3) A service charge of 10 cents is added to all accounts reported to the Business Office for collection.

(4) If a book, which has been reported lost and has been paid for, is returned within one year, refund will be made after deduction of the accumulated fines, plus 5 per cent of the list price of the book for each month it was missing from the Library.

Unified Facilities. The library facilities of the state institutions of higher education in Oregon are organized into a single unit under the supervision of a director, with a local librarian on each campus. The director is also librarian of the State College at Corvallis, where the central offices of the library system are located.

The collections at the several institutions are developed to meet special needs on each campus; but the book stock of the libraries, as property of the state, circulates freely to permit the fullest use of all books.

A combined author list of all books and periodicals in the State System is maintained in the central office to facilitate a better distribution of the book stock and to eliminate unnecessary duplication of published material. It has also proved most valuable as a checking source for bibliographical resources of the system. An author list of books in the State College Library is maintained at the University Library.

Museums and Collections

ILLUSTRATIVE collections for use in connection with the work of instruction have been developed by the various schools and departments of the institution. These include scientific, industrial, historical, and art material classified and arranged for effective use.

Horner Museum of the Oregon Country

MARY BOWMAN HULL.....Assistant Curator

The Horner Museum of the Oregon Country, located in the Museum Building, includes notable collections of historic, scientific, industrial, and artistic interest, displayed in showcases and cabinets. The museum collections are of particular value in affording visual products in the same way that the library affords literary products. It is rapidly becoming the storehouse of institutional treasures and custodian of relics, curios, and acquisitions of permanent value.

The Museum was formally opened February 20, 1925. Its inception and success up to the present time are due in large measure to the personal interest of the late Dr. J. B. Horner, Professor of History and Director of Oregon Historical Research, in whose memory the museum has been named.

Collections. The most attractive specimens of the several collections are on display. Specimens not on display are cataloged and are readily accessible for study.

The Hill collection, presented to the College in 1924 by the heirs of the late Dr. J. L. Hill of Albany, Oregon; the J. G. Crawford collection from prehistoric burial mounds; the E. E. Boord collection of specimens of animals of the Northwest and the Far North; the Mrs. C. A. Sehlbrede and Emma Reid Alaskan curios; the Leslie M. Davis collection of Brazilian weapons; the Wiggins, Lisle, Hopkins, and Rice collections of historic

American weapons; the Ansel G. Evans historic hand-made carpenter's tools; the Hugh M. Sherwood, Sr., geological collection; the Dr. J. H. Greves and Ralph I. Thompson collections of shells; a group of paintings and sculptures from the State Committee of Public Works of Art Project; the D.A.R. antiques; the Mrs. J. E. Barrett, Mrs. A. B. Cordley, Mrs. John Cerny, and Stanley Bishoprick collections of Indian basketry; the Maggie Avery Stevenson collection of Rocky Mountain relics; the Mrs. Kenneth Cooper square piano (brought around Cape Horn); the Mrs. Henry Voss organ; the famous De Moss stagecoach, from Ray De Moss—these with other zoological, geological, botanical, industrial, and commercial collections represent some ten thousand specimens from more than four hundred donors.

Administration. Additions of valuable materials are being made from time to time in the form of loans, donations, or exchange collections that are of particular interest to the institution. The Museum is administered by a faculty committee composed of Professor J. Leo Fairbanks, Dr. E. V. Vaughn, Dr. Ira S. Allison, Professor W. E. Lawrence, Professor Robert H. Dann, Professor R. E. Dimick, and Dr. K. L. Gordon. This committee solicits information concerning desirable collections that might be available either as loans or as gifts. Proper credit is given those who thus contribute.

Other Collections

In addition to the Museum proper, there are on the campus several special museums, including extensive collections of fauna and flora, economic plants, soils, insects, textiles and embroideries, woods, crude drugs, and geologic specimens. Some of these collections are described in connection with the various departments and schools.

The Herbarium consists of approximately 70,000 mounted ferns and flowering plants, and packeted fungi. About 10,000 more specimens are unmounted. Oregon is more completely represented than any other state, but large collections have been obtained from other parts of the United States and from foreign countries. Collections from Alaska are increasing rapidly by gifts and exchange. Photographs of types of Northwestern species on file number 242. The largest collections of hypogaeous fungi in the United States, both of Basidiomycetes and Ascomycetes, with many types, are housed on this campus.

The Entomological Collection contains approximately 40,000 named and an equal number of unnamed specimens of insects, about 90 per cent of which are from Oregon, the remainder being from various regions of this country and about 2,500 from foreign lands. Orders represented are: Coleoptera 12,000; Hymenoptera, 10,000; Diptera 6,000; Lepidoptera 4,000; other orders constituting the remainder. The collection contains nearly 200 types, paratypes and cotypes. Attention is now being paid to obtaining as large a representation as possible of Oregon aquatic insects. A catalog of Oregon insects is in process of preparation. The collection has recently been placed in standard trays and cardboard units. Special cases have been constructed of insects preserved in liquid. The value of this collection is greatly enhanced by the research publications available in the entomological library.

Geological Collections. The geological collections include minerals, ores, rocks, invertebrate fossils, some vertebrate fossils, and a large collec-

tion of fossil plants. The mineral collections total about 700 specimens arranged according to the Dana classification and including at least one specimen, and in some cases several, of nearly all of the minerals listed by Dana. The ore-deposit collection includes one or more samples for each mineral arranged according to the Lindgren classification of ores. In addition, there are 300 hand specimens of rocks representing a wide variety of types taken from the classical localities of the world. This collection is supplemented by 150 samples arranged according to Harker's book on igneous rocks. There are also on file thin sections of each of these rocks.

Zoological Collections. Minor collections of marine invertebrates, fishes, reptiles and amphibians, and small mammals, and an ornithological collection quite representative of the local bird life comprise the zoological collections.

Official Publications

OFFICIAL publications include those issued directly by the State Board of Higher Education and various institutional publications issued by the State College. The legislative act placing all the state institutions of higher education under the control of one Board provided that all public announcements pertaining to the several institutions "shall emanate from and bear the name of the Department of Higher Education and shall be conducted in such a way as to present to the citizens of the state and prospective students a fair and impartial view of the higher educational facilities provided by the state and the prospects for useful employment in the various fields for which those facilities afford preparation." All publications of the State System are issued under the editorial supervision of the Department of Information, through the central offices of the division or through institutional offices.

System Publications

Announcements emanating directly from the Board are published in a **BULLETIN** and in a **LEAFLET SERIES**.

The **Bulletin** of the Oregon State System of Higher Education, issued monthly, includes announcements of curricula, annual catalogs, information for students, and official reports.

The **Leaflet Series** of the State System of Higher Education, issued semimonthly, includes special announcements to prospective students and to the general public.

State College Publications

All State College publications that present the results of research and creative scholarship at the State College, except those issued through the Agricultural Experiment Station and the Engineering Experiment Station, are under the general supervision of the State College Publications Committee. The committee has administrative and budgetary control over the **OREGON STATE MONOGRAPHS**, selecting the manuscripts to be issued in the several series of that publication, and also over any subject-matter periodicals that may be issued by the institution. Members of the committee are E. C. Gil-

bert, Chairman; Edwin T. Reed, Secretary; R. S. Besse, S. H. Graf, E. L. Packard.

The Oregon State Monographs report the results of research and creative scholarship by members of the State College staff. The various series include the Biological Science Series, the Physical Science Series, the Mathematics and Statistics Series, the Education and Guidance Series, together with such other series as may be required to cover the fields of the Humanities, Social Science, Agriculture and Rural Life, Engineering, Forestry, Home Economics, Pharmacy, and Secretarial Science. The monographs are distributed at cost to persons who request them.

Agricultural Experiment Station Publications. The Station BULLETINS include reports and monographs on research and experimental investigations in agronomy, horticulture, drainage, irrigation, dairying, animal husbandry, poultry husbandry, insect pests, plant diseases, home economics, agricultural economics, farm management, marketing, and special subjects of interest to the husbandman, conducted at the central station or at the several branch stations. The Station also issues a series of CIRCULARS, briefer and less technical than the bulletin series, a mimeograph series of CIRCULARS OF INFORMATION, and occasional pamphlets and reports. Single copies of experiment station publications are supplied free to residents of Oregon who request them.

Engineering Experiment Station Publications. These include a series of BULLETINS, CIRCULARS, and REPRINTS, reporting progress in engineering research. The engineering publications are distributed at cost to persons who request them.

Extension Publications. The Federal Cooperative Extension Service publishes a series of BULLETINS written in such style as to be easily understood, thus meeting the demand for scientific knowledge in popular form, especially with reference to its application to everyday life. The subjects covered by these publications include the various phases of agriculture, home economics, engineering and applied science. A series of OUTLOOK CIRCULARS deals from time to time with the agricultural outlook of the state in respect to the major lines of agricultural production. The Extension Service also issues twenty-one different series of 4-H Club CIRCULARS. In addition to its regular series, the Extension Service publishes occasional miscellaneous circulars, posters, and reports. Single copies of extension bulletins are supplied free to residents of Oregon who request them.

Academic Regulations

Admission

In order to be admitted to the State College a student must be of good moral character and must present evidence of acceptable preparation for work at the college level. The development of character is regarded as a primary aim in education and is emphasized at all the state institutions of higher education.

Every person applying for admission to the regular sessions of the State College must submit complete records of all his high-school and his college work, if any. For failure to submit complete records the State College may cancel the student's registration.

Admission to First-Year Standing

The requirements for admission to first-year or freshman standing conform to the uniform entrance requirements adopted by all the higher educational institutions of Oregon. Applicants who are not residents of Oregon may be held for additional requirements demonstrating superior ability.

Evidence of acceptable scholastic preparation may consist of either (1) certificate of preparatory-school record, or (2) statement of standing on College Entrance Board examinations.

Preparation Required. For admission to first-year standing, the student's preparation must conform to one of three plans, under each of which a proportion of his preparation must be in certain specified fields. In listing the requirements under the three plans, the following terms are used:

UNIT, a subject taught five times a week, in periods of not less than forty minutes each, for a school year of not less than thirty-six weeks.

MAJOR, three units in one field.

MINOR, two units in one field.

SPECIFIED FIELDS: English, languages other than English, mathematics, natural science, social science.

Under Plan A, part of the entrance units must be grouped into majors and minors. Under Plan B, more freedom is allowed in distribution of units. Under Plan C, still greater freedom in distribution is allowed a student of exceptional ability as demonstrated by classification in the highest quartile of his high-school graduating class and by the unreserved recommendation of his high-school principal; a high rating in a college mental test may also be required.

No credit under any of the plans is granted for penmanship, spelling, physical education, or any subject commonly classified as a student activity.

Students from a four-year high school must present 15 units, including under the three plans—

Plan A. 2 majors and 3 minors: 3 of these 5 groups in Specified Fields, including 1 major in English.

Plan B. 10 units in Specified Fields: 3 of these units in English.

Plan C. 8 units in Specified Fields: 3 of these units in English; exceptional ability as explained above.

Students from a senior high school must present 12 units, including under the three plans—

Plan A. 2 majors and 2 minors: 3 of these 4 groups in Specified Fields, including either a major or a minor in English.

Plan B. 8 units in Specified Fields: 2 of these units in English.

Plan C. 7 units in Specified Fields: 2 of these units in English; exceptional ability as explained above.

In order to be admitted to any of the engineering curricula, a student must have one unit in elementary algebra, one-half unit in higher algebra, and one unit in plane geometry.

Admission by Certificate. Application for admission by certificate is made on the official form, *Uniform Certificate of Secondary School Record*, prepared by the State Department of Education. The applicant's scholastic record must be certified by the principal or superintendent of his school. This official certificate should be filed with the State College Registrar at least two weeks before the applicant expects to enter the State College; if applications are submitted later, registration may be unavoidably delayed.

Admission by Examination. Students seeking admission by examination should obtain information from the secretary of the College Entrance Examination Board, 431 West 117th Street, New York City.

Admission with Advanced Standing

Advanced standing is granted to students transferring from other institutions of collegiate rank. All applications for advanced standing must be submitted to the Registrar, and must be accompanied by official transcripts of all high-school and college records, and by statements of honorable dismissal.

The amount of credit granted upon transfer from an accredited institution depends upon the nature and quality of the applicant's previous work, evaluated according to the academic requirements of the State College. Final determination of the amount of credit to be granted may be deferred until after the student has been in attendance for at least three terms.

A student wishing credit for work done elsewhere than at an accredited educational institution must petition the Committee on Academic Requirements for permission to take examinations in specified courses listed in the catalog of the State College. In general, credit by examination is allowed only for work taken in regularly organized courses in nonaccredited institutions of collegiate rank.

Admission as Special Student

Two classes of special students are admitted: (1) those not qualified for admission as regular students but qualified by maturity and experience to work along special lines; and (2) those qualified for admission as regular students who are not working toward a degree and do not care to follow any of the degree curricula.

An applicant for admission as a special student must be not less than 21 years of age, and must file with the Registrar documentary evidence sufficient to prove his special fitness to pursue the subjects desired. Credits earned by special students shall not subsequently be counted toward a

degree until the student has completed at least two years of work (93 term hours) as a regular student. In case a regular student changes to special status, work done while classified as a special student will not count toward a degree.

Admission with Graduate Standing

Graduates of accredited colleges and universities are admitted to graduate classification by the Dean of the Graduate Division and the State College Registrar on presentation of an official transcript of their undergraduate work. But admission to candidacy for an advanced degree is determined only after a preliminary examination, given when a student has completed approximately fifteen term hours of graduate work.

Graduates of nonaccredited universities and colleges are expected to obtain the bachelor's degree from an accredited institution before proceeding to graduate work.

Degrees and Certificates

THE State College offers curricula leading to certificates on the completion of two years' work, and to baccalaureate and graduate degrees. If changes are made in the requirements for degrees and certificates, special arrangements may be made for students who have taken work under the old requirements. In general, however, a student will be expected to meet the requirements in force at the time he plans to receive a degree or certificate.

Science, *B.A., B.S., M.A., M.S., Ph.D. degrees.*

Agriculture, *B.S., M.S., Ph.D. degrees.*

Education, *B.A., B.S., B.S. in Ed., M.A., M.S., Ed.M., Ed.D. degrees.*

Engineering and Industrial Arts, *B.S., M.S., Ch.E., C.E., E.E., M.E. degrees.*

Forestry, *B.S., M.S., M.F., F.E. degrees.*

Home Economics, *B.A., B.S., M.A., M.S. degrees.*

Pharmacy, *B.S., M.S. degrees.*

Secretarial Science, *B.S.S. degree.*

Work leading to the degree of *Master of Arts (General Studies)* is offered under the direction of the Graduate Division.

Lower-division work leading to certificates (*Junior Certificate, Junior Certificate with Honors Privileges, Lower-Division Certificate*) is offered in liberal arts and sciences, in the professional and technical fields listed above, and in architecture and allied arts, business administration, journalism, music, and physical education. Approved preparation is also offered for the degree curricula in medicine and nursing education at the University of Oregon Medical School in Portland.

The Junior Certificate admits to upper-division standing and the opportunity to pursue a major curriculum leading to a degree.* A student is expected to fulfill the requirements for the Junior Certificate during his first two years at the State College. The requirements are as follows:

(1) Term Hours: Minimum, 93.†

(2) Grade-Point Average: Minimum, 2.00.

*A student who transfers to the State College after completing the equivalent of the requirements for the Junior Certificate at another institution may be admitted to upper-division standing without the formal granting of the Junior Certificate.

†In schools having a graduation requirement of 204 term hours, students should present 96 hours for the Junior Certificate.

(3) Written English:

(a) A general examination in English is required upon entrance. If this examination is not passed, the course designated English K must be taken and passed.

(b) English Composition: 9 term hours unless excused. Any student whose work meets the standards aimed at may, at the end of any term, with the consent of the head of the Department of English, be excused from further required written English.

(4) Physical Education: 5 terms in activity courses unless excused.

(5) Military Science: 6 terms for men unless excused.

(6) General Hygiene.

(7) Group requirements: A prescribed amount of work selected from three "groups" representing comprehensive fields of knowledge. The three groups are: language and literature, science, social science. The group requirements are as follows:

(a) For students in liberal arts and sciences—The completion of at least 9 approved term hours in each of the three groups and at least 9 additional approved term hours in courses numbered 200-210 in any one of the same three groups. Courses that satisfy group requirements for students in liberal arts and sciences are numbered from 100 to 110 and from 200 to 210.

(b) For students in the professional and technical schools—The completion of at least 9 term hours in English literature or upper-division foreign language or social science and at least 9 term hours in science. If a school cannot meet this requirement by the end of the sophomore year, fulfillment may be deferred by agreement between the dean of the school concerned and the Academic Requirements Committee, such agreement to be filed in the Registrar's Office.

The Junior Certificate with Honors Privileges admits to upper-division standing and permits the student to work for a bachelor's degree with honors in those colleges and schools providing an honors program. For this certificate the student must have a grade-point average of at least 2.75, in addition to fulfilling all the requirements for the Junior Certificate.

The Lower-Division Certificate recognizes the successful completion of two years of lower-division work. This certificate is granted upon request to students whose desire has been only to round out their general education. It does not require the scholastic average specified for the Junior Certificate, and does not admit to upper-division standing.

The Certificate in Agriculture recognizes the completion of the Two-Year Curriculum offered by the School of Agriculture. For this certificate students must meet requirements (3), (4), (5), and (6) specified for THE JUNIOR CERTIFICATE, must complete 9 term hours of science and 9 term hours of either language and literature or of social science, must complete a minimum of 85 term hours including 43 term hours in agriculture, and must have the dean's recommendation certifying fulfillment of all requirements of the School of Agriculture.

The Bachelor's Degree. When a student has fulfilled all the requirements for a Junior Certificate, he is classified as an upper-division student and may become a candidate for a bachelor's degree in the college or

school of his choice. The requirements for a bachelor's degree (including both lower- and upper-division work) are as follows:

- (1) Term Hours: Minimum, 192, including—
 - (a) Hours in upper-division courses: Minimum 45.
 - (b) Hours in the major: Minimum, 36, including at least 24 in upper-division courses.
 - (c) Hours after receipt of Junior Certificate: Minimum, 45.
- (2) Required distribution of hours for different bachelor's degrees:
 - (a) Bachelor of Arts: 36 hours in arts and letters, including two years (normally 24 term hours) of college work in a foreign language.
 - (b) Bachelor of Science: 36 hours in science or social science.
 - (c) Professional bachelor's degree (B.S. in Ed., B.S.S., etc.): Fulfillment of all major requirements.
- (3) Grade-Point Average: Minimum, 2.00.
- (4) Residence: Minimum, 45 term hours (normally the last 45).
- (5) Dean's Recommendation, certifying fulfillment of all requirements of major department or school.
- (6) Restrictions:
 - (a) Correspondence Study: Maximum, 60 term hours toward any bachelor's degree.
 - (b) Law or Medicine: Maximum, 48 term hours toward any degree.
 - (c) Applied Music: Maximum, 12 term hours toward any degree.

Senior Honors. Senior honors are conferred each year by the Administrative Council upon those members of the graduating class, candidates for a bachelor's degree, who throughout their entire college course have maintained the highest scholastic standing in their respective schools. A student to be eligible to such honor must have a grade-point average of 3.25 or higher. Election is limited to ten per cent of the graduating members of a school. Students attaining this honor are listed in the commencement program as Senior Honor Students.

Advanced Degrees. The requirements for advanced degrees are listed on another page under GRADUATE DIVISION.

Academic Procedure

THE regular academic year throughout the State System of Higher Education is divided into three terms of approximately twelve weeks each. The summer sessions supplement the work of the regular year (see special announcements). Students may enter at the beginning of any term but are advised to enter in the fall. It is important that freshmen and transferring students entering in the fall term be present for Freshman Week (see page 75). A detailed calendar for the current year will be found on pages 10-11.

Definitions

A **COURSE** is a subject, or an instructional subdivision of a subject, offered through a single term.

A **YEAR SEQUENCE** consists of three closely articulated courses extending through the three terms of the academic year.

A **CURRICULUM** is an organized program of study arranged to provide definite cultural or professional preparation.

A **TERM HOUR** represents three hours of the student's time each week for one term. This time may be assigned to work in classroom or laboratory or to outside preparation. The number of lecture, recitation, laboratory, or other periods per week for any course may be found in the course descriptions in this catalog, or in the separately printed Schedule of Classes.

Course Numbering System

Courses throughout the State System of Higher Education are numbered as follows:

- 1-99. Courses in the first two years of foreign language, or other courses of similar grade.
- 100-110, 200-210. Survey or foundation courses that satisfy the lower-division group requirements in the language and literature, science, and social science groups. These numbers may also be used to designate courses in the professional schools of a similar survey or foundation type.
- 111-199. Other courses offered at first-year level.
- 211-299. Other courses offered at second-year level.
- 300-399. Upper-division courses not applicable for graduate credit.
- 400-499. Upper-division courses primarily for seniors. If approved by the Graduate Council, these courses may be taken for graduate credit. In this catalog, 400-499 courses approved for graduate *major* credit are designated (*G*) following the title. Courses approved for graduate *minor* credit only are designated (*g*).
- 500-599. Courses primarily for graduate students but to which seniors of superior scholastic achievement may be admitted on approval of instructor and department head concerned.
- 600-699. Courses that are highly professional or technical in nature and may count toward a professional degree only and cannot apply toward an advanced academic degree such as M.A., M.S., or Ph.D.

Certain numbers are reserved for courses that may be taken through successive terms under the same course number, credit being granted according to the amount of acceptable work done. These course numbers are as follows:

- 301, 401, 501. Research or other supervised original work.
- 303, 403, 503. Thesis (reading or research reported in writing).
- 305, 405, 505. Reading and Conference (independent reading reported orally to instructor).
- 307, 407, 507. Seminar.

The following plan is followed in numbering summer-session courses:

- (1) A summer-session course that is essentially identical with a course offered during the regular year is given the same number.

- (2) A summer-session course that is similar to a course offered during the regular year, but differs in some significant respect, is given the same number followed by "s".
- (3) A course offered during the summer session which does not parallel any course offered during the regular year is given a distinctive number followed by "s".

Regulations and Requirements

Students are held responsible for familiarity with the regulations governing such matters as the routine of registration, academic standards, student activities, organizations, etc. The information presented in the following paragraphs is limited to items of special interest to entering students. Complete academic regulations are published annually in a pamphlet. A copy is furnished each entering student by the Registrar's Office.

Freshman Week, a program of orientation for entering undergraduate students, is held annually before fall-term registration. New students are made familiar with the aims of higher education, the principles governing the wise use of time and money, methods of study, and the ideals and traditions of the institution. By means of general assemblies, group lectures and discussions, individual conferences, examinations and tests, an effort is made to assist every new student in getting the best possible start in his new work. Full directions concerning Freshman Week and registration procedure are sent to each applicant who is accepted for admission.

Placement Examinations. To provide a basis for reliable advice and assistance to students in planning their college programs, several examinations are given to all entering undergraduate students.

Psychological Examination. All entering undergraduate students are required to take a psychological examination. This test is considered to some extent a measure of college aptitude, and the results are weighed in arranging the student's program of study. Students who have taken the American Council on Education psychological examination at another institution may be exempt from taking the State College examination on submitting a certified copy of the scores earned.

Examination in English. All students entering as freshmen are required to take a preliminary examination for the purpose of demonstrating their preparation in English. The examination covers the fundamental principles of grammar and requires evidence of the student's ability to apply these principles in writing. Students failing to obtain a satisfactory grade in this examination are required to take and pass Corrective English (English K) before registering for work in English Composition.

Physical Examination. A physical examination is required of all students entering the institution.

Examination in Mathematics. All entering students intending to take mathematics during their freshman year (including students registering in any curriculum in engineering or forestry) are required to take a placement examination in first year high-school algebra, on the basis of which their college work in mathematics is determined.

Grades and Points. The quality of student work is measured by a system of grades and grade points.

Grades. The grading system consists of: four passing grades, A, B, C, D; failure, F; incomplete, INC.; withdrawn, W. The grade of A denotes exceptional accomplishment; B, superior; C, average; D, inferior. Students ordinarily receive one of the four passing grades or F, failure. When the quality of the work is satisfactory, but the course has not been completed, for reasons acceptable to the instructor, a report of INC. may be made and additional time granted. Students may withdraw from a course by filing the proper blanks at the Registrar's Office in accordance with State College regulations. A student who discontinues attendance in a course without official withdrawal receives a grade of F in the course.

Points. Grade points are computed on the basis of 4 points for each term hour of A grade, 3 points for each term hour of B, 2 points for each term hour of C, 1 point for each term hour of D, and 0 points for each term hour of F. Marks of INC. and W are disregarded in the computation of points. The grade-point average (GPA) is the quotient of total points divided by total term hours in which A, B, C, D, and F are received. Grade points are computed on all work which the student does as an undergraduate, including transferred hours, correspondence study, and special examinations.

Scholarship Regulations. The administration of the regulations governing scholarship requirements is vested in the Personnel Committee of the faculty. This committee has discretionary authority in the enforcement of rules governing probation, and also has authority to drop a student from the State College when it appears that his work is of such a character that he cannot continue with profit to himself and with credit to the institution. In general, profitable and creditable work means substantial progress toward meeting graduation requirements.

(1) A lower-division student is automatically placed on probation if his grade-point average for any term is below 1.50. He is not released from probation until his grade-point average for a subsequent term is at least 1.75.

(2) An upper-division student is given written warning if his grade-point average falls below 2.00 in any term. He is automatically placed on probation if his grade-point average for any term falls below 1.75, or his cumulative grade-point average below 2.00. He is not released from probation until he has made a term grade-point average of at least 2.00 and a cumulative grade-point average of at least 2.00.

(3) A certificate of eligibility must be obtained from the Dean of Men or Dean of Women before a student can qualify for an elective or appointive office in any student, extracurricular, or organization activity. Scholastic probation automatically removes a student from any such office, and prevents him from participating in any such activities while he is on probation (except as provided in Paragraph 5 below).

(4) No student who has been in residence six terms, or equivalent, is eligible to hold any elective office or to accept an appointment in a student activity unless he has attained upper-division standing. The meaning of the term "elective office" is to be interpreted by the Personnel Committee.

(5) The rules of the Pacific Coast Intercollegiate Athletic Conference govern in all questions of athletic eligibility.

(6) Students who have been suspended or expelled are denied all the privileges of the institution and of all organizations in any way connected with it, and are not permitted to attend any social gathering of students, or to reside in any fraternity, sorority, or club house, or in any of the halls of residence.

Auditors. A person not otherwise registered in the State College who desires to attend the meetings of a class without receiving credit may register as an auditor. To register, he must present to the Registrar's Office the written approval of the instructor who gives the course, and pay a special fee.

Any student regularly enrolled in the institution who desires to attend a class without registering for credit must present to the Registrar the written approval of the departments in which the course is given, and of the student's adviser. No additional fee is charged a full-time student for this privilege.

Visitors. A person not regularly registered as a student but who is on the campus as a guest of the institution may be granted the privilege of attending classes on the presentation of a visitor's card signed by the Registrar.

Fees and Deposits

STUDENTS at the State College and at the University pay the same fees. In the fee schedule printed below, *regular fees* are those fees paid by all students under the usual conditions of undergraduate or graduate study. *Special fees* are fees paid under the special conditions indicated.

The institution reserves the right to change the schedule of tuition and fees without notice.

All students registered for academic credit (undergraduate and graduate, full-time and part-time) are entitled to the use of the State College Library, to the use of laboratory equipment in connection with courses for which they are registered, to medical attention and advice at the Student Health Service, to the use of gymnasium equipment (including gymnasium suits and laundry service), and to all other State College services maintained for the benefit of students. The registration fees cover all charges for these privileges. No reduction of fees is made to students who may not desire to use some of these privileges.

Regular Fees

Undergraduate Students. Undergraduate students enrolled in the State College at Corvallis who are residents of Oregon pay regular fees each term of the regular academic year, as follows: tuition, \$10.00; laboratory and course fee, \$11.50; incidental fee, \$5.50; building fee, \$5.00. The total in regular fees, which include all laboratory and other charges in connection with instruction, is \$32.00 per term.*†

Undergraduate students who are not residents of Oregon pay the same fees as Oregon residents except that the tuition fee is \$50.00 instead of \$10.00, making a total of \$72.00 per term.

The regular fees for undergraduate students for a term and for a year may be summarized as follows:

Fees	Per term	Per year
Tuition	\$ 10.00	\$ 30.00
Laboratory and course fee.....	11.50	34.50
Incidental fee	5.50	16.50
Building fee	5.00	15.00
Total for Oregon residents.....	\$ 32.00	\$ 96.00
Total for nonresidents (who pay \$50.00 instead of \$10.00 tuition)	72.00	216.00

Regular fees are payable in full at the time of registration, or, if the student wishes, in three instalments.

Graduate Students. Graduate students registered for seven term hours of work or more pay a fee of \$25.00 a term. Graduate students do not pay the nonresident fee or the building fee. Graduate students registered for

*Except special fees for instruction in applied music.

†Undergraduate students registered in the State System of Higher Education for the first time pay a matriculation fee. For students registering at the State College, the University, or the Medical School, this fee is \$5.00. For students registering at the normal schools, the matriculation fee is \$2.00. Students transferring from one of the normal schools to the State College or the University pay an additional matriculation fee of \$3.00.

six hours of work or less pay the regular part-time fee of \$3.00 a term hour. Payment of the graduate fee entitles the student to Student Health Service and gymnasium privileges.

Student-Body Fee

In addition to the institutional registration fees, the Associated Students organization has an optional student-body fee. The income from this fee is used to finance activities sponsored by the organization, such as the student newspaper, and athletic, forensic, dramatic, musical, and social activities.

Deposits

Every person who enrolls for academic credit (except staff members) is required to make a deposit of \$5.00, payable once each year at the time of first registration. This is required as a protection against loss or damage by the student of institutional property such as: dormitory equipment, laboratory equipment, military uniforms, library books, locker keys. If at any time charges against this deposit becomes excessive, the student may be called upon to re-establish the original amount.

Special Fees

The following fees are paid by students under the conditions indicated:

Matriculation Fee	\$5.00
Undergraduate students registering in the State System of Higher Education for the first time pay a matriculation fee. For students registering at the State College, the University, or the Medical School, this fee is \$5.00. For students registering at the normal schools, the matriculation fee is \$2.00. Students transferring from one of the normal schools to the State College or the University pay an additional matriculation fee of \$3.00.	
Part-Time Fee, per term hour	\$3.00
Any student (undergraduate or graduate) registering for six term hours of work or less pays a fee of \$3.00 per term hour, instead of regular registration fees. This fee is payable at the time of registration. Students registered for six term hours of work or less do not pay the nonresident fee. Payment of the part-time fee entitles the student to Student Health Service and gymnasium privileges.	
Late-Registration Fee	\$1.00 to \$5.00
Students registering after the scheduled registration dates of any term pay a late-registration fee of \$1.00 for the first day and \$1.00 for each additional day until a maximum charge of \$5.00 is reached.	
Late-Payment Penalty, per day	\$0.25
Students pay their regular fees either at the time of registration or in three installments, as preferred. The student is charged the late-payment penalty in case of delinquency in payment of any installment. If fees and penalties are not paid within one week after dates set for partial payments, the student's registration is canceled.	
Change-of-Program Fee	\$0.25
The student pays this fee for each change in his official program after the program has been approved and accepted by the Registrar's Office.	
Reinstatement Fee	\$2.00
If for any reason a student has his registration canceled during a term for failure to comply with the regulations of the institution, but is later allowed to continue his work, he must pay the reinstatement fee.	
Special-Examination Fees	\$1.00 to \$10.00
A student pays a fee of \$1.00 per term hour for the privilege of taking an examination for advanced credit, or any other special examination. A graduate student taking his preliminary or final examination at a time when he is not registered for academic work pays a fee of \$10.00 for the privilege of taking the examination. If a graduate student takes his preliminary or final examination while registered for part-time work for which he pays a tuition fee of less than \$10.00 a term, he pays, as an examination fee, an amount equal to the difference between his tuition fee and \$10.00.	

Auditor's Fee, per term hour.....	\$1.00 to \$3.00
<p>An auditor is a person who has obtained permission to attend classes without receiving academic credit. Auditors pay a fee of \$1.00 per term hour for nonlaboratory courses, and \$3.00 per term hour for laboratory courses. The auditor's fee is payable at the time of registration and entitles the student to attend classes, but to no other institutional privileges. A student regularly enrolled in the State College may be granted the privileges of an auditor without paying the auditor's fee.</p>	
Staff-Member's Fee, per term hour.....	\$1.00
<p>Staff members registered in courses for credit pay this fee. Staff members may audit courses without fee payment.</p>	
Transcript Fee	\$1.00
<p>This fee is charged for each transcript of credits issued after the first, which is issued free of charge.</p>	
Graduation Fee	\$6.50
<p>The graduation fee is paid for each degree taken. No person may be recommended for a degree until he has paid all fees and charges due the institution, including the graduation fee. This fee entitles the student to one year's membership in the Alumni Association. When a student receives a certificate at the same time that he receives his degree, an additional fee of \$2.50 is charged for the certificate.</p>	
Placement-Service Registration Fee.....	\$3.00
<p>All students or graduates applying for teaching positions through the State College Placement Service pay this fee. An additional fee of 25 cents is charged when credentials are sent to school officials at the applicant's request.</p>	
Special Music-Course Fees.....	See Department of MUSIC
Library Fines and Charges.....	See LIBRARY

Refunds

Fee Refunds. Students who withdraw from the State College and who have complied with the regulations governing withdrawals will be entitled to certain refunds of fees paid, depending on the time of withdrawal. The refund schedule has been established by the State Board of Higher Education and is on file in the Registrar's office. All refunds are subject to the following regulations:

- (1) Any claim for refund must be made in writing before the close of the term in which the claim originated.
- (2) Refunds in all cases shall be calculated from the date of application for refund and not from the date when the student ceases attending classes, except in unusual cases when formal withdrawal has been delayed through causes largely beyond the control of the student.

Deposit Refunds. The \$5.00 deposit, less any deductions which may have been made, is refunded about three weeks after the close of the academic year. Students who discontinue their work at the State College before the end of the year may receive refunds, upon petition to the Business Office, about three weeks after the close of the fall or winter term.

Regulations Governing Nonresident Tuition

The Oregon State Board of Higher Education has defined a nonresident student as a person who comes into Oregon from another state for the purpose of attending one of the institutions under the control of the Board.

In order to draw a clear line between resident and nonresident students the Board has ordered that all students in the institutions under its control who have not been domiciled in Oregon for more than one year immediately preceding the day of their first enrollment in the institution shall be termed nonresident students, with the following exceptions:

- (1) Students whose fathers (or mothers, if the father is not living) are domiciled in the state of Oregon.
- (2) Children of regular employees of the Federal Government stationed in the state of Oregon.
- (3) Students holding bachelor's or higher degrees from higher educational institutions whose work is acceptable as preparation for graduate work.
- (4) Students in summer sessions.

Student Life and Welfare

Student Personnel Program

THE personnel program of the State College aims to assist each student to develop a personality of power and influence, to appreciate the joy that may come from accomplishment stimulated by interest and enthusiasm, and to have a keen sense of responsibility for his or her own behavior. The Committee on Student Personnel seeks to promote an efficient personnel service in each school or division of instruction, and to coordinate the various personnel agencies of the institution, including the clinical services. The committee makes available to all students the advisory and guidance services of the entire institution. It makes contacts with individual students, and invites students to come to it as they may desire. It may scrutinize the scholastic record of any student, and it seeks to give particular attention to any student who is not measuring up to his possibilities. When the causes of poor accomplishment can be ascertained, suggestions for improvement are offered. In the case of students who are placed on probation under the regulations governing scholarship, the committee seeks to render all possible aid.

Deans of Students. The Dean of Men and the Dean of Women have general responsibility for student welfare. The deans keep in contact with organized student activities and living groups, and are of assistance to students collectively through these agencies as well as to individuals having special problems. In particular they act as advisers to freshmen, and are concerned with the orientation of new students in college life and work.

Special Committees. The Committee on Student Interests, including student as well as faculty members, assist students with social and living problems. The Committee on Student Housing assists students in making proper adjustments relative to boarding and lodging. The Committee on Health and Sanitation takes initiative in the development and maintenance of high standards of health and sanitation in the various places of student residence. The Committee on Religious Education concerns itself with coordinating the various campus religious agencies, and serves as a connecting link between the religious work on the campus and the various local churches. The Committee on Educational Activities, including both student and faculty members, promotes and supervises the various student educational activities. The student employment service, the student health service, the student loan fund administration, and other agencies of student welfare, are described on later pages.

Placement. In all of the schools the placement of graduates is recognized as an important concern of the faculty generally, and especially of the dean's office. Each school maintains vital contacts with the professional fields for which its curricula give preparation, and is thus enabled to be of greater service both to the profession and to graduates. The demands of the professions and the industries are taken into account in the revision of courses of study. Assistance is regularly given to graduates

in finding work for which they are qualified by personality and training. In the counseling of students special assistance is given to the selection of a program of studies for each student that will develop his particular abilities and at the same time prepare him for some type of service for which there is demand.

The aid given students in obtaining part-time and vacation jobs is described under SELF-SUPPORT (pages 83-84). The Teacher Placement Service is described under SCHOOL OF EDUCATION.

Student Living

COMFORTABLE, healthful, and congenial living conditions contribute much to the success of college life and work. Living conditions of the right kind not only aid students to do the best in their studies but also through the experiences of group life contribute to the building of character and personality. Hence the State College is vitally concerned with student housing. Halls of residence are maintained on the campus by the institution, and the living conditions of students residing outside the dormitories are closely supervised.

Many students live in fraternity, sorority, or club houses accommodating groups of from twenty to fifty persons. Admission to these groups is by invitation only. Students also live with relatives near the campus or in private homes or boarding houses. Opportunity for cooperative group living, with a house mother in charge, is available to a limited number of women students who can qualify under certain scholastic and personal requirements. By sharing costs and duties of housekeeping, requiring from 1 to 1½ hours of work per day, the student living in a cooperative house may reduce living expenses from \$7 to \$10 per month below the regular price of room and board. Applications and requests for information should be addressed to the Dean of Women.

The halls of residence provide comfortable, democratic living conditions favorable to successful work as a student and to participation in the wholesome activities of campus life.

Men's Dormitories. Five halls of residence for men—Buxton, Cauthorn, Hawley, Poling, and Weatherford—are maintained, accommodating a total of 344 students. The five halls are part of a single structure described under BUILDINGS as the "Men's Dormitory Building."

Rooms accommodate two students each and are equipped with study tables, chairs, dressers, and wardrobe facilities. All floors are covered with a good grade of linoleum. Adequate lighting is provided, besides which there are attachments for study lamps. Each floor has lavatory and shower-bath facilities. For each floor common sleeping rooms are provided, equipped with cots, mattresses, mattress-covers, and pillows. Each student furnishes his own study lamp, bedding, towels, and personal furnishings. In each hall a club or social room, comfortably and tastefully furnished, is available for the use of all students in the hall. Telephone service is provided on each floor of each hall, and in the basement of each hall laundry facilities with electric irons and trunk storage accommodations are available. In addition, one of the halls contains a general reception room and guest suite for the entertainment of parents and other guests.

Women's Dormitories. Two halls of residence for women—Margaret Snell and Waldo—are maintained. Both halls are home-like and attractive

and are supplied throughout with pure mountain water, both hot and cold, electric lights, and steam heat. The rooms are furnished with single beds, mattresses, dressers, tables, and chairs. Other furnishings, including pillows, pillow-cases, sheets, blankets, bed spreads, curtains, rugs, and towels, are furnished by the student. The bedrooms average about 12 by 15 feet with one window 3 feet by 7 feet. Many of the rooms are larger and a few of them have two or three windows. All rooms in Margaret Snell Hall have two or more windows. Each hall contains reception and social rooms for the use of students. Laundry facilities and trunk storage accommodations are also available in each hall. Telephone service is provided.

Dormitory Living Expenses. The cost of room and board in any of the halls of residence is \$30.00 a calendar month when the student occupies a double room and \$33.50 a calendar month when the student occupies a single room.

Board and room must be paid in advance. Payment is due the first of each month. Students paying after the first are charged a late-payment fee of \$3.00 for the first day, and 25 cents for each additional day until a maximum charge of \$5.00 is reached.

The charges listed for room and board cover the period of the academic term only. An additional charge will be made when rooms are occupied during vacation periods.

The right is reserved to increase the charge for room and board should advance in costs require it. The charge will be decreased whenever decreased costs make this possible.

Students should not arrive at halls of residence until the day the halls are officially open, usually one day before the opening of a term.

Dormitory Room Deposit. A deposit of \$5.00 must be sent to the Director of Dormitories at the time of application for room. The amount of the deposit will be deducted from the first month's bill for board and room.

If a student, after making deposit, does not enter the State College, the deposit will be refunded, provided the Director of Dormitories is notified at least one week before the opening day of the term. Rooms will not be held after the first day of registration.

College Tea Room. A tea room in the Memorial Union under the supervision of the Department of Institution Economics in the School of Home Economics serves attractive luncheons during the regular school week. The tea room also makes a specialty of catering for luncheon and dinner parties.

Private Board and Room. Board and room can be obtained in private homes or boarding houses at rates from \$22.00 to \$35.00 a month. For a room without board the rates are from \$10.00 to \$20.00 a month for a double room and \$6.00 to \$15.00 a month for a single room. Board alone can be obtained for from \$20.00 to \$24.00 a month.

The Housing Committee exercises general supervision over all student living quarters and endeavors to see that all students have comfortable rooms and wholesome living conditions. Students are allowed to live only in rooms approved by the committee.

Housing Regulations. The following regulations govern housing of students, with the provision that when financial reasons make it necessary the housing committee may excuse students from dormitory residence and permit them to live in approved homes when rates for board and room are lower.

All unmarried students are required to live either in private homes, dormitories, or fraternity or sorority houses.

All freshman women at the State College are required to live in the dormitories during the first year.

Women students not living with relatives as residents of Corvallis are required to live in the dormitories, sorority houses, or cooperative houses. Upon application to the Housing Committee permission may be obtained to live in approved homes to work for room and board or some portion thereof.

Upperclass women at the State College may move to the sorority houses at the beginning and end of any term. At the beginning of the term, moving will take place on the second Saturday.

Freshman and sophomore men not living with relatives in Corvallis must live in the dormitories or in the present organized fraternities. Any exemptions from this requirement must be approved by the Housing Committee.

Any student reserving a room in the men's halls must occupy it until the end of the term. If he moves out of the dormitory before the end of the term without proper permission, he must pay his room and board to the dormitory for the remainder of the term or forfeit his registration. A student who pledges to a fraternity may move to a fraternity house at the end of either the first or the second term.

All women students living in the dormitories must take their meals at the dormitories.

All men students living in the dormitories must take their meals in the dining room provided for them in the Memorial Union.

Student Expenses. In thinking of the cost of a year in college, the student usually has in mind the amount which he will spend from the time he leaves home until he returns at the close of the year. Such an estimate would include personal items—clothing, travel, and amusements, items which vary according to the thrift, discrimination, and habits of the individual. The following table gives as nearly as possible the average expenses incurred by a student at the State College during an academic year. Board and room estimates are based on charges in the halls of residence. The incidental item covers miscellaneous personal expenditures which vary greatly with the individual. Cost of clothing is not included. The expenses of the fall term are listed also, since there are expenses during the fall term not incurred during the winter and spring terms.

Fees	Per term	Per year
Fees	\$ 32.00	\$ 96.00
Deposits	5.00	5.00
Books, supplies, etc.	20.00	35.00
Board and room	90.00	245.00
Incidentals estimated as explained above.....	35.00	100.00
	\$182.00	\$481.00

Self-Support. Many students earn a large part of their expenses by work in the summers and during the academic year. Some students are entirely self-supporting. In some cases students devote an occasional term or two to regular employment in addition to vacation periods, thus taking more than the usual number of years to complete a curriculum.

The work available during the academic year consists of such tasks as janitor work, house cleaning, typewriting, reporting, tutoring, waiting on

table, dish washing, clerking, service-station work, service as hotel bell boys, messenger service, caring for children, odd jobs, etc.

Organized effort is made to assist those desiring to find work. The employment bureau for men is conducted in Shepard Hall under the direction of the office of the Dean of Men. The employment bureau for women is conducted by the office of the Dean of Women in Commerce Hall.

Remunerative employment cannot be guaranteed to all who may desire it, and the new student should have sufficient funds to cover the expenses of at least the first term. It is difficult to earn one's way while carrying a program of studies and only capable students of good health should attempt it. The attention of new students who intend to earn all or part of their living is called to the following facts:

(1) Work of any kind is much more readily obtained after the student has had opportunity to familiarize himself with the local conditions.

(2) No student should expect to obtain employment by correspondence. It is advisable, however, to send an application to the employment bureau some time after September 1 and to come to the campus a day or two before the term opens to talk the matter over with the employment secretary. Positions for part-time employment are not listed, as a rule, until about the time the term opens.

(3) No student should come expecting to earn money unless he knows how and is willing to work. Only those students who do their work well can succeed in obtaining sufficient employment to meet their needs. Those who have skill in some field of work usually have greater opportunity and receive better pay.

(4) There is a constant oversupply of those wishing to do teaching and clerical work. None but those having superior qualifications and experience are likely to obtain employment of this type during the first term.

(5) There is a considerable demand for efficient stenographers, but generally there is not sufficient work of this kind to meet the needs of all applicants. There is a considerable demand for radio repair men, printers, licensed electricians, motion-picture operators, high-school and city bus operators, clerks and barbers.

(6) In many instances, students who can do any kind of domestic or manual labor well and who have good health can earn their board for three hours of work a day or board and room for three and one-half hours of work a day.

During recent years Oregon State College in common with the other institutions of recognized standing throughout the country has received a grant from the Federal Government through the National Youth Administration for the purpose of providing part-time employment for students. The quota allotted the State College has provided employment for approximately 350 students at an average of \$12.00 per month. At the time this Catalog went to press it was not known whether the NYA program would be carried on through 1938-39. Students wishing such employment, if the program is continued, should obtain information from the Registrar. Applicants are selected primarily on the basis of their financial need but are required to do a reasonably high grade of scholastic work. For this reason the scholastic record to date must be taken into consideration. NYA employees are assigned work in the various schools and departments or with public service agencies in the community at tasks which offer some opportunity for worthwhile vocational experience.

Student Health Service

THROUGH the Student Health Service the State College does all in its power to safeguard the health of its students. The Health Service accomplishes its ends through health education, complete medical examinations for the detection of remediable defects, constant vigilance against incipient disease, medical treatment of acute diseases, and the maintenance of hygienic student living conditions.

The student health services at the institutions in the Oregon State System of Higher Education are supported by student registration fees. Every student registered for credit is entitled to general medical attention and advice at the Student Health Service during office hours. If his condition requires hospitalization for general medical attention he is entitled to free care at the Student Health Service not to exceed five days per term. For a longer period an additional charge is made. When a special nurse is necessary, the expense must be met by the student. All expenses of, or connected with, surgical operations, or highly specialized service, must be borne by the student. A student who is ill may, on request, be attended at his rooming place by health-service physicians. For each such call at a student's place of residence an additional fee of \$1.00 is charged, payable at the Business Office upon receipt of a statement from the Student Health Service. Calls, after health-service hours, should be telephoned to the Student Health Service.

The privileges of the Student Health Service are not available to members of the faculty.

Facilities. All the activities pertaining to the medical examination and care of students are centered in the Student Health Service building. The clinic occupies the entire second floor and includes physicians' offices, examining rooms, X-ray and clinical laboratories, pharmacy, and minor surgery. Patients who are confined to bed are cared for on the third floor.

There are three physicians, six nurses, a laboratory technician, and an X-ray technician on the staff.

Vaccination. Under ruling of the State Board of Higher Education, students are required, as a condition of entrance to any of the institutions in the State System, to satisfy the institutional physician of immunity to smallpox (by evidence of having had the disease or of successful vaccination). Exception is made, however, for students who decline vaccination because of religious convictions. Such students may be admitted, but only on the condition that they or (in case of minor or dependent students) their parents or guardians agree in writing to assume all expenses incident to their care or quarantine, should they fall ill with smallpox while students at the institution.

Loan Funds

AS AN aid to students in financing a part of their study at the State College a number of loan funds have been established. In addition to the general "Student Loan Fund," to which there are many donors, a number of special loan funds have been established.

The Student Loan Fund

The Student Loan Fund is a perpetual revolving trust fund, established for the purpose of lending money to worthy students attending or who wish to attend Oregon State College. It is administered by the Student Loan Fund of the State College, a membership organization, incorporated under the laws of the State of Oregon, whose members are known and designated as trustees, and are appointed by the President of the State College. This fund has arisen through the liberality of friends of the institution and through the accumulation of interest on loans.

The purpose, as expressed by one of the donors, is "not to induce students to attend school by providing money that can be easily obtained, but rather to aid those who have determined to secure an education and are paying the cost wholly or in part from their own earnings." Students are eligible to loan aid after they have been in attendance at the State College at least one term.

Among the many donors to the Student Loan Fund may be mentioned the following: Hon. R. A. Booth, Dr. Clara Humason Waldo, Mr. Ashby Pierce, Mr. R. M. Johnston, Mr. L. J. Simpson, Mr. Ben Selling, Dr. U. M. Dickey, the College Folk Club, the Agricultural Club, the Oregon Countryman, miscellaneous contributions by Faculty, Professors Paul Petri and Lillian Jeffreys Petri, Winter Short Course Students, the A. Grace Johnson Memorial Fund, the Forestry Fund, the Piano Practice Fund, various Class Donations, the Phi Pi Phi fraternity, Y.M.C.A. Rifle Club, Marguerite MacManus String Quartet, Salem Oregon State Club, Portland Oregon State Club, Oregon State Barometer, Domestic Science Dining Room (Panama-Pacific International Exposition, San Francisco), bonds during the war—Waldo Hall Club, Cauthorn Hall Club, Miners' Club, Silverton Rotary Club.

A special faculty committee with offices in the Memorial Union is charged with the responsibility of administering the Student Loan Fund and cooperates in the administration of the other loan funds available for students at the State College.

The fundamental principles upon which the Student Loan Fund is administered and upon which the success of the fund has been built are:

- (1) Care in the selection of student character as a credit basis.
- (2) Detailed budgeting of expenses and receipts to assure that the sums borrowed are not disproportionate with the student's capacity to repay.
- (3) Insurance against loss by a "Contract of Guaranty" signed by the parent or guardian.
- (4) Effective follow-up system on delinquent loans.

Other Loan Funds

The Crawford Loan Fund. By the wills of the late Edward G. Crawford and his wife Ida M. Crawford a fund has been left in trust with the United States National Bank of Portland to assist worthy young men desiring to educate themselves. Applications for assistance under this will are made through the local loan office. Applicant must be a native-born citizen of the United States, have attended primary school, either public or private, and have shown a desire and ability to help to educate himself. He must be regularly enrolled as a student in the school or college at which the proceeds of the loan will be used. According to the terms of the will, this fund can be used to assist young men who require financial aid in obtaining an education in any of the mechanical arts, trades, or in practical business, or along any particular line of study save and except the professions of medicine, law, theology, pedagogy, and music.

The Federation of Women's Clubs Educational Fund provides loans to women students who are well recommended.

Masonic Educational Funds. The Grand Lodge of the State of Oregon has assigned \$2,000 to a fund which may be used by needy sons and daughters of Master Masons. Loans from this fund are made at the discretion of the institution and the approval of the master and wardens of the the Trustees of the Grand Lodge, upon the recommendation of the president located in the same place as the institution. Loans to any one student may not exceed \$200 in an academic year, subject to repayment in full or in installments at the borrowing student's earliest convenience.

The Knights Templar have a national fund available for the aid of students in their senior year. The student applying need not necessarily have Masonic affiliations as a prerequisite. Loans from this fund are obtained in the manner above described.

Eastern Star Educational Fund. Loans are available to students who are members or daughters of members of the Order of the Eastern Star. Loans are made upon honor, no security being asked, and will be made by the Trustees of the Grand Chapter on the recommendation of the president of the institution which the student is attending and the approval of the Worthy Matron and Worthy Patron of the chapter of the Order of the Eastern Star located in the same place as the institution of learning.

The J. T. Apperson Educational Fund. By the will of the late Hon. J. T. Apperson, who had been a Regent of the State College from its foundation, a fund amounting to between \$55,000 and \$75,000 is to be a perpetual endowment, administered by the State Land Board of Oregon, for the assistance of worthy young men and women, "who are actual bona fide residents of the State of Oregon, and who would otherwise be unable to bear the expense of a college course at the Oregon State Agricultural College." The income from this estate is loaned to students. Applicants for loans must be recommended to the State Land Board by the President of the State College and the State Superintendent of Public Instruction. Application is made through the Student Loan Committee.

The Arthur Palmer Tift Memorial Loan Fund. By the will of the late Mrs. Joan C. Palmer Tift, practically her entire estate is left as a permanent loan fund for deserving young men needing financial assistance while attending Oregon State College. This fund is left as a memorial to her son, Arthur Palmer Tift, Portland attorney, who died on January 14, 1919. The fund is irreducible and all interest accruing therefrom is added to the fund.

The Oregon State Pharmaceutical Association Educational Fund, established by the Oregon State Pharmaceutical Association at its thirty-sixth convention held at Corvallis in July 1925, is a fund to be used primarily in making loans to needy and deserving students of Oregon State School of Pharmacy.

The Joseph N. Teal Loan Fund. By bequest the late Joseph N. Teal of Portland gave to the State College the sum of \$5,000 "to be administered as a perpetual revolving fund to be loaned . . . to worthy students pursuing courses of instruction in said College."

The Ben Selling Scholarship Loan Fund. By the will of the Honorable Ben Selling of Portland, \$100,000 is set aside, from a part of the income of

which loans may be made to men and women of the State College. Applicants must be approved by the State College Student Loan Committee.

A. W. S. Emergency Loan Fund for Women Students. The Associated Women Students have set aside a sum of money which is available to women students who are in need of small amounts of money for short periods of time. The fund is administered by the Dean of Women.

Oregon State College Chamber of Commerce Loan Fund. The Oregon State College Chamber of Commerce placed \$600 with the Loan Committee for the assistance of worthy students. This money is administered by the Student Loan Committee with special consideration for students interested in the business aspects of their field of specialization.

Scholarships and Fellowships

A NUMBER of scholarships and fellowships have been established largely through the generosity of private donors, providing funds in varying amounts for the encouragement of students showing special promise. Some of these are general scholarships. Others are limited to special fields.

State Scholarships. A limited number of scholarships are awarded annually to students in the institutions of the Oregon State System of Higher Education. These scholarships cover tuition and laboratory and course fees (a total of \$21.50 a term or \$64.50 a year for a student attending the State College). Recipients of scholarships must, however, pay the matriculation fee, incidental fee, the building fee, and special fees. At least fifty-per cent of the scholarships are awarded to entering freshmen. To be eligible, an entering student must rank in the upper third of his high-school graduating class. Students who have previously attended an institution of higher learning must have a grade-point average of 2.50 (computed according to the grade-point system in use at the Oregon state institutions of higher education). All applicants, to be eligible, must be in need of financial assistance. Application should be made on official blanks to the secretary of the State Board of Higher Education or to the State College Registrar. Applications from students who have not previously attended college must be filed by April 1. Applications from students with previous college experience must be filed by June 15.

State College Assistantships, Scholarships, and Fellowships. A number of graduate and research assistantships, scholarships, and fellowships are awarded annually by the State College to qualified graduate students in various fields. For stipends and application procedure, see GRADUATE DIVISION.

Bernard Daly Educational Fund. Under terms of the will of the late Dr. Bernard Daly of Lakeview, Oregon, worthy self-supporting young men and women of Lake County, Oregon, may receive a part or all of their necessary college expenses. The terms of the will provide that the income from this fund be used to pay the college expenses of at least fifteen students each year. The fund is administered by the board of trustees, who select candidates annually from a list of applicants recommended by the

county judge and county school superintendent of Lake County, following a qualifying examination held in Lake County.

Phi Kappa Phi Exchange Scholarship. To encourage interchange among students of the cultures of this and other countries, the local chapter of Phi Kappa Phi supports, on an annual basis, an international exchange scholarship, under which a foreign student receives tuition and room for one academic year at Oregon State College. The Oregon State student who goes abroad receives similar assistance from the foreign institution; he returns to this campus for the year following the one spent abroad.

Blumauer-Frank Drug Company Scholarship. A scholarship of \$50, established 1935, is awarded annually to the junior student in pharmacy who makes the highest average in a competitive examination given to selected members of his class whose records have been outstanding during their three years in college. Should the winner not return the following academic year, the scholarship is awarded to the student making the next highest average. The purpose of the scholarship is to further the advancement of professional pharmacy and to aid a worthy student in completing his senior year. The Blumauer-Frank Drug Company has furnished a heavy bronze plaque upon which is engraved the name of the winner and the year.

Oregon State Pharmaceutical Association Educational Fund Scholarship. The Board of Trustees of the Oregon State Pharmaceutical Association Educational Fund will grant an annual scholarship of \$100 to a member of the freshman class of the School of Pharmacy who meets the following requirements: (1) His father or mother must be a member of the Oregon State Pharmaceutical Association. (2) He must rank high in scholarship, character, and effort. (3) He must make application for the scholarship and certify that he will continue his course in pharmacy at Oregon State College until graduation.

Standard Brands, Inc. Grant. A grant of \$1,200 a year is given for chemical research on yeast by Standard Brands, Inc. of New York, successor to the Fleischmann Company. This grant is expended under the direction of Dr. Roger J. Williams of the Chemistry Department for equipment, supplies, and assistance, and allows the appointment of one or more research assistants.

Fleischmann Fellowship. A grant of \$900 for the year for chemical research on yeast is given by Standard Brands, Inc., of New York, successor to the Fleischmann Company. Seven hundred and fifty dollars of this amount is the stipend of the Fleischmann Fellowship. It is awarded and the research carried on under the direction of Dr. Roger J. Williams of the Chemistry Department.

International Friendship Scholarship. The Home Economics Club of the State College on March 2, 1926, established a scholarship of \$500 which is awarded annually to a graduate foreign student to study home economics at Oregon State College. The recipient of the scholarship is selected by a committee composed of the executive council of the Home Economics Club, the Dean of the School of Home Economics, and a representative of Omicron Nu.

Goodwin Oriental Good Will Scholarship. Through the generosity of Mr. and Mrs. Arthur E. Goodwin of Seattle a scholarship of \$750 is awarded annually to a graduate foreign student from an oriental country to study home economics at Oregon State College. The recipient of the scholarship is selected by a committee composed of the Executive Council of the Home Economics Club, the Dean of the School of Home Economics, and a representative of Omicron Nu.

The **A. Grace Johnson Memorial Scholarship** is awarded in units of \$100 or less to a worthy, needy home economics student who is registered as an upper classman and whose scholastic average is equal to or above that of the student body. The scholarship fund, started in the spring of 1935, is a continually growing one contributed to by former fellow workers, students, friends, and relatives of Miss Johnson, professor of household administration at the State College from 1915 to the time of her death in 1933.

The **Leonora Kerr Scholarship** is an award of \$50 made annually to an outstanding woman student, a high-school graduate, selected by the scholarship committee of the College Folk Club. The scholarship was established by the College Folk Club as a tribute to its founder and first president, Mrs. W. J. Kerr.

Rotana Club Scholarship. The Rotana Club of Portland provides a scholarship of \$25 awarded each year to a sophomore student in the School of Home Economics on the basis of scholastic promise, qualities of personality, and leadership. In making the selection consideration is given to the need of the student for assistance in financing her education. The recipient of the scholarship is selected by the Dean of the School of Home Economics from nominations made by the school faculty.

Kingery Dermatological Research Assistantship in Chemistry. A research assistantship is available for the study of chemical means for combating pathogenic yeast infections. The stipend of approximately \$300 is given by Dr. Lyle B. Kingery of Portland, and the project is under the immediate direction of Dr. Roger J. Williams of the Chemistry Department.

The **Lee Scholarship** is awarded each year to a woman student in home economics registered as a junior, who during her career in college has shown improvement in her work, stability and meritorious record in all her activities, and general all-round worthiness. This scholarship provides a sum of money derived from the annual income of a fund of \$1,000 bequeathed by Minnie E. Lee as a memorial to her husband J. B. Lee and herself, to be paid to the recipient at the time of her registration in the senior year. The award is not open to any student who has received any other monetary prize.

The **Mary J. L. McDonald Fellowship in Reforestation.** Through the generosity of the late Mrs. Mary J. L. McDonald of San Francisco, a fellowship has been established giving opportunity to do advanced study in problems of reforestation. The fellowship is awarded each year by a committee of the faculty of the Oregon State School of Forestry to a graduate of a recognized school of forestry on the basis of proficiency in forestry studies, personality, and demonstrated ability to do independent work.

Oregon Home Extension Council Scholarship. The Oregon Home Extension Council Scholarship is an award of \$25 made annually at the Oregon Conference of the Study of Home Interests to a junior or senior girl who shows sincere interest in and promise of leadership in extension work, who stands high in scholarship, is active in school affairs, and is in need of assistance. The scholarship student is selected by a committee consisting of the Dean of the School of Home Economics, the State Leader of Home Economics Extension, and the President of the State Home Extension Council. The scholarship fund is sponsored by the Oregon Home Economics Extension Council and the extension units in counties having home demonstration agents.

The American Association of University Women Graduate Scholarship. Every three years beginning in 1928 the Oregon Division of the American Association of University Women gives a scholarship of \$1,200 to a woman who is a resident of Oregon, and who holds at least a bachelor's degree, for advanced study at any American or foreign university.

Prizes and Awards

DISTINCTION in scholarship is recognized at the State College through the recognition of "Senior Honor Students" at the time of graduation, through election to the various honor societies, and through prizes and awards. A description of requirements for recognition as Senior Honor Students and a list of honor societies will be found elsewhere in this Catalog. There are also essay and oratorical prizes, and awards for proficiency in special fields, and for all-round distinction in student life. The Phi Kappa Phi Freshman Awards recognize each year those students who have made distinguished records in scholarship during their first year in college.

The **Clara H. Waldo Prizes**, totaling \$140 annually, are awarded each spring in the proportions of \$50, \$40, \$30, and \$20 respectively to the woman student of highest standing registered as a regular student in the senior, junior, sophomore, and freshman year. The committee having charge of the award of these prizes is guided by the following points: (a) proficiency in scholarship, (b) success in student activities, (c) qualities of womanhood, and (d) qualities of leadership.

The **Lipman Wolfe Prizes**, totaling \$100 annually, are awarded each year in the proportions of \$50, \$30, and \$20 respectively to the man or woman of highest standing registered as a regular student in the senior, junior, and sophomore classes. The committee having charge of the award of these prizes is guided by the following points: (a) proficiency in scholarship, (b) qualities of manhood or womanhood with special emphasis on unselfishness and kindness, (c) qualities of leadership, and (d) contribution to campus welfare.

The **Joseph H. Albert Prize** of \$25 is an award annually made to the senior student who is adjudged by a joint committee of faculty and students to have made the greatest progress toward the ideal in character, service, and wholesome influence.

The Chi Omega Prize. Eta Alpha of Chi Omega offers an annual award of \$25 to the senior woman who is adjudged by a college committee on honors and awards to approach most nearly an ideal of intellect and spirituality and to have exerted the most wholesome influence upon her associates.

The E. D. Ressler Memorial. This award, given by the Oregon State Teachers Association, is presented to the junior preparing to enter the teaching profession who in the judgment of the education faculty, as approved by the committee on honors and awards, has made the best all-round record as an undergraduate.

The Alpha Zeta Scholarship Plaque is awarded during the first term of the sophomore year to the student in agriculture receiving the highest grade average in the freshman class.

The Kappa Delta Pi Award of \$25 is made annually to the sophomore enrolled in the School of Education who as a freshman in that school made the highest scholastic average.

The American Institute of Electrical Engineers Prize is an associate membership in the institute, awarded annually by the Portland Section for the best paper prepared and delivered by an undergraduate member of the Oregon State College student branch.

The A. S. M. Awards. The American Society of Metals (Oregon Chapter) awards annually three memberships in the society and cash awards of \$10 and \$5 each for the best papers prepared by student members of the society.

Epsilon Pi Tau Award. A certificate of merit is awarded annually to the sophomore in industrial arts who during his freshman year has made the greatest progress in scholarship and development of fellowship.

The American Society of Civil Engineers Prizes are junior memberships in the society awarded annually for the three best papers prepared and delivered in the student branch of the society.

The American Society of Mechanical Engineers Prize of \$25, \$15, and \$10 respectively are awarded annually for the three best papers prepared and delivered in the student branch of the society.

Eta Kappa Nu Award. A certificate of merit is awarded annually to the outstanding student in the sophomore electrical engineering class. A permanent record of this award is kept on a bronze plaque in Apperson Hall.

The S.A.E. Awards. The Society of Automotive Engineers (Oregon Section) awards annually three prizes of \$25, \$15, and \$10 for the best papers prepared by student members of the society.

The A. I. Ch. E. Award. The American Institute of Chemical Engineers awards a pin each year to the junior member of the student chapter who made the highest record during his freshman and sophomore years.

Sigma Tau Award. A medal is awarded each year to the sophomore student in engineering who during his freshman year was the most outstanding student.

The Charles Lathrop Pack Forestry Prize. Through the generosity of Mr. Charles Lathrop Pack of New Jersey, a gift of \$2,000 has been made to the State College to encourage forestry students to write for publication. The income from the gift is awarded each year to the student in forestry who produces the most interesting, logical, and technically significant paper for publication.

The Xi Sigma Pi Plaque is awarded each year to the student in forestry who has maintained the highest grade average during the sophomore year.

The Omicron Nu Plaque is awarded each year to the senior woman who has best lived the teachings of home economics throughout her college career. Candidates are first selected by a committee of the home economics faculty and their names then submitted to vote of the Home Economics Club, final decision resting with the committee.

Oregon Home Economics Association Award. An award of \$25 is made annually by the Oregon Home Economics Association to an Oregon girl majoring in home economics who is a sophomore and needs financial aid to continue her education. The selection is made by a committee made up of the President of the Oregon Home Economics Association, the Dean of the School of Home Economics, and a member of the home economics staff.

The Home Economics Prize of \$10 was established (1928) by members of Omicron Nu for the purpose of promoting scholarship and leadership in home economics, the recipient being selected by a joint committee representing Omicron Nu and the faculty in home economics.

The Drucilla Shepard Smith Prize. Through the generosity of John E. Smith of the Class of 1902 a sum of \$500 has been contributed as a memorial to his mother, the late Drucilla Shepard Smith (Mrs. F. S. Smith) formerly of McCoy, Polk County, Oregon. The income from this gift is awarded annually to the graduate or undergraduate student who during the year has had published the best article or series of articles dealing with practical solutions of problems that confront women in rural homes. These problems may be concerned with club work, education, finance, family government, health and sanitation, marketing, psychology, recreation, social affairs, or any other subject in which difficulties arise for the rural homemaker. The judges determining the award of this prize are appointed by the President of the State College.

The Rho Chi Prize of \$10 is awarded annually to the freshman in pharmacy who in the judgment of the Rho Chi society and the faculty in pharmacy has been most outstanding in scholarship and activities.

The Lehn and Fink Medal. A gold medal, appropriately engraved, is awarded each year to the senior student in the School of Pharmacy who has attained the highest scholarship rank, or who in the judgment of the faculty has made the most distinctive contribution to the advancement of science in pharmacy.

Women's Auxiliary to Oregon State Pharmaceutical Association Prize. A cash prize of \$25 is awarded annually to the senior woman in pharmacy who in the judgment of the faculty in pharmacy has shown the greatest proficiency in scholarship, qualities of leadership and womanhood, and success in student activities.

Extracurricular Activities

THE State College recognizes the values of extracurricular student activities as a part of a college education: formation of habits of civic responsibility and leadership through self-government and student clubs and societies; the broadening of outlook and sympathies through varied human associations; cultural development through participation in the intellectual and esthetic life of the campus.

The Associated Students. The students of the State College are organized for self-government into the Associated Students of Oregon State College. The A. S. O. S. C. sponsors and manages such activities as intercollegiate athletics, student publications, forensics and dramatics, and concert and lecture series.

The Associated Women Students, a group within the general student body organization, sponsors and supervises activities of women students. The A. W. S. is a chapter of the Intercollegiate Association of Women Students.

Each entering class forms an organization within the A. S. O. S. C. which retains its identity throughout the four undergraduate years at the State College and after graduation. Class reunions are held regularly by alumni. During their undergraduate days students in the different classes uphold various distinctive traditions. Graduating classes usually leave a gift to the State College. Classes returning for their silver anniversary or jubilee also may make gifts as an expression of their loyalty and appreciation toward the institution at which they received their undergraduate education.

Clubs and Associations. A large number of clubs and associations flourish on the State College campus to serve special student interests. Some of these organizations are: American Society of Agricultural Engineers (Oregon student branch); Agriculture Club; American Institute of Chemical Engineers (Oregon State chapter); American Society of Civil Engineers (Oregon State student chapter); American Society of Mechanical Engineers (Oregon State student branch); American Institute of Electrical Engineers (Oregon State chapter); Society of Automotive Engineers (Oregon State student branch); Bernard Daly Club (students holding Daly scholarships); Cosmopolitan Club; Forestry Club; Four-H Club; Home Economics Club; Industrial Arts Club; Pharmaceutical Association; Teminids (Eastern Star); Young Men's Christian Association; Young Women's Christian Association.

The parents of Oregon State students are organized into two groups, Oregon State Dads and Oregon State Mothers, both active in the support of the State College.

Other organizations important in the life of the campus are the Biology Club (faculty); the Faculty Men's Club; American Association of University Women (Corvallis branch); College Folk Club (faculty women and wives of staff members); Oregon State Dames (wives and mothers of students, affiliated with the national organization, University Dames).

Honor Societies. A number of honor societies are maintained on the Oregon State campus for the recognition of general scholarship in particular fields and student leadership. Most of them are national organizations with chapters at the leading colleges and universities of the country.

Among these societies are: Phi Kappa Phi (all-college scholastic, men and women); Sigma Xi (research, science; men and women); Alpha Lambda Delta (underclass women); Alpha Zeta (agriculture, men); Blue Key (senior men); Delta Sigma Rho (forensics, men and women); Eta Kappa Nu (electrical engineering); Euterpe (music, women); Gamma Sigma Delta (agriculture); Kappa Kappa Alpha (art, men and women); Kappa Kappa Psi (band); Mortar Board (senior women); Mu Beta Beta (Four-H clubs, men and women); National Collegiate Players (dramatics, men and women); Omicron Nu (home economics); Orchesis (dancing, women); Parthenia (physical education, women); Phi Lambda Upsilon (chemistry); Phi Sigma (biology, men and women); Rho Chi (pharmacy, men and women); Sigma Alpha (physical education, men); Sigma Pi Sigma (physics, men and women); Sigma Tau (engineering); Tau Beta Pi (engineering); Talons (sophomore women); Theta Sigma Phi (journalism, women).

Professional and Departmental Societies. Student societies are maintained in many of the schools and departments for the promotion of high standards of scholarship and professional training. Most of them are national organizations. Among these societies are: Alpha Delta Sigma (advertising, men); Alpha Tau Delta (nursing, women); Epsilon Pi Tau (industrial arts); Kappa Delta Pi (education, men and women); Kappa Psi (pharmacy, men); Phi Chi Theta (commerce, women); Pi Mu Epsilon (mathematics, men and women); Scabbard and Blade (military); Sigma Delta Chi (journalism, men); Sigma Delta Psi (physical education, men); Sigma Gamma Epsilon (geology and mining); Xi Sigma Pi (forestry).

Athletics and Sports. Oregon State College is a member of the Pacific Coast Intercollegiate Athletic Conference composed of ten leading universities and colleges of the coast region. In addition to intercollegiate athletics a comprehensive program of intramural sports is sponsored by the institution through the Division of Physical Education. The sports program is closely correlated with instruction in physical education. Student organizations encourage sports participation and give recognition for proficiency.

Major intercollegiate sports for men include football, basketball, baseball, and track. Minor intercollegiate sports include swimming, tennis, golf, wrestling, boxing, and fencing. Intramural sports include speedball, track, basketball, foul throwing, swimming, rowing, touch football, cross country, golf, wrestling, volleyball, handball, tennis, baseball, fencing, and boxing.

Organized sports for women include hiking, volleyball, archery, dancing, hockey, baseball, basketball, swimming, tennis, badminton, deck tennis, horseshoes, golf, fencing, and games of low organization.

The Varsity "O" Association includes men who have been awarded a major-sport letter.

The Minor "O" Association includes all men who have been awarded a letter in any of the minor sports.

The Women's Athletic Association sponsors women's athletic contests and the organization of various sport clubs. As a member of the Athletic Conference of American College Women, it correlates its program with a nationwide effort to maintain women's athletics on a high educational level.

The Orange "O" Association is composed of women holders of the Orange "O," awarded to those who have met the requirements, including the earning of points in interclass athletics.

Lectures. The regular State College curriculum is supplemented by frequent public lectures by faculty members and visiting scholars. Lectures are sponsored by the Committee on Convocations and Lectures, the Faculty Men's Club, the American Association of University Women, the College Folk Club, the Committee on Religious Education, the Associated Students, the Associated Women Students, Phi Kappa Phi, and by various schools and departments.

Forensics and Dramatics. Forensics and dramatics are fostered at the State College not only for their value to those participating but also for their intellectual and cultural value for the whole campus community. The State College is a member of the Pacific Forensic League composed of the leading colleges and universities on the coast, and of the Intercollegiate Forensic Association of Oregon composed of ten colleges and universities.

Training and experience in acting, play production, and stage craft are provided by the Speech Department. Each season groups of short plays are given in connection with the instruction in community drama. Three major plays are presented each year by the National Collegiate Players, Workshop Theater Players, or Mask and Dagger, the campus dramatic groups. Special student organizations such as the Wesley Players and the Westminster Players also provide outlets for dramatic talent and opportunities for experience in play production.

The Associated Students sponsor a full schedule of varsity and freshman debate and oratory for both men and women. From 36 to 40 Oregon State teams supporting both negative and affirmative of many questions participate each year in more than 100 intercollegiate debates. Oregon State representatives compete in the old-line State Oratorical Contest, the state Peace oratorical contest, and the state and Pacific Coast extempore-speaking contests. Interclass and interorganization contests are held in debate, oratory, and extempore speaking. Approximately 40 teams participate each year, the winners receiving loving cups.

Art and Music. The State College gives special encouragement to extracurricular activities in art and music. Concerts and recitals sponsored by the Department of Music, the Associated Students, and the several student musical organizations play a central part in the cultural life of the State College community. The Department of Art and Architecture, Kappa Kappa Alpha, and other campus organizations or groups sponsor frequent exhibits of student art work and loan collections. Several dance recitals are given each year under the auspices of the Department of Physical Education, Orchesis, and other organizations.

The Oregon State Symphony Orchestra is an organization of about fifty student musicians. Two or more major concerts are given each year. The Orchestra plays for Commencement and other important institutional events. In addition to its own concert series, the orchestra cooperates with the choral organizations in oratorical productions. Any State College student is eligible to try out for the orchestra.

Membership in the 75-piece, uniformed R.O.T.C. Band is open to students passing a satisfactory examination in the elements of music and ability to perform on a band instrument. Individual practice and attendance at rehearsals are required. The Band furnishes basses, baritones, altos, and drums; otherwise, members must furnish their own instruments, which must be in low pitch.

The Glee Club, student men's organization, prepares programs of male choruses, glees, and compositions of a lighter nature. Membership is determined through individual examination of candidates.

The Madrigal Club, student women's organization, studies compositions for women's voices of various types and gives concerts both alone and in conjunction with the Glee Club at various times during the year. Membership is determined through individual examinations of candidates.

The College Chorus is composed of the members of both the Glee and Madrigal clubs. Besides attending regular rehearsals of the club to which they belong, the members are required to attend additional rehearsals of the combined clubs, at which numbers are rehearsed for concerts given at Christmas time, Easter time, and Commencement. Occasionally the two clubs unite in the production of a light opera.

The Educational Activities Board brings artists to the campus for concerts and recitals as part of the annual lyceum series. Free Sunday afternoon concerts are offered to students and the public. Free public recitals by advanced music students are given frequently during the academic year.

Social Organizations. Personal associations with fellow students through social organizations and living groups constitute one of the pleasantest features of campus life. All students have opportunity to belong to some type of social organization.

Students not belonging to fraternities or sororities are organized for social activities. Each residence hall and cooperative house has its own group organization. The men's halls and the women's halls are organized for united activities. Independent women are organized in Phrateres, national society for independent women. Independent men maintain a group of clubs. All independent students, including those residing in the dormitories, are represented in the Independent Student Council, which is a member of the Independent Intercollegiate Student Association.

Fraternities on the Oregon State campus are organized into the Interfraternity Council, which is a member of the National Interfraternity Conference. The sororities on the campus are organized into the Panhellenic Council, which is a member of the National Panhellenic Congress.

Fraternities at the State College are: Alpha Chi Rho, Alpha Gamma Rho, Alpha Sigma Phi, Alpha Tau Omega, Beta Kappa, Beta Theta Pi, Chi Phi, Delta Chi, Delta Sigma Phi, Delta Tau Delta, Delta Upsilon, Kappa Delta Rho, Kappa Sigma, Lambda Chi Alpha, Phi Delta Theta, Phi Gamma Delta, Phi Sigma Kappa, Pi Kappa Phi, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Sigma Phi Epsilon, Sigma Phi Sigma, Sigma Pi, Theta Chi, Theta Kappa Nu, Theta Xi.

Sororities at the State College are: Alpha Chi Omega, Alpha Delta Pi, Alpha Gamma Delta, Alpha Xi Delta, Beta Phi Alpha, Chi Omega, Delta Delta Delta, Delta Zeta, Gamma Phi Beta, Kappa Alpha Theta, Kappa Delta, Kappa Kappa Gamma, Pi Beta Phi, Sigma Kappa.

Student Publications. Oregon State College student publications are listed below. The official publications of the State College and of the State System of Higher Education are listed on another page.

The OREGON STATE BAROMETER is a full-size newspaper, containing campus news and selected general and educational news, issued five days a week during the academic year. It is edited, managed, and financed by students. Any student may qualify for a position on the staff.

The BEAVER, the year book of the Associated Students, is a substantially bound, pictorial record of student life. The volume is published in May during Campus Week End.

The AGRICULTURAL JOURNAL, a quarterly magazine published by the Agricultural Club, is devoted to the promotion of agricultural interests.

The LAMPLIGHTER, a quarterly literary magazine written and printed by students, has as its aim to give encouragement to students having talent for writing.

The OREGON STATE TECHNICAL RECORD, a quarterly magazine (a member of Engineering College Magazines Associated), is devoted to engineering and industry.

The ANNUAL CRUISE, an illustrated magazine published annually by the Forestry Club, is devoted to scientific forestry and lumbering and to the forestry and lumbering industries.

The STUDENT DIRECTORY is compiled and published twice a year by the Associated Students.

Alumni Association

ALUMNI of Oregon State College include 10,863 graduates and approximately 27,500 former students. Active membership in the Alumni Association requires the payment of \$3 annual dues. The association is governed by a board of eleven directors, some of this number being elected each year at the annual business meeting held at Commencement. Each board member represents a definite section of the state and serves for a term of three years. The association maintains its permanent manager and office staff in Room 110, Memorial Union, where complete files are kept of all graduates and former students of the State College. The officers of the association for 1937-38 are as follows:

ARTHUR FERTIG, '17, Warrenton.....	President
GEORGE A. KNUTSEN, '31, Portland.....	Vice President
ARTHUR K. BERMAN, '07, Corvallis.....	Treasurer
GEORGE T. SCOTT, '29, Corvallis.....	Manager
CHARLES T. PARKER, '08, Portland.....	Director
DR. C. J. BARTLETT, '08, Baker.....	Director
ROSS CADY, '09, Boise, Idaho.....	Director
PERCY MURRAY, '24, Klamath Falls.....	Director
KENNETH G. DENMAN, '27, Medford.....	Director
ALLAN RINEHART, '29, Portland.....	Director
LOWELL STOCKMAN, '22, Pendleton.....	Director
KENNETH C. PERRY, '25, Salem.....	Director
R. EARL RILEY, '12, Portland.....	} Alumni Members of Memorial Union Board of Governors
ROY R. CLARK, '09, Portland.....	
E. E. WILSON, '89, Corvallis.....	
F. EARL PRICE, '22, Corvallis.....	
J. F. PORTER, '12, Corvallis.....		Alumni Member Memorial Union Board of Directors

The Alumni Association publishes a two-page section of alumni news in each Tuesday issue of the OREGON STATE BAROMETER, which is devoted to the upbuilding of the State College and its program of service.

Part III

Resident Instruction

Lower Division

MAHLON ELLWOOD SMITH, Ph.D., Dean and Director of Lower Division, Oregon State System of Higher Education.

GERTRUDE FULKERSON, Secretary to the Dean.

General Statement

FRESHMAN and sophomore work in the liberal arts and sciences is unspecialized. The work is offered through the Lower Division on a parallel basis at the University and the State College and leads to the Junior Certificate. Students completing the work of the Lower Division and fulfilling all requirements for the Junior Certificate may select a major in a specialized field at the close of the sophomore year.

For students who plan to complete work for the bachelor's degree the two lower-division years provide broad general education and a foundation for specialization during the junior and senior years in some major field in the liberal arts and sciences or in a professional or technical curriculum. Lower-division students explore several fields of study with a view to determining special interests and aptitudes.

For students who complete no more than the first two years of college work, the Lower Division aims to afford a balanced cultural program and preparation for intelligent citizenship.

The State Board of Higher Education, in establishing the Lower Division, defined its primary purpose as follows:

(1) **Basic Education.**

Insuring to all students the elements of a sound general education during their first two years; delaying specialization until the junior and senior years and then encouraging it to a high degree.

(2) **Orientation.**

Providing students with a period of exploratory contact which will enable the institution to assist them to make a wise selection of specialization on the basis of their abilities and aptitudes.

Lower-Division Groups. For the purpose of adjusting the work to the two-fold objectives of basic education and orientation, lower-division work in the liberal arts and sciences has been arranged in three groups, each representing a comprehensive field of knowledge, as follows: **LANGUAGE AND LITERATURE**, **SCIENCE** (including the biological and physical sciences and mathematics), and **SOCIAL SCIENCE**.

Group Requirements. Students intending to major in the liberal arts and sciences must complete at least 9 approved term hours in each of the three groups and at least 9 additional approved term hours in courses numbered 200-210, or equivalent, in any one of the same three groups. Courses that satisfy group requirements are numbered from 100 to 110 and from 200 to 210. (For group requirements for students in the professional schools see page 72.)

Required Courses. Besides fulfilling group requirements, lower-division students must take required work in English Composition, Hygiene, Physical Education, and Military Science and Tactics, as stated on pages 71-72. Entering students are required to take certain aptitude and placement examinations, and to make any adjustments indicated as a result of standings achieved in these tests.

Major Requirements and Electives. Students complete their study programs with courses required by major departments or schools or with electives. Students who have decided on a major field take the courses prescribed by the major school or department. Students who are uncertain of their dominant interest or their vocational intentions, or who do not plan to pursue major specialization later, take a program of studies designed to aid them in self-exploration and individual development.

The general distribution of work for lower-division students is shown in the curriculum on page 106.

Lower-Division Advisers. Each entering student is assigned to a Lower-Division adviser, whom the student consults in making out his study program. It is the duty of the adviser to assist the student in building an integrated program, in line with his interests and with institutional and lower-division requirements.

Certificates

STUDENTS who have met the group requirements, and have completed a total of at least 93 term hours of required and elective freshman and sophomore work, qualify for one of three certificates, depending on their objectives and attainments:

The Junior Certificate, which admits to upper-division standing and the opportunity to pursue a major curriculum leading to a degree. It requires a grade-point average of at least 2.00.

The Junior Certificate with Honors Privileges, which admits to the privilege of working for honors in the colleges and schools providing honors work. To receive this certificate the student must have a grade-point average of at least 2.75 in addition to fulfilling all requirements for the Junior Certificate.

The Lower-Division Certificate, which recognizes the successful completion of two years of lower-division work. It is granted upon request to students whose desire has been only to round out their general education. The scholastic average specified for the Junior Certificate is not required. The Lower-Division Certificate does not admit to upper-division standing.

Group Courses

YEAR SEQUENCES applicable in meeting group requirements are listed below. These courses may also be taken as electives. Descriptions of the courses are printed under the several departmental headings.

LANGUAGE AND LITERATURE GROUP

English

- Eng 101, 102, 103. Literature Survey, 3 hours each term.
 Eng 104, 105, 106. Introduction to Literature, 3 hours each term.
 Eng 201, 202, 203. Shakespeare, 3 hours each term.

Germanic Languages

GERMAN

- Ger 201, 202, 203. German Literature (Third-Year German), 3 hours each term.

Romance Languages

FRENCH

- RL 201, 202, 203. French Literature, 3 hours each term.

SPANISH

- RL 207, 208, 209. Spanish Literature, 3 hours each term.

SCIENCE GROUP

Science Surveys

- BiS 101, 102, 103. Biological Science Survey, 4 hours each term.
 PhS 101, 102, 103. Physical Science Survey, 4 hours each term.

Bacteriology

- Bac 201, 202, 203. Elementary Bacteriology, 3 hours each term.
 Bac 204. General Bacteriology, 3 hours fall or winter term.
 Bac 205. General Bacteriology, 3 hours winter or spring term.
 Bac 206. General Bacteriology, 3 hours spring term.

Botany

- Bot 201, 202, 203. General Botany, 3 hours each term.

Chemistry

- Ch 101, 102, 103. Elementary General Chemistry, 3 hours each term.
 Ch 201, 202, 203. Principles of Chemistry, 4 hours each term.
 Ch 204, 205, 206. General Chemistry, 5 hours each term.
 Ch 208, 209. General Chemistry, 5 hours winter and spring terms.

Entomology

- Ent 201, 202, 203. General Entomology, 3 hours each term.

Geology

- G 201, 202, 203. Geology, 3 hours each term.
 G 204, 205, 206. Geology Laboratory, 1 hour each term.

Mathematics

- Mth 100. Intermediate Algebra, 4 hours one term.
 Mth 101, 102, 103. Unified Mathematics, 4 hours each term.
 Mth 106. Trigonometry, 4 hours one term.
 Mth 108. Mathematics of Finance, 4 hours one term.
 Mth 109. Elements of Statistics, 4 hours one term.
 Mth 201, 202, 203. Differential and Integral Calculus, 4 hours each term.

Physics

- Ph 201, 202, 203. General Physics, 4 hours each term.
 Ph 204, 205, 206. Astronomy and Meteorology, 3 hours each term.

Psychology

- Psy 201, 202, 203. Elementary Psychology, 3 hours each term. (Applicable in satisfying group requirements in Science group if accompanied by Psy 204, 205, 206.)
 Psy 204, 205, 206. Elementary Psychology Laboratory, 1 hour each term.

Zoology

- Z 201, 202, 203. General Zoology, 3 hours each term.
 Z 204, 205, 206. Vertebrate Zoology, 4 hours each term.
 Z 209, 210. Elementary Human Anatomy, 3 hours fall and winter terms.

SOCIAL SCIENCE GROUP

General Social Science

- SSc 101, 102, 103. Background of Social Science, 3 hours each term.

Economics

- Ec 201, 202, 203. Principles of Economics, 3 hours each term.

History

- Hst 201, 202, 203. History of Western Civilization, 3 hours each term.
 Hst 207, 208. England and the British Empire, 3 hours } Hst 207, 208, 209 constitute
 fall and winter terms. } a year sequence.
 Hst 209. The World Since 1914, 3 hours spring term.

Political Science

- PS 201, 202, 203. Modern Governments, 4 hours each term.

Psychology

- Psy 201, 202, 203. Elementary Psychology, 3 hours each term.
 Psy 204, 205, 206. Elementary Psychology Laboratory, 1 hour each term.

Sociology

- Soc 201, 202, 203. Elements of Sociology, 3 hours each term.

Other Lower-Division Courses

In addition to the courses applicable in meeting group requirements, the following lower-division courses in liberal arts and sciences are offered at the State College. Descriptions of the courses are printed under the several departmental headings.

LANGUAGE AND LITERATURE**English****LITERATURE**

- Eng 161. American Literature, 3 hours fall or spring term.
 Eng 231. Directed Recreational Reading, 1 or 2 hours any term.
 Eng 261, 262, Individual Authors, 3 hours fall term.
 Eng 263. Great Books, 3 hours winter term.
 Eng 264, 265, 266. Continental European Literature, 3 hours each term.
 Eng 271, 272, 273. Contemporary Literature, 3 hours each term.
 Eng 274. The Short Story, 3 hours spring term.
 Eng 275. The Bible as Literature, 3 hours spring term.
 Eng 276. The Novel, 3 hours winter term.

WRITTEN ENGLISH

- Eng K. A one-term course for students failing to pass the English Placement examination. One hour fall or winter term.
 Eng 111, 112, 113. English Composition, 3 hours each term.
 Eng 118. Technical Report Writing, 3 hours spring term.
 Eng 211. Essay Writing, 3 hours fall term.
 Eng 213, 214, 215. Short Story Writing, 2 hours each term.
 Eng 217. Business English, 3 hours any term.
 Eng 218. Advanced Composition, 3 hours winter term.

SPEECH

- Sp 111, 112, 113. Extempore Speaking, 3 hours each term.
 Sp 120. Voice and Diction, 3 hours spring term.
 Sp 211, 212, 213. Oratory Squad, 2 hours each term.
 Sp 214, 215, 216. Extempore Speaking Squad, 2 hours each term.
 Sp 217, 218, 219. Debating, 2 hours each term.
 Sp 220. Argumentation, 3 hours fall or spring term.
 Sp 221. Speech Composition, 3 hours fall term.
 Sp 222. The Extended Address, 3 hours spring term.
 Sp 231. Parliamentary Procedure, 3 hours spring term.
 Sp 234, 235, 236. Radio Speaking, 3 hours each term.
 Sp 250. Speech Defects, 3 hours spring term.

DRAMA

- Sp 121. Interpretation I, 3 hours any term.
 Sp 122. Interpretation II, 3 hours any term.
 Sp 123. Interpretation III, 3 hours spring term.
 Sp 244. Stagecraft and Lighting, 3 hours any term.
 Sp 247, 248, 249. Community Drama, 3 hours each term.
 Sp 251. Workshop Theater Players, 1 to 3 hours any term.

Modern Languages**GERMAN**

- Ger 1, 2, 3. First-Year German, 4 hours each term.
 Ger 4, 5, 6. Second-Year German, 4 hours each term.

FRENCH

- RL 1, 2, 3. First-Year French, 4 hours each term.
 RL 4, 5, 6. Second-Year French, 4 hours each term.
 RL 211, 212, 213. Directed Reading in French, 1 hour each term.

SPANISH

- RL 11, 12, 13. First-Year Spanish, 4 hours each term.
 RL 14, 15, 16. Second-Year Spanish, 4 hours each term.
 RL 214, 215, 216. Directed Reading in Spanish, 1 hour each term.

SCIENCE

Bacteriology

- Bac 230. Principles of Bacteriology, 3 hours spring term.

Chemistry

- Ch 121. Elements of Organic Chemistry, 4 hours spring term.
 Ch 130. Descriptive General Chemistry, 3 hours spring term.
 Ch 226, 227. Organic Chemistry, 5 hours fall and winter terms.
 Ch 230. Elementary Qualitative Analysis, 3 hours spring term.
 Ch 231, 232. Quantitative Analysis, 4 or 5 hours winter and spring terms.
 Ch 233. Advanced Qualitative Analysis, 4 or 5 hours fall term.
 Ch 250. Elements of Biochemistry, 3 hours fall term.
 Ch 251, 252, 253. Organic and Agricultural Biochemistry, 5 hours each term.

Entomology

- Ent 211. Principles of Economic Entomology, 3 hours fall or winter term.
 Ent 223. Elementary Entomology, 2 hours winter term.
 Ent 234. Entomology for Engineers, 2 hours fall or spring term.
 Ent 235. Practical Bee Culture, 2 hours spring term.

Geology

- G 280, 281, 282. Introduction to Field Geology, 1 or 2 hours each term.

Mathematics

- Mth 10. Elementary Algebra, 4 hours one term.
 Mth 20. Elementary Geometry, 4 hours one term.
 Mth 221, 222. Introduction to Calculus, 4 hours two terms.

Nursing Education

- Nur 211, 212, 213. Backgrounds of Nursing, 3 hours each term.

Physics

- Ph 111, 112, 113. Engineering Physics, 3 hours each term.
 Ph 161. Rudiments of Photography, 2 hours any term.
 Ph 211, 212. Qualitative Physics, 3 hours fall and winter terms.
 Ph 214. Household Physics, 3 hours winter term.

Zoology

- Z 130. Principles of Zoology, 3 hours spring term.
 Z 211. Elementary Human Physiology, 5 hours spring term.

SOCIAL SCIENCE

Economics

- Ec 211. Outlines of Economics, 4 hours any term.
 Ec 212. Outlines of Economics, 3 hours any term.

History

- Hst 224, 225, 226. History of American Civilization, 3 hours each term.

Philosophy

- Phl 211, 212, 213. Practical Life Philosophies, 2 hours each term.

Political Science

- PS 212. American National Government, 3 hours any term.
 PS 231, 232, 233. Current Affairs, 2 hours each term.

Psychology

- Psy 111. Mental Hygiene, 3 hours any term. (No credit allowed to students who have taken Ed 101).
 Psy 112, 113, 114. Introduction to Reflective Thinking, 3 hours each term.
 Psy 211. Outlines of Psychology, 6 hours any term.
 Psy 212, 213, 214. Logic, 3 hours each term.

Sociology

- Soc 211. General Sociology, 4 hours any term.
 Soc 212. General Sociology, 3 hours any term.

Lower-Division Curriculum

Junior Certificate Junior Certificate with Honors Privileges Lower-Division Certificate

	Term hours		
	F	W	S
Freshman Year			
Year sequence in any one of the three groups.....	3-4	3-4	3-4
Year sequence in another of the three groups (may be deferred until sophomore year).....	3-4	3-4	3-4
English Composition (Eng 111, 112, 113).....	3	3	3
Military Science and Tactics (men).....	1	1	1
¹ Physical Education.....	1	1	1
² Departmental or school requirements or exploratory electives.....	5-3	5-3	5-3
	16	16	16
Sophomore Year			
Sophomore year sequence in one of the groups begun in the freshman year.....	3-4	3-4	3-4
Year sequence in a third group.....	3-4	3-4	3-4
Military Science and Tactics (men).....	1	1	1
Physical Education.....	1	1	1
² Departmental or school requirement or exploratory electives.....	8-6	8-6	8-6
	16	16	16

¹General Hygiene (PE 150), 2 term hours, must be taken in place of physical education one term of the freshman year. Women take Social Ethics (PE 131) in addition to physical education one term of the freshman year.

²Chosen with the approval of the Dean of the Lower Division. If one of the year sequences in group requirements is deferred to the sophomore year, the opportunity for school requirements or electives is correspondingly increased. The electives may well be used for fulfilling requirements in a third group.

School of Science

Faculty

EARL LEROY PACKARD, Ph.D., Dean of the School of Science; Director of the Institute of Marine Biology.

GLADYS LEIBBRAND, Secretary to the Dean.

*General Science**

WILLIAM DONALD WILKINSON, Ph.D., Assistant Professor of Geology.

FRANK HERSCHEL SMITH, Ph.D., Instructor in Botany.

BANNER BILL MORGAN, B. S., Graduate Assistant in Biological Science.

MAURICE JOHN MUNDORFF, B.S., Graduate Assistant in Physical Science.

Bacteriology

GODFREY VERNON COPSON, M.S., Professor of Bacteriology; Head of Department.

CLAIR VAN NORMAN LANGTON, Dr.P.H., Professor of Hygiene.

JOSEPH ELLSWORTH SIMMONS, M.S., Associate Professor of Bacteriology.

HENRIETTA MORRIS, Sc.D., Associate Professor of Hygiene.

WALTER BENO BOLLEN, Ph.D., Associate Professor of Bacteriology.

NOEL HARDEN GROSS, M.A., Instructor in Bacteriology.

Botany

CHARLES ELMER OWENS, Ph.D., Professor of Botany and Plant Pathology; Head of Department.

WINFRED MCKENZIE ATWOOD, Ph.D., Professor of Plant Physiology.

WILLIAM EVANS LAWRENCE, B.S., Associate Professor of Plant Ecology.

HELEN MARGARET GILKEY, Ph.D., Associate Professor of Botany; Curator of Herbarium.

ETHEL IDA SANBORN, Ph.D., Associate Professor of Botany.

DONALD PHILIP ROGERS, Ph.D., Instructor in Botany.

FRANK HERSCHEL SMITH, Ph.D., Instructor in Botany.

GARLAND MARIE POWELL, M.S., Assistant Curator of Herbarium.

WALTER THOMAS LUND, M.S., Instructor-Technician in Botany.

LEROY EUGENE WEAVER, B.S., Graduate Assistant in Botany.

HOWARD RAY YOUSE, A.B., Graduate Assistant in Botany.

Chemistry

JOHN FULTON, M.S., Professor of Chemistry; Head of Department.

EARL C GILBERT, Ph.D., Professor of Physical Chemistry.

J SHIRLEY JONES, M.S.A., Professor of Agricultural Chemistry.

*The Department of General Science is in general charge of a committee composed of the heads of the departments, with a chairman in immediate charge.

ROGER JOHN WILLIAMS, Ph.D., D.Sc., Professor of Chemistry.
JOSEPH PARKE MEHLIG, Ph.D., Associate Professor of Analytical Chemistry.
WILLIAM ELMER CALDWELL, Ph.D., Assistant Professor of Chemistry.
LEO FRIEDMAN, Ph.D., Assistant Professor of Chemistry.
CHARLES S PEASE, Ph.D., Assistant Professor of Organic Chemistry.
BERT EINAR CHRISTENSEN, Ph.D., Assistant Professor of Chemistry.
GLEN CHASE WARE, M.S., Instructor in Chemistry.
EDWARD CLEVELAND CALLAWAY, M.S., Instructor in Chemistry.
JAMES WILLIAMS FERGUSON, Ph.D., Instructor in Chemistry.
CURTIS ERDMUND MEYER, Ph.D., Research Associate in Chemistry.
HARRY HERSHEL WEINSTOCK, JR., Ph.D., Research Associate in Chemistry.
MAX MARK BOCEK, B.S., Research Scholar in Chemistry.
DONALD ERICKSON, A.B., Research Scholar in Chemistry.
ALBERT MARION HUGHES, B.A., Research Scholar in Chemistry.
SUE ROBBINS STANBERY, B.S., Graduate Research Assistant in Biochemistry.
ANNE KING STOUT, B.S., Graduate Research Assistant in Biochemistry.
CLARENCE IRWIN GIBBON, B.S., Graduate Assistant in Chemistry.
THOMAS PARKER MARSH, B.S., Graduate Assistant in Chemistry.
JOHN BENJAMIN STARK, B.S., Graduate Assistant in Chemistry.
FRANK KOEHLER THOMPSON, A.B., Graduate Assistant in Chemistry.
VERNON HENDRUM CHELDELIN, B.A., Graduate Assistant in Chemistry.
ROBERT EDWARD EAKIN, B.S., Research Assistant in Biochemistry.
HOWARD WENDELL KRUSE, B.A., Graduate Assistant in Chemistry.
WILLIAM MYRON MCKEE, B.S., Graduate Assistant in Chemistry.
KENNETH NEIL MCLEOD, B.S., Graduate Assistant in Chemistry.
HARRY MOSHER, B.S., Graduate Assistant in Chemistry.
ERNEST FAY PRATT, B.A., Graduate Assistant in Chemistry.
JOSEPH BERNARD SPULNIK, B.S., Graduate Assistant in Chemistry.
LLOYD EUGENE VAN BLARICOM, B.S., Graduate Assistant in Chemistry.
MELFORD ALLAN WOODS, B.S., Graduate Assistant in Chemistry.

Entomology

DON CARLOS MOTE, Ph.D., Professor of Entomology; Head of Department.
WILLARD JOSEPH CHAMBERLIN, Ph.D., Associate Professor of Entomology.
HERMAN AUSTIN SCULLEN, Ph.D., Associate Professor of Entomology.
JOHN EMERSON DAVIS, B.S., Graduate Assistant in Entomology.

Geology

EARL LEROY PACKARD, Ph.D., Professor of Geology; Head of Department.
EDWIN THOMAS HODGE, Ph.D., Professor of Economic Geology.
IRA SHIMMIN ALLISON, Ph.D., Professor of Geology.
WILLIAM DONALD WILKINSON, Ph.D., Assistant Professor of Geology.

Mathematics

WILLIAM EDMUND MILNE, Ph.D., Professor of Mathematics; Head of Department.

CHARLES LESLIE JOHNSON, B.S., Professor of Mathematics.

EDWARD HIRAM MCALISTER, A.M., D.Sc., Professor Emeritus of Mathematics.

EDWARD BENJAMIN BEATY, M.A., Professor of Mathematics.

NICHOLAS TARTAR, B.S., Associate Professor Emeritus of Mathematics.

HARRY LYNDEN BEARD, M.A., Assistant Professor of Mathematics.

JOHN ALBERT VAN GROOS, M.S., Assistant Professor of Mathematics.

GEORGE ALFRED WILLIAMS, A.M., Assistant Professor of Mathematics.

*WILLIAM JOHN KIRKHAM, Ph.D., Assistant Professor of Mathematics.

ORVILLE GOODWIN HARROLD, JR., Ph.D., Instructor in Mathematics.

PAUL GERHARD HOEL, Ph.D., Instructor in Mathematics.

HENRY SCHEFFÉ, Ph.D., Instructor in Mathematics.

ROY HAROLD LIEN, B.A., Graduate Assistant in Mathematics.

C GORDON MORRIS, A.B., Graduate Assistant in Mathematics.

Nursing Education

†ELNORA ELVIRA THOMSON, R.N., Professor of Nursing Education; Director of Department.

*†RUTH VEE WHEELOCK, M.A., R.N., Associate Professor of Nursing Education.

†C JEANETTE OSWALD, M.A., R.N., Associate Professor of Nursing Education.

Physics

WILLIBALD WENIGER, Ph.D., Professor of Physics; Head of Department.

WILLIAM PINGRY BOYNTON, Ph.D., D.Sc., Professor Emeritus of Physics.

WILLIAM BALLANTYNE ANDERSON, Ph.D., Professor of Physics.

FRED BUCKNER MORGAN, M.S., Assistant Professor of Physics.

*EDWIN ARTHUR YUNKER, Ph.M., Assistant Professor of Physics.

JOHN CLIFTON GARMAN, Ph.M., Assistant Professor of Physics.

WILLIAM ROY VARNER, M.S., E.E., Assistant Professor of Physics.

JAMES JOSEPH BRADY, Ph.D., Assistant Professor of Physics.

WILLIAM CURTIS REID, M.S., Instructor in Physics.

DUIS BOLINGER, B.S., Graduate Assistant in Physics.

WILLIAM HICKMAN MOORE, B.A., Graduate Assistant in Physics.

CYRIL FELDSTEIN, B.S., Graduate Assistant in Physics.

CHUNG KWAI LUI, M.S., Part-time Graduate Assistant in Physics.

Zoology

NATHAN FASTEN, Ph.D., Professor of Zoology; Head of Department.

KENNETH LLEWELLYN GORDON, Ph.D., Assistant Professor of Zoology.

ROSALIND WULZEN, Ph.D., Assistant Professor of Zoology.

JOHN LYNN OSBORN, A.M., Assistant Professor of Zoology.

EDITH HANSEN, M.A., Instructor in Zoology.

ALFRED TAYLOR, Ph.D., Instructor in Zoology.

*On leave of absence.

†Members of the faculty of the Department of Nursing Education, University of Oregon Medical School, Portland.

General Statement

ALL major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in the biological and physical sciences, including mathematics, is centered in the School of Science at the State College.

The School of Science performs a threefold function. It provides major curricula in science for students whose objective is a liberal education and who proceed to a degree of Bachelor of Arts or Bachelor of Science. In the second place, the School of Science provides professional preparation for students planning to enter some scholarly occupation in the realm of science, and who therefore take both an undergraduate science major and from one to three or more years of graduate study in science. In the third place, the School of Science provides elective and service courses for students majoring in other schools, or those interested in science who require it as a basis for technical or professional work in other allied schools.

Training in science is afforded students preparing for science teaching in secondary schools or in institutions of higher education; for positions in which a knowledge of science is fundamental for research, or for professional work in science or in its many applications to modern civilization.

The instruction in the first two years is made as broad and liberalizing as possible, laying a solid foundation for upper-division and graduate work in the various fields of science and affording preparation in basic sciences underlying the work of technical and professional schools.

Requirements for Admission

STUDENTS entering as freshmen with the definite intention of specializing in science or mathematics or of preparing to enter a medical school, register in the Lower Division for the first two years, designating Science as their "group" of principal interest. The student's aim in the Lower Division is to obtain a broad general education and to determine upon a field in which he desires to major.

Junior Certificate Required for Entrance. Students must obtain a Junior Certificate before admission to the School of Science. The requirements for this certificate may be briefly summarized as follows: The student must complete at least 93 term hours, with a minimum grade-point average of 2.00; must satisfy the English composition, military, and physical education requirements; and must complete the group requirements in language and literature, social science, and science. A student who has not fulfilled all Lower-Division requirements but has completed two years of college work (95 term hours or more) may be conditionally admitted to the School of Science, in which case he is responsible to the Lower Division for the completion of the Junior Certificate requirements.

Preparation for Specialization. The science advisers, representing the different departments in which upper-division students may major, help students in the Lower Division in the selection of specific courses prerequisite to major work. In the science curricula (pages 115-122), suggested lower-division curricula are included, designed to aid students in meeting the requirements for a Junior Certificate and in the selection of those courses which will best prepare for majoring in a given science.

Requirements for Graduation

BACCALAUREATE and advanced degrees are offered by the School of Science in all the science departments, including Bacteriology, Botany, Chemistry, Entomology, Geology, Mathematics, Physics, and Zoology. The bachelor's and master's degrees are also offered in General Science.

Baccalaureate Degrees. A student may be granted the degree of Bachelor of Arts or Bachelor of Science by meeting the institutional requirements for the respective degree and completing 192 term hours, of which 45 must be in upper-division work and of these at least 24 must be in a major department. Curricula have been so planned that students are enabled to follow their own interests outside the School of Science while obtaining adequate training in science, including preparation for graduate work leading to advanced degrees.

Advanced Degrees. Through the Graduate Division graduate work is offered leading to the degrees of Master of Arts and Master of Science in each of the science departments, and to the degree of Doctor of Philosophy in the departments of Botany, Chemistry, Geology, Mathematics, Physics, and Zoology. For the requirements for the M.A., M.S., and Ph.D. degrees see GRADUATE DIVISION.

Facilities

MATERIAL facilities for the work of the School of Science include the various laboratories equipped for instruction and research in science. The biological science laboratories are located in Agriculture Hall. The Department of Mathematics occupies the third floor of the adjacent Dairy Building. The physical science laboratories are located in Science Hall, the Physics Building, and the Mines Building. Important adjuncts to the instruction in physics are radio station KOAC and the Photographic Service, both located in the Physics Building.

Oregon affords an almost unlimited region for field studies in plants, animals, and geological materials, thus offering many interesting research problems for advanced and graduate students.

Scientific Collections. In addition to the usual laboratory equipment available in each department, mention should be made of the Herbarium, consisting of 80,000 plants, a collection of insects numbering more than 80,000 specimens, a collection of representative birds of Oregon, and extensive collections of invertebrate fossils and igneous rocks of Oregon. See MUSEUMS AND COLLECTIONS.

Oregon Institute of Marine Biology. The Oregon Institute of Marine Biology, established for undergraduate and graduate study and research work in marine biology, is administered under an executive committee of which the Dean of the School of Science is chairman. The marine laboratory is being developed as a significant factor in science instruction and research throughout the State System of Higher Education.

Curricula in Science

ASAN aid to students in meeting the requirements in the various departments and divisions, curricula are outlined for undergraduate students majoring in general science or in one of the special sciences and for students preparing to study medicine or nursing. In connection with the

various major curricula, suggested programs for the freshman and sophomore years are presented for students in the Lower Division interested in science. Students' programs of study at the graduate level are worked out in accordance with the regulations of the Graduate Division.

Major Curricula

Departmental Majors. Curricula covering the work required for the degree of Bachelor of Arts or Bachelor of Science have been developed for the divisions of the School of Science. The curricula as outlined are designed to show the student the most satisfactory sequence of courses leading to a degree and to indicate the minimum courses required for a major in a given department. Each curriculum permits election of at least one-half of a student's work outside of the School of Science, thus enabling the student to obtain a broad college education even though he may be preparing for specialized work in some field of science. The electives in these curricula should be utilized to meet a definite objective rather than as an easy way of accumulating credit for graduation. By careful planning of the use of these electives a student may attain a definite objective whether that be broad general education, preparation for advanced and graduate work in a specialized field of science, or training for a definite position depending upon science. The undergraduate departmental curricula are printed on pages 116-121.

Within or in addition to the undergraduate curricula outlined, the School of Science offers opportunity for specialization in the various branches or divisions of the several biological and physical sciences and mathematics. An advanced student having interest in one of these fields may make progress toward the attainment of such a goal by the proper selection of course offerings in science or in allied professional and technical schools. In certain fields only limited offerings are now listed, but in such cases additional work may be taken by utilization of the 401-407 and 501-507 courses, providing for individual study. Professional specialization in a field requires from one to three or more years of graduate study.

In biology a student may emphasize, for example, anatomy or physiology, ecology or genetics, hygiene or parasitology, morphology or taxonomy, and through advanced study may become an anatomist or physiologist, ecologist or geneticist, sanitarian or parasitologist, morphologist or taxonomist.

In the physical sciences a student may emphasize one of the many divisions of chemistry, such as physical chemistry, physiological chemistry, or industrial chemistry. If more interested in physics, he may perhaps wish to specialize in astronomy, acoustics, cosmogony, electron physics, meteorology, optics, photography, radio, or X-rays. In geology training can be obtained in such specialized fields as petroleum geology, ore deposits, and economic geology.

In mathematics he may select such fields as statistics, hydrodynamics, mechanics, and many other specialized fields. Advanced mathematics is an essential element in specialization in certain fields of science.

For students interested in fields involving two or more sciences—as for example, biochemistry, biophysics, geophysics, paleobiology, seismology—special curricula may be outlined and the work supervised jointly by the departments concerned. Where the student's chosen field involves an applied field as well as science, he may elect one or more minors in a professional school.

General Science Major. A major undergraduate administrative division of general science has been organized to meet the needs of students whose

scholarly interests are predominantly scientific, but whose needs are not met by a major curriculum in one of the special sciences. These students include those desiring general education with major attention to the field of science; prospective teachers of high-school science, who must be adequately prepared in a considerable range of high-school subjects; and prospective specialists in a border-line field between two or more sciences.

To meet the needs of such students a rather flexible curriculum has been authorized, the courses being selected from the offerings of the various departments. A committee representing the larger general fields of science administers the general science curriculum and is responsible for the advising of students majoring in this division. The curriculum in General Science is printed on pages 115-116.

Science Teaching. Students may prepare to teach science in the secondary schools by majoring either in General Science or in a specified science and fulfilling the requirements for a State Teacher's Certificate. Under SCHOOL OF EDUCATION are printed the state certification requirements, together with approved major and minor norms in biological sciences, general science, mathematics, and physical sciences.

Students interested in health education will find courses covering a wide range of fields offered in the School of Science; in the Schools of Agriculture, Education, Engineering, and Home Economics; and in the Division of Physical Education. A student can utilize such courses in the School of Science toward a degree in General Science, electing from the other schools such work as most closely meets his requirements.

Premedical Curriculum

The University of Oregon Medical School, one of the six units in the State System of Higher Education, is located in Portland. It was established in 1887 and since 1913 has been the sole medical school in the Pacific Northwest. The Medical School, which is rated Class A by the American Medical Association, offers a four-year professional curriculum in medicine (M.D. degree), following a three-year preparatory medical curriculum. The curriculum in medicine thus comprises a total of seven years beyond the high school. The number of students admitted to the Medical School each year is limited. In addition to the work in medicine, the Department of Nursing Education, as an integral part of the Medical School, offers education for the professional field of nursing.

A premedical curriculum is offered at both the State College and the University. At each institution students pursuing this curriculum work under the supervision of a special faculty Advisory Committee to insure a selection of studies which will satisfy the entrance requirements of the University of Oregon Medical School, and the cultural needs of students planning to enter the profession of medicine. At the State College the chairman of this committee is Professor Nathan Fasten.

Courses prescribed by the American Medical Association for entrance to standard medical schools are offered by both the State College and the University. The University of Oregon Medical School requires for admission at least three years of preparatory work. The Medical School recommends that the student, in his preparatory work, plan a balance in elective courses between courses in liberal arts and courses (beyond the minimum requirements) in subjects required for admission to the Medical School.

For entrance to standard medical schools the student must not only complete certain prescribed work but also show an aptitude for medical

studies. The medical aptitude test of the Association of American Medical Colleges is given during the fall term of each year by the Premedical Advisory Committee to all students who expect to apply during the academic year for admission to a medical school. Further knowledge of the student's ability is obtained by frequent conferences between the student and his instructors and authorized advisers.

To meet the requirements for the Junior Certificate and to obtain a bachelor's degree (B.A. or B.S.) at the State College or at the University at the end of the first year at the Medical School, the student should select a major in the School of Science at the State College or in the College of Arts and Letters or the College of Social Science at the University. His choice of a major must be approved by the Advisory Committee. In order to meet the requirements for a bachelor's degree the student must satisfy in the lower-division and junior years all requirements for the degree except those that may be met at the University of Oregon Medical School. The upper-division course requirements for a major must be approved by the Advisory Committee and the student's major dean before he enters the Medical School.

A student may meet the requirements for a major in science in the first year in the University of Oregon Medical School, in which case he may elect a more liberal program in nonscience subjects. At the close of his first year in Medical School he receives the bachelor's degree from the School of Science.

The Premedical Curriculum, recommended as meeting the needs of the majority of students preparing for entrance to the Medical School, is printed on pages 121-122.

Preparatory Nursing Curricula

Nursing affords many opportunities for a woman who is well prepared. The Department of Nursing Education of the University of Oregon Medical School offers a five-year curriculum that leads to the Bachelor of Arts degree and to a certificate in a nursing specialty, and prepares for state examinations for nurse registration; and a four-year curriculum that leads to the Bachelor of Science degree and prepares for state examinations for nurse registration. Students completing either curriculum receive the bachelor's degree (B.A. or B.S.) from the State College or the University.

The four-year curriculum may be discontinued at the close of the year 1937-38. The Preparatory Nursing curricula are printed on page 122.

Five-Year Curriculum. The five-year program is the preferred curriculum. The student in this curriculum takes her first two years of work at Oregon State College at Corvallis or at the University of Oregon at Eugene. This is followed by three years of work in the Department of Nursing Education on the campus of the Medical School in Portland. The work in Portland is coordinated with practice in the Multnomah County Hospital and in the Doernbecher Memorial Hospital for Children, both located on the Medical School campus. In the fifth or senior year of the curriculum the student receives training in a nursing specialty.

Four-Year Curriculum. The student in the four-year curriculum takes one year of work at the State College or the University, followed by three years of work in the Department of Nursing Education at the Medical School, with a coordinated program of training in the Multnomah County Hospital and the Doernbecher Memorial Hospital for Children.

Undergraduate Curricula

B.A., B.S. Degrees

*Suggested Lower-Division Curriculum
Curriculum in General Science
Curricula in Special Sciences
Preparatory Medical and Nursing Curricula*

General Notes

All students in science curricula should observe carefully the following notes:

- The maximum number of term hours required within the School of Science does not exceed 90 in any major curriculum. The maximum number of hours required for a major in any department is 54. The student thus has liberal opportunity to obtain broad training in other fields as well as science.
- In the freshman year General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education. Women take Social Ethics (PE 131) one term.
- Students expecting to meet the language requirements for a B.A. degree or to obtain a reading knowledge of German or French in preparation for graduate work may elect a language in the freshman and sophomore years. If two years of German or French are elected in the freshman and sophomore years, the completion of the group requirement in either Language and Literature or Social Science may be postponed until the junior year. Students expecting to major in chemistry or physics may similarly postpone two groups.
- For state teacher's certificate 6 hours of psychology should be elected in the sophomore year as it is prerequisite to upper-division courses in education. Psy 211 meets this requirement. Psy 201, 202, 203 also meets the Social Science group requirement.
- Students wishing to qualify for a state teacher's certificate should elect 12 term hours in prescribed education courses in the junior year, at least 11 term hours in the senior year, and 9 term hours in the first term of the graduate year.

Suggested Curriculum for Lower-Division Students Interested in Science¹

	Term hours		
	F	W	S
Freshman Year			
Year sequence in any one of the three groups.....	3-4	3-4	3-4
Year sequence in another of the three groups (may be deferred until sophomore year) and/or electives.....	0-3	0-3	0-3
English Composition (Eng 111, 112, 113).....	3	3	3
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
Two courses in Physical or Biological Science or exploratory electives.....	6-9	6-9	6-9
	14-18	14-18	14-18
Sophomore Year			
Sophomore year sequence in one of the groups begun in the freshman year.....	3-4	3-4	3-4
Year sequence in a third group and/or electives.....	3-6	3-6	3-6
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
Two courses in Physical or Biological Science or exploratory electives.....	6-9	6-9	6-9
	14-18	14-18	14-18

Curriculum in General Science¹

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year			
Group requirement in Social Science or Language and Literature.....	3	3	3
Group requirement in Science.....	3-5	3-5	3-5
English Composition (Eng 111, 112, 113).....	3	3	3
Military Science (men).....	1	1	1
² Unified Mathematics (Mth 101, 102, 103).....	4	4	4
Physical Education.....	1	1	1
	15-17	15-17	15-17

¹See GENERAL NOTES above.

²Upon approval of the Dean other work in science or mathematics may be substituted for Mth 101, 102, 103.

	Sophomore Year		
	Term hours		
	F	W	S
Group requirement in Social Science or Language and Literature.....	3	3	3
Two year sequences in Science.....	6-10	6-10	6-10
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
¹ Electives.....	4-2	4-2	4-2
	15-17	15-17	15-17
UPPER-DIVISION MAJOR CURRICULUM			
Junior Year			
² Upper-division Science.....	5-7	5-7	5-7
³ History of Science (GS 411, 412, 413).....	2	2	2
¹ Electives.....	8	8	8
	15-17	15-17	15-17
Senior Year			
² Upper-division Science.....	2	2	2
³ Classics of Science (GS 421, 422, 423).....	2	2	2
¹ Electives.....	11-13	11-13	11-13
	15-17	15-17	15-17

Curricula in Special Sciences

Bacteriology *Geology*
Botany *Mathematics*
Chemistry *Physics*
Entomology *Zoology*

BACTERIOLOGY⁴

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year			
Group requirement in Social Science or Language and Literature.....	3	3	3
General Zoology (Z 201, 202, 203).....	3	3	3
English Composition (Eng 111, 112, 113).....	3	3	3
General Chemistry (Ch 204, 205, 206).....	5	5	5
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
	16	16	16
Sophomore Year			
⁶ General Bacteriology (Bac 204, 205, 206).....	3	3	3
Group requirement in Language and Literature or Social Science.....	3	3	3
General Physics (Ph 201, 202, 203).....	4	4	4
Organic Chemistry (Ch 226, 227).....	5	5	5
Elementary Physical Chemistry (Ch 340).....	---	---	3
Electives.....	---	---	2
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
	17	17	17
UPPER-DIVISION MAJOR CURRICULUM			
Junior Year			
Systematic Bacteriology (Bac 321).....	3	---	---
Systematic Bacteriology Laboratory (Bac 324).....	2	---	---
Physiology of Bacteria (Bac 451, 452).....	---	3	3
Physiology of Bacteria Laboratory (Bac 454, 455).....	---	2	2
Physiological Chemistry (Ch 330, 331).....	---	2	3
Electives.....	10	8	7
	15	15	15
Senior Year			
Bacteriological Technique (Bac 341).....	3	---	---
Bacteriological Problems (Bac 432, 433).....	---	5	5
Seminar (Bac 407).....	1	1	1
Electives.....	11	9	9
	15	15	15

¹The electives may include courses in health education leading to special training in that field.

²These courses should be in fields related to work taken in the Lower Division, and must include one year-sequence. G 330, 331, 332, G 340, 341, and Bot 410 apply as either biological or physical science.

³GS 411, 412, 413 and GS 421, 422, 423 are offered alternate years. Students take one sequence in the junior year and the other in the senior year.

⁴See GENERAL NOTES on page 115.

⁵Or Bac 204, 332, 333.

BOTANY¹

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year

	Term hours		
	F	W	S
Group requirement in Language and Literature or Social Science.....	3	3	3
General Botany (Bot 201, 202, 203).....	3	3	3
English Composition (Eng 111, 112, 113).....	3	3	3
² Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
Electives.....	3	3	3
	17	17	17

Sophomore Year

Group requirement in Social Science or Language and Literature.....	3	3	3
The Lower Plants (Bot 311).....	4	---	---
The Higher Plants (Bot 312).....	---	4	---
Systematic Botany (Bot 313).....	---	---	4
General Zoology (Z 201, 202, 203).....	3	3	3
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
	16	16	16

UPPER-DIVISION MAJOR CURRICULUM

Junior Year

Principles of Plant Pathology (Bot 351).....	4	---	---
Principles of Plant Ecology (Bot 341).....	---	4	---
Principles of Plant Physiology (Bot 331).....	---	---	4
General Physics (Ph 201, 202, 203).....	4	4	4
³ Electives.....	8	8	8
	16	16	16

Senior Year

Microtechnique (Bot 472).....	---	3	---
Seminar (Bot 407).....	1	1	1
Geology (G 201, 202, 203).....	3	3	3
Electives.....	11	8	11
	15	15	15

CHEMISTRY¹

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year

Group requirement in Language and Literature or Social Science.....	3	3	3
General Chemistry (Ch 204, 205, 206).....	5	5	5
English Composition (Eng 111, 112, 113).....	3	3	3
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
	17	17	17

Sophomore Year

Quantitative Analysis (Ch 232, 233).....	---	5	5
Advanced Qualitative Analysis (Ch 231).....	5	---	---
Group requirement in Language and Literature or Social Science.....	3	3	3
General Physics (Ph 201, 202, 203).....	4	4	4
Differential and Integral Calculus (Mth 201, 202, 203).....	4	4	4
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
	18	18	18

¹See GENERAL NOTES on page 115.²Students interested in physiological and chemical aspects of plant life should take Ch 204, 205, 206 and elect Ch 226, 227, and 340, or their equivalent as early as convenient.³Students majoring in botany should elect work in bacteriology and entomology and, if possible, advanced work in the botanical field of chief interest. Hrt 311 is advised for second term of junior or senior year.

UPPER-DIVISION MAJOR CURRICULUM

	Term hours		
	F	W	S
Junior Year			
¹ Organic Chemistry (Ch 430, 431, 432).....	4	4	4
¹ Physical Chemistry (Ch 440, 441, 442).....	4	4	4
² Electives	8	8	8
	16	16	16
Senior Year			
Electives	13	13	13

ENTOMOLOGY³

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year			
Group requirement in Language and Literature or Social Science.....	3	3	3
General Entomology (Ent 201, 202, 203).....	3	3	3
General Zoology (Z 201, 202, 203).....	3	3	3
English Composition (Eng 111, 112, 113).....	3	3	3
⁴ Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
Military Science (men).....	1	1	1
Physical Education	1	1	1
	17	17	17
Sophomore Year			
Insect Morphology (Ent 351).....	3	---	---
Principles of Economic Entomology (Ent 211).....	---	3	---
Practical Bee Culture (Ent 235).....	---	---	2
Practical Bee Culture Laboratory (Ent 236).....	---	---	1
Principles of Forest Entomology (Ent 321).....	3	---	---
General Botany (Bot 201, 202, 203).....	3	3	3
Military Science (men).....	1	1	1
Physical Education	1	1	1
Electives or Group Requirement	6	9	9
	17	17	17

UPPER-DIVISION MAJOR CURRICULUM

Junior Year			
Economic Entomology (Ent 411, 412, 413).....	3	3	3
Insect Taxonomy (Ent 451, 452, 453).....	3	3	3
Entomological Nomenclature and Literature (Ent 352).....	---	3	---
Historical Entomology (Ent 353).....	3	---	---
Principles of Plant Pathology (Bot 351).....	4	---	---
Elementary Bacteriology (Bac 201).....	---	3	---
⁴ Electives	3	3	9
	16	15	15
Senior Year			
Advanced Entomology (Ent 471, 472, 473).....	3	3	3
Entomological Field Work (Ent 311, 312, 313).....	2	2	2
Seminar (Ent 407)	1	1	1
⁴ Electives	9	9	9
	15	15	15

¹Both of these sequences need not be taken in the junior year.²Students interested in physiological or chemical aspects of applied entomology should elect more chemistry later. A course in General Physics also is advised.³See GENERAL NOTES on page 115. Students planning to major in Forest Entomology should confer with Dr. W. J. Chamberlin, Forest Entomologist.⁴Students interested in the statistical phases of applied entomology should elect Unified Mathematics and Statistical Methods. Prospective professional entomologists should elect Ch 121, 250, and 340, or their equivalent as early as convenient. Students majoring in entomology should also elect courses in geology.

GEOLOGY¹

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year

	Term hours		
	F	W	S
Group requirement in Language and Literature or Social Science.....	3	3	3
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
English Composition (Eng 111, 112, 113).....	3	3	3
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
	15	15	15

Sophomore Year

Geology (G 201, 202, 203).....	3	3	3
Geology Laboratory (G 204, 205, 206).....	1	1	1
Group requirement in Language and Literature or Social Science.....	3	3	3
Military Science (men).....	1	1	1
Physics or Zoology.....	4	4	4
Physical Education.....	1	1	1
Electives.....	3-4	3-4	3-4
	16-17	16-17	16-17

UPPER-DIVISION MAJOR CURRICULUM

Junior Year

Mineralogy (G 312, 313, 314).....	4	4	4
² Structural Geology (G 321) or Physiography (G 322).....	4	4 or 4	4
Stratigraphy (G 323).....	4	---	---
³ Invertebrate Paleontology (G 340, 341).....	4	4	---
Paleobotany (Bot 410).....	---	---	4
Electives.....	4	4-8	4-8
	16	16-18	16-18

Senior Year

Earth Materials (G 412, 413, 414).....	4	4	4
Electives.....	12	12	12
	16	16	16

MATHEMATICS¹

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year

Group requirement in Language and Literature or Social Science.....	3	3	3
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
English Composition (Eng 111, 112, 113).....	3	3	3
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
Electives.....	4	4	4
	16	16	16

Sophomore Year

Differential and Integral Calculus (Mth 201, 202, 203).....	4	4	4
Group requirement in Language and Literature or Social Science.....	3	3	3
Physical or Biological Science.....	3-4	3-4	3-4
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
Electives.....	3-4	3-4	3-4
	15-17	15-17	15-17

¹See GENERAL NOTES on page 115.²G 322 also serves as one of a sequence of elective junior courses of general interest to students expecting to teach or those majoring in general science. This series is G 322, 350, 352.³This is a technical sequence; the student having a general interest in paleontology would normally elect the sequence G 330, 331, 332.

UPPER-DIVISION MAJOR CURRICULUM

	Term hours		
	F	W	S
Junior Year			
Differential Equations (Mth 421, 422) and other upper-division mathematics courses	6	6	6
Physical or Biological Science	3-4	3-4	3-4
Electives	7	7	7
	16-17	16-17	16-17
Senior Year			
Upper-Division Mathematics	3	3	3
*Electives	13	13	13
	16	16	16

PHYSICS²

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year			
Group requirement in Language and Literature or Social Science	3	3	3
General Physics (Ph 201, 202, 203) or Engineering Physics (Ph 111, 112, 113)	4-3	4-3	4-3
Unified Mathematics (Mth 101, 102, 103)	4	4	4
English Composition (Eng 111, 112, 113)	3	3	3
Military Science (men)	1	1	1
Physical Education	1	1	1
	16-15	16-15	16-15
Sophomore Year			
Group requirement in Language and Literature or Social Science	3	3	3
Introduction to Modern Physics (Ph 311, 312, 313)	3	3	3
Differential and Integral Calculus (Mth 201, 202, 203)	4	4	4
General Chemistry (Ch 204, 205, 206) or Principles of Chemistry (Ch 201, 202, 203) or Elementary General Chemistry (Ch 101, 102, 103)	5-3	5-3	5-3
Military Science (men)	1	1	1
Physical Education	1	1	1
	17-15	17-15	17-15

UPPER-DIVISION MAJOR CURRICULUM

Junior Year			
Physical Measurements (Ph 321, 322, 323)	3	3	3
*Electives	12-14	12-14	12-14
	15-17	15-17	15-17
Senior Year			
Introduction to Theoretical Physics (Ph 421, 422, 423) or Radio Communication (Ph 331, 332, 333)	3	3	3
Thesis (Ph 403) or Reading and Conference (Ph 405) or Seminar (Ph 407)	1-3	1-3	1-3
*Electives	11-9	11-9	11-9
	17-15	17-15	17-15

ZOOLOGY²

SUGGESTED LOWER-DIVISION CURRICULUM

Freshman Year			
Group requirement in Language and Literature or Social Science	3	3	3
General Zoology (Z 201, 202, 203)	3	3	3
English Composition (Eng 111, 112, 113)	3	3	3
*Elementary General Chemistry (Ch 101, 102, 103)	3	3	3
Military Science (men)	1	1	1
Physical Education	1	1	1
Electives	3	3	3
	17	17	17

¹Includes supporting science courses for students planning graduate work in mathematics.

²See GENERAL NOTES on page 115.

³Suggestions: Mathematics, photography, modern languages, physics.

⁴Students interested in becoming professional zoologist take Ch 204, 205, 206.

	Term hours		
	F	W	S
Sophomore Year			
Group requirement in Social Science or Language and Literature.....	3	3	3
Vertebrate Zoology (Z 204, 205, 206).....	4	4	4
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
*Electives.....	4	4	4
	17	17	17
UPPER-DIVISION MAJOR CURRICULUM			
Junior Year			
Evolution and Eugenics (Z 314).....	3	---	---
Genetics (Z 315).....	---	3	---
Histology (Z 375).....	3	---	---
Microtechnique (Z 376).....	---	3	---
Embryology of Higher Vertebrates (Z 377).....	---	---	3
General Physics (Ph 201, 202, 203).....	4	4	4
*Electives.....	5	5	8
	15	15	15
Senior Year			
General Physiology (Z 411, 412, 413).....	3	3	3
Invertebrate Zoology (Z 431, 432).....	4	4	---
Electives.....	8	8	12
	15	15	15

Premedical and Nursing Education Curricula¹

PREMEDICAL CURRICULUM

SUGGESTED LOWER-DIVISION CURRICULUM

	Term hours		
	F	W	S
Freshman Year			
General Zoology (Z 201, 202, 203).....	3	3	3
English Composition (Eng 111, 112, 113).....	3	3	3
General Chemistry (Ch 204, 205, 206).....	5	5	5
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
*Electives.....	4	4	4
	17	17	17
Sophomore Year			
Vertebrate Zoology (Z 204, 205, 206).....	4	4	4
Organic Chemistry (Ch 226, 227).....	5	5	---
Quantitative Analysis (Ch 232).....	---	---	5
German or French.....	4	4	4
Military Science (men).....	1	1	1
Physical Education.....	1	1	1
*Electives.....	1	1	1
	16	16	16
UPPER-DIVISION MAJOR CURRICULUM			
(School of Science and Medical School)			
Junior Year			
General Physics (Ph 201, 202, 203).....	4	4	4
German or French.....	4	4	4
*Electives.....	9	9	9
	17	17	17

MAJOR IN SCIENCE AT THE STATE COLLEGE

B.A., B.S. Degrees

The student preparing to enter the Medical School should complete by the end of his junior year an approved major in science and all requirements for a degree except the fourth year of undergraduate residence. The first year at the Medical School may be counted in lieu of the fourth year of undergraduate residence.

¹Ch 226, 227, Ch 232, and Bot 201, 202, 203 are recommended for those wishing a physiological major.

²Ent 351 and G 340, 341 and suggested electives outside the department.

³See GENERAL NOTES on page 115.

⁴Students should confer with their premedical adviser in the selection of all electives. These electives should include the nonscience group requirements in Language and Literature and in Social Science in order to satisfy the requirements for a Junior Certificate.

MAJOR IN SCIENCE AT THE MEDICAL SCHOOL

B.A., B.S. Degrees

A student who, during his three years in the Premedical Curriculum at the State College, meets all the institutional requirements for graduation except completion of a major and the fourth year of residence may meet the requirements for a major in science in the first year at the Medical School. The following courses in basic sciences which constitute the work of the first year in the University of Oregon Medical School are of upper-division character, and will be accepted, in conjunction with the science work prescribed in the preparatory curriculum, as the full equivalent of a major in general science or zoology. A student counting these courses toward his major receives his degree through the School of Science at the State College.

	Term hours
Anatomy	18
Histology	6
Embryology	4
Bacteriology	8
Biochemistry	11
Physiology	5
	52

PREPARATORY NURSING CURRICULA¹

FIVE-YEAR DEGREE CURRICULUM

Freshman Year

	Term hours		
	F	W	S
French or German	4	4	4
English Composition (Eng 111, 112, 113)	3	3	3
Principles of Chemistry (Ch 201, 202, 203)	4	4	4
Backgrounds of Nursing (Nur 211, 212, 213)	3	3	3
Physical Education	1	1	---
Personal Hygiene (PE 150)	---	---	3
	15	15	17

Sophomore Year

French or German	4	4	4
Sociology	3	3	3
Elementary Psychology (Psy 201, 202, 203)	3	3	3
Shakespeare (Eng 201, 202, 203)	3	3	3
Zoology	3	3	3
Physical Education	1	1	1
	17	17	17

FOUR-YEAR DEGREE CURRICULUM

Freshman Year

English Composition (Eng 111, 112, 113)	3	3	3
English Literature	3	3	3
Backgrounds of Nursing (Nur 211, 212, 213)	3	3	3
Principles of Chemistry (Ch 201, 202, 203)	4	4	4
Zoology	3	3	3
Physical Education	1	1	1
	17	17	17

General Science

CERTAIN phases of the instructional work of the School of Science, organized under the Department of General Science, are of general character, being broader in scope and objective than any of the departments. This department is peculiarly the ally of all the science departments, with the function of supplementing and correlating the work. The courses aim to give the student a comprehensive view of science as a division of knowledge, and are open, not only to students majoring in science, but also to students in the professional schools. The general science major provides opportunity for students to pursue a broad program of study in science.

The survey courses in biological and physical science cover the fundamental fields of science rather than the content usually included in the specialized science departments. These courses are nontechnical and are designed for the student interested in science more as a cultural subject

¹See GENERAL NOTES on page 115.

than for any other specific purpose. The courses may serve as satisfaction of a Lower-Division Science group requirement or as part satisfaction of education norms, but they are not usually considered as prerequisites to further work in science or in the professional schools.

NOTE: Students who already have earned 9 term hours or more in one of the biological sciences are not permitted to apply toward graduation credit earned in GS, 101, 102, 103 except with the approval of the Dean of the School of Science. The same limitation exists regarding GS 104, 105, 106.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

GS 101, 102, 103. Biological Science Survey. Three terms, 4 hours each term.

A nontechnical year sequence presenting the fundamental principles of biology as they apply to both plants and animals. Not designed as foundational or introductory to subsequent special work in bacteriology, botany, entomology, or zoology. Rather it is planned for general students and those majoring in other fields and is designed to acquaint them with the general phenomena of life as concretely illustrated in fields of biology. Three lectures; 1 demonstration-quiz period. Dr. Smith.

GS 104, 105, 106. Physical Science Survey. Three terms, 4 hours each term.

A general introductory study of the field of the physical sciences, embracing cosmic relations, principles of physics and chemistry, geologic processes and man's reaction to them. Special attention is given to the development and application of the scientific method. Not designed as foundational for a major in the physical sciences, but for students majoring in other fields who wish a broad view of the principles of physics, chemistry, and geology. Three lectures; 1 quiz period. Assistant Professor Wilkinson.

UPPER-DIVISION COURSES

GS 405. Reading and Conference. Terms and hours to be arranged.

GS 411, 412, 413. History of Science. (G) Three terms, 2 hours each term.

The development of science from the beginnings, with emphasis on the scientific method and spirit. Illustrated by lantern slides. Prerequisite: eighteen hours of upper-division science, or equivalent. Two periods.

GS 421, 422, 423. Classics of Science. (G) Three terms, 2 hours each term.

Works notable in the development of biology, physical science, and mathematics, studied for (1) their significance to science and (2) their form. The biographies of men of science are studied as a background. Students also prepare papers suitable for oral presentation before organized groups, such as section meetings of a scientific society. Prerequisite: eighteen hours of upper-division science, or equivalent. Two periods. Not offered 1938-39.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

GS 505. Reading and Conference. Terms and hours to be arranged.

GS 507. Seminar. Terms and hours to be arranged.

Bacteriology

INSTRUCTION in bacteriology is planned to afford a foundation for the applied fields and a thorough training in bacteriological subjects. Such training is essential to the appreciation of the importance of these subjects in our civilization and serves as a foundation for graduate work leading to the advanced degrees. As agriculture and allied fields are of vital importance to the state of Oregon, a very valuable and practical field of research is open to the student seeking advanced work of this nature in bacteriology.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Bac 201, 202, 203. Elementary Bacteriology. Three terms, 3 hours each term.

The fundamental principles of the bacteriology of food and water supplies; sanitation and hygiene; infectious disease; sewage disposal, etc. Designed to meet the needs of students who have had no training in chemistry but who desire a general knowledge of bacteriology. Two lectures; 1 two-hour demonstration period.

Bac 204. General Bacteriology. Fall or winter term, 3 hours.

A series of lectures, recitations, and laboratory experiments to familiarize students with the fundamental principles of bacteriology. Prerequisite: one year of chemistry. Two lectures; 2 two-hour laboratory periods.

Bac 205. General Bacteriology. Winter or spring term, 3 hours.

A continuation of Bac 204. A course adapted to the bacteriology of food preservation, principles of sanitation, bacteriological studies of water, milk, and foods of all kinds; common infectious diseases; disinfection; germicides; and preservatives. Prerequisite: Bac 204. Two lectures; 2 two-hour laboratory periods.

Bac 206. General Bacteriology. Spring term, 3 hours.

A continuation of Bac 205.

Bac 230. Principles of Bacteriology. Spring term, 3 hours.

A lecture course with demonstrations in the basic principles of bacteriology as applied to everyday life. Three lectures.

UPPER-DIVISION COURSES

Bac 321. Systematic Bacteriology. Fall term, 3 hours.

A study of taxonomy and nomenclature as applied to bacteriology. History of bacterial classifications; the International Rules of Nomenclature, and the Bacteriological Code. Evolution and relationships of bacteria; development of a satisfactory classification. Review of other organisms closely related to the bacteria. Prerequisite: Bac 206. Three lectures.

Bac 324. Systematic Bacteriology Laboratory. Fall term, 2 hours.

Optional laboratory studies to accompany Bac 321.

Bac 332. Pathogenic Bacteriology. Winter term, 3 hours.

A study confined strictly to the micro-organisms associated with disease in man. Prerequisite: Bac 204. Two lectures; 2 two-hour laboratory periods.

Bac 333. **Immunity and Serum Therapy.** Spring term, 3 hours.

A study of the theories of immunity and their application to serum therapy; preparation of toxins, anti-toxins, vaccines, etc.; study of normal and pathological blood. Prerequisite: Bac 205 or 332. Two lectures; 2 two-hour laboratory periods.

Bac 341, 342. **Bacteriological Technique.** Fall and winter terms, 3 hours each term.

An intensive study of the fundamental principles underlying methods used in the study of bacteria. A detailed study of the *Manual of Methods for Pure Culture Study of Bacteria*. Prerequisite: Bac 206. Two lectures; 2 two-hour laboratory periods.

Bac 361. **Forest Sanitation.** Fall term, 3 hours.

The sanitary provisions necessary for forest camps, camp grounds, and summer homes; location and construction of camp facilities. Three recitations.

Bac 401. **Research.** Terms and hours to be arranged.

Bac 403. **Thesis.** Terms and hours to be arranged.

Bac 405. **Reading and Conference.** Terms and hours to be arranged.

Bac 407. **Seminar.** One hour each term.

Bac 411. **Dairy Bacteriology.** (g) Fall term, 3 hours.

Application of bacteriology to dairy practice; physiological activities of bacteria underlying bacterial analysis of dairy products; dairy sanitation; bacteriology of diseases of dairy cattle. Prerequisite: Bac 204. Two lectures; 2 two-hour laboratory periods.

Bac 412. **Dairy Bacteriology.** (G) Winter term, 3 hours.

A continuation of Bac 411. A more thorough study of specific problems in dairy bacteriology and practice in special technique. Prerequisite: Bac 411. One lecture; 2 two-hour laboratory periods.

Bac 413. **Agricultural Bacteriology.** Spring term, 3 hours.

A course in bacteriology for students in agriculture. Application of bacterial activities to farm practices and to the farm home; rural sanitation, hygiene, control of infectious diseases, fermentation, food preservation, etc. Prerequisite: Bac 204, Ch 250. One lecture; 2 two-hour laboratory periods.

Bac 421. **Soil Bacteriology.** (g) Fall term, 4 hours.

A study of micro-organisms of the soil and their relation to soil fertility; biochemistry of the decomposition of humus; nitrogen-fixation; ammonification, etc. Prerequisite: Bac 204 or Ch 330. Two lectures; 3 two-hour laboratory periods.

Bac 422. **Soil Bacteriology.** (G) Winter term, 3 hours.

A continuation of Bac 421. A review of literature on soil bacteriology. Prerequisite: Bac 421. One lecture; 2 two-hour laboratory periods.

Bac 432, 433. **Bacteriological Problems.** (g) Winter and spring terms, 5 hours each term.

For students qualified to study intensively some of the problems concerned with systematic bacteriology and to carry on research studies concerned with the principles underlying some of the physiological activities of bacteria. Prerequisite: Bac 321, 324, or their equivalent.

Bac 441. Sanitary Bacteriology. Spring term, 3 hours.

Lectures, recitations, and laboratory experiments to familiarize the student with the principles of bacteriology as applied to problems of community and municipal sanitation. Prerequisite: Bac 205. Two lectures; 2 two-hour laboratory periods.

Bac 442. Microscopy of Waters. Spring term, 3 hours.

Planned to give a thorough knowledge of the micro-organisms found in surface waters. Study of the treatment of water by chemicals, aeration, etc. Prerequisite: Bac 441. One lecture; 2 two-hour laboratory periods.

Bac 445. Applied Hygiene. Winter term, 3 hours.

The application of the principles of hygiene to sanitary, statistical, governmental, epidemiological, and sociological problems. Three periods.

Bac 451, 452. Physiology of Bacteria. (g) Winter and spring terms, 3 hours each term.

Physical and chemical characteristics of bacteria and their environments; influence of physical and chemical factors on changes produced by micro-organisms, enzymes, and fermentation. Prerequisite: Bac 206 or equivalent; organic chemistry. Three lectures.

Bac 454, 455. Physiology of Bacteria Laboratory. (g) Winter and spring terms, 2 hours each term.

Optional laboratory studies to accompany Bac 451, 452.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

Bac 501. Research. Terms and hours to be arranged.

Bac 503. Thesis. Terms and hours to be arranged.

Bac 505. Reading and Conference. Terms and hours to be arranged.

Bac 507. Seminar. Terms and hours to be arranged.

Botany

THE courses in botany provide comprehensive and advanced training in the various branches of this subject: first, for those who expect to make some field of plant science their major or life work; second, as a foundation for the work of students majoring in such professional schools as Agriculture and Forestry; and third, for those interested largely or entirely in botany from the cultural point of view.

For those having a professional interest in botany (the first two groups), it is proposed to meet the needs of those preparing (1) for professional careers as plant pathologists, plant physiologists, ecologists, taxonomists, or other specialized service at experiment stations, in the United States Department of Agriculture, or in other research institutions, or for botany teaching and research in colleges and universities; (2) for technical positions in which a knowledge of botany is essential, such as in agricultural extension work, plant disease control work, plant quarantine inspection, grazing assistant work, seed testing, food and drug analysis; and (3) for advanced study and research in such fields as horticulture, agronomy, forestry, soil science, biochemistry, and paleobotany.

The herbarium collections are under the care of a curator. They total approximately 70,000 specimens, including 40,000 classified specimen sheets of higher plants, 10,000 unmounted specimens, and 30,000 packets of parasitic fungi.

Excellent greenhouse facilities are available at the State College for botanical instruction and research.

An extensive and diversified research program relating to plant disease is conducted under the Botany Department by a group of State and Federal investigators. This involves the use of modern equipment and technique for laboratory, greenhouse, and field. Students are therefore provided with exceptional opportunities for training in plant pathology and often for part-time employment under able scientists.

Botany students also have a special advantage at this institution since they may elect minor work in the fields of forestry and agriculture, which provide the greatest opportunities for the useful application of plant science.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Bot 201, 202, 203. General Botany. Three terms, 3 hours each term.

An introductory study of plant life. Fall term, structure and functions of higher plants. Winter term, chief groups of plants, principles of reproduction and genetics, practical relationships in everyday life. Spring term, practice in plant identification. Prerequisite to further work in botany. One lecture; 1 recitation; 2 two-hour laboratory periods. Staff.

UPPER-DIVISION COURSES

Bot 311. The Lower Plants. Fall term, 4 hours.

Typical structure and life histories of the algae, fungi, hepatics, and mosses. Prerequisite: Bot 202 or equivalent. Two lectures; 2 three-hour laboratory periods. Associate Professor Sanborn.

Bot 312. The Higher Plants. Winter term, 4 hours.

Typical structure and life histories of the ferns, fern allies, gymnosperms, and flowering plants. Prerequisite: Bot 202 or equivalent. Two lectures; 2 three-hour laboratory periods. Associate Professor Sanborn.

Bot 313. Systematic Botany. Spring term, 4 hours.

Principles of plant classification; a study of common plant families; collection and identification of Oregon higher plants. Prerequisite: Bot 203. Two lectures; 3 two-hour laboratory periods. Associate Professor Gilkey.

Bot 314. Range and Pasture Botany. Fall term, 3 hours.

Taxonomy of grasses; ecology of range plants and their forage value; ecology of the grazing ranges and pastures from the standpoint of their maintenance; methods of grazing study; poisonous plants and methods of preventing stock poisoning. Prerequisite: Bot 201, 202. Two lectures; 2 two-hour laboratory periods. Associate Professor Lawrence.

Bot 315. Forest Pathology. Winter term, 3 hours.

Introductory study of the nature, cause, and prevention of tree diseases and timber defects, especially those related to fungal parasites,

saprophytes, and symbionts. Prerequisite: Bot 201, 202. One lecture; 2 two-hour laboratory periods. Dr. Rogers.

- Bot 331. Principles of Plant Physiology.** Spring term, 4 hours.
Introductory study of the physiology of living plants with the aid of laboratory and greenhouse experiments of special interest in agriculture and forestry. Prerequisite: Bot 201, 202, or equivalent, and at least one year of chemistry. Two lectures; 3 two-hour laboratory periods. Professor Atwood.
- Bot 341. Principles of Plant Ecology.** Winter term, 4 hours.
Principles governing the interrelations of plants and environment; influence of living agencies and of light, heat, and other atmospheric and soil factors on the native vegetation and cultivated crops. Of particular interest to students in forestry and agriculture. Not open to freshmen or sophomores. Prerequisite: Bot 201, 202. Two lectures; 2 two-hour laboratory periods. Associate Professor Lawrence.
- Bot 351. Principles of Plant Pathology.** Fall term, 4 hours.
Causes, symptoms, effects, methods of spread and principles of control of plant diseases with laboratory examination of typical specimens. Prerequisite: Bot 201, 202. Two recitations; 3 two-hour laboratory periods. Professor Owens.
- Bot 401. Research.** Terms and hours to be arranged.
- Bot 403. Thesis.** Terms and hours to be arranged.
- Bot 405. Reading and Conference.** Terms and hours to be arranged.
- Bot 407. Seminar.** One hour each term.
- Bot 410. Paleobotany. (g)** Spring term, 4 hours.
A study of plants that are important from a paleobotanical standpoint, followed by a study of floras from the Devonian to the Pleistocene, with special reference to the Tertiary floras of Oregon. Two lectures; 2 three-hour laboratory periods. Associate Professor Sanborn.
- Bot 411, 412, 413. Comparative Morphology. (G)** Three terms, 3 hours each term.
The comparative structure and life history of the chief plant groups with evolutionary trends and the basic principles of phylogeny and classification. First term, Algae; second term, Bryophytes; third term, Pteridophytes and Spermatophytes, with evolution of stele and strobilus from Pteridophytes. Prerequisite: Bot 311, 312, or equivalent. One lecture; 2 three-hour laboratory periods. Offered alternate years. Not offered 1938-39. Associate Professors Lawrence and Sanborn.
- Bot 414. Advanced Range and Pasture Ecology. (g)** Winter term, 3 hours.
A continuation and advanced consideration of the problem of plant successions on the range, methods of vegetation analysis, ecology of range species and poisonous plants, the identification of grasses, rushes, and sedges. Prerequisite: Bot 314, 341. Two lectures; 2 two-hour laboratory periods. Associate Professor Lawrence.
- Bot 421, 422, 423. Advanced Systematic Botany. (G)** Three terms, 3 hours each term.
Advanced studies of higher plants. Prerequisite: Bot 313. One lecture; 2 three-hour laboratory periods. Offered alternate years. Associate Professor Gilkey.

Bot 431, 432, 433. **Advanced Plant Physiology.** (G) Three terms, 3 hours each term.

Studies of the physiological processes and relations of plants with reviews of literature. Prerequisite: Bot 331 and organic chemistry. One lecture; 2 three-hour laboratory periods. Professor Atwood.

Bot 441, 442, 443. **Advanced Plant Ecology.** (G) Three terms, 3 hours each term.

Measurement of environmental factors and their relation to field practice, with special reference to forest, grazing, and agricultural ecology. The structure of the plant community, including plant succession and methods in vegetation analysis. Each term may be taken separately. Prerequisite: Bot 341, or equivalent. Two lectures; 1 three-hour laboratory period. Associate Professor Lawrence.

Bot 451. **Plant Pathological Technique.** (g) Fall term, 3 hours.

The methods used in the isolation, culture, inoculation, and study of organisms causing plant diseases. Prerequisite: Bot 351 or equivalent. One lecture; 2 three-hour laboratory periods. Dr. Rogers.

Bot 452. **Field and Truck Crop Diseases.** (G) Winter term, 3 hours.

The chief diseases of field crops and vegetables and the principles of control. Especially for students in farm crops and vegetable crops. Prerequisite: Bot 351 or equivalent. Three two-hour periods. Professor Owens.

Bot 453. **Fruit Diseases.** (G) Spring term, 3 hours.

The chief diseases of fruits and their control. Especially for students in horticulture. Prerequisite: Bot 351 or equivalent. Three two-hour periods. Professor Owens.

Bot 461, 462, 463. **Mycology.** (G) Three terms, 3 hours each term.

First term, mushrooms, smuts, rusts, and other Basidiomycetes. Second term, Ascomycetes and imperfect fungi. Third term, Myxomycetes and Phycomycetes. Prerequisite: Bot 311 or equivalent. One lecture; 2 three-hour laboratory periods. Dr. Rogers.

Bot 471. **Plant Anatomy.** (G) Fall term, 3 hours.

Microscopic anatomy and development of plant tissues. One lecture; 2 three-hour laboratory periods. Dr. Smith.

Bot 472. **Microtechnique.** (g) Winter term, 3 hours.

Principles and practice in fixing, embedding, sectioning, staining, and mounting plant tissues for permanent study. One lecture; 2 three-hour laboratory periods. Dr. Smith.

Bot 473. **Plant Cytology.** (G) Spring term, 3 hours.

A study of the various components or cells, nuclear and cell division, meiosis and fertilization. Prerequisite: Bot 472 or equivalent. Two lectures; 2 two-hour laboratory periods. Dr. Smith.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G)
may be taken for graduate credit.

Bot 501. **Research.** Terms and hours to be arranged.

Bot 503. **Thesis.** Terms and hours to be arranged.

Bot 505. **Reading and Conference.** Terms and hours to be arranged.

Bot 507. **Seminar.** Terms and hours to be arranged.

Bot 541. **Plant Formations.** Fall term, 3 hours.

Classification of vegetation areas of the world, floristic plant geography, especially with reference to North America. Prerequisite: Bot 341, 441. Two lectures; 1 three-hour laboratory period. Associate Professor Lawrence.

Bot 542. **Structural and Experimental Ecology.** Winter term, 3 hours.

Special adaptations of plant species with reference to their ecological relations. Prerequisite: Bot 313, 331, 341, 442, 472. One lecture; 2 three-hour laboratory periods. Associate Professor Lawrence.

Bot 543. **Field Ecological Methods.** Spring term, 3 hours.

Field practice in the use of ecological instruments and methods of studying vegetation. Prerequisite: Bot 341, 443. One lecture; 2 three-hour laboratory periods. Associate Professor Lawrence.

Bot 573. **Cyto-genetics.** Winter term, 3 hours.

An advanced course in cytology dealing with the cytological basis of inheritance. Heredity in plants and animals will be considered from the point of view of chromosome behavior. Prerequisite: Bot 473 or Z 537 and one of the following: AI 315, FC 417 or Z 315. Two lectures; 1 two-hour laboratory and discussion period. Dr. Smith.

Chemistry

THE Department of Chemistry aims to prepare its students for (1) governmental service; (2) teaching positions in colleges, universities, junior colleges, and secondary schools; (3) positions as chemists and technical experts in commercial laboratories of all sorts, having to do with all types of manufactured articles; (4) positions as chemists in various food industries, in dairying, at experiment stations.

For the better positions in any of these fields the Ph.D. degree is almost universally necessary for younger men. Research or original investigation plays a very important part in these better positions whether the work is that of governmental chemist, university professor, or industrial chemist. A strong fundamental training in all the main branches of chemistry is therefore essential. Specialization can come only after a very substantial amount of fundamental work is covered.

Positions for which the full training of the doctorate degree may not be required include junior chemists in the government service, teachers in secondary schools, holders of minor positions in colleges, analysts, and control chemists in various branches of industry.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Ch 101, 102, 103. **Elementary General Chemistry.** Three terms, 3 hours each term.

Designed for students desiring an introduction to the general field. Required in certain curricula in agriculture and engineering; Ch 101,

102 required in home economics. One lecture; 1 recitation; 1 three-hour laboratory period.

Ch 121. Elements of Organic Chemistry. Spring term, 4 hours.

A laboratory and class study of the more common compounds of the aliphatic series. Required in home economics. Prerequisite: Ch 101, 102.

Ch 130. Descriptive General Chemistry. Spring term, 3 hours.

For students desiring a general knowledge of chemistry as an aid to better understanding of the numerous developments in the commercial and industrial world today; particularly for forestry students. Not accepted as a substitute for other chemistry courses. Three lectures or recitations.

Ch 201, 202, 203. Principles of Chemistry. Three terms, 4 hours each term.

A year sequence in general chemistry for students desiring a basic course for advanced work in the field of chemistry or for special applications in such fields as chemical engineering. Two lectures; 1 recitation; 1 three-hour laboratory period. (Spring term, 2 lectures; 2 three-hour laboratory periods).

Ch 204, 205, 206. General Chemistry. Three terms, 5 hours each term.

For students planning to major in chemistry and for other students requiring extensive knowledge of the subject. Laboratory work in Ch 206 includes elementary qualitative analysis.

Ch 208, 209. General Chemistry. Winter and spring terms, 5 hours each term.

A two-term sequence designed to cover the same material as Ch 101, 102, 103 for students starting at the beginning of the winter term. Two lectures; 1 recitation; 2 three-hour laboratory periods.

Ch 226, 227. Organic Chemistry. Fall and winter terms, 5 hours each term.

A substantial two-term sequence in the chemistry of the carbon compounds; the aliphatics, aromatics, and derivatives. Prerequisite: Ch 206. Two lectures; 1 recitation; 2 three-hour laboratory periods.

Ch 230. Elementary Qualitative Analysis. Spring term, 3 hours.

The identification of the common ions and cations. Accompanies Ch 206. Prerequisite: Ch 205 or equivalent. Two three-hour laboratory periods. Not offered 1938-39.

Ch 231, 232. Quantitative Analysis. Two terms, 4 or 5 hours each term.

The principles of quantitative analysis, including electrometric analysis and hydrogen-ion concentration. (Ch 231 fall term, Ch 232 winter or spring term.) Prerequisite: Ch 206.

Ch 233. Advanced Qualitative Analysis. Fall term, 4 or 5 hours.

Advanced theory of qualitative analysis and examination of commercial products. Prerequisite: Ch 230.

Ch 250. Elements of Biochemistry. Fall term, 3 hours.

A laboratory study of proteins, carbohydrates, fats, and other compounds having biochemical significance. Prerequisite: Ch 121 or equivalent. Two lectures; 2 two-hour laboratory periods.

Ch 251, 252, 253. **Organic and Agricultural Biochemistry.** Three terms, 5 hours each term.

Sequence courses providing thorough grounding in fundamental principles of organic chemistry, biochemistry, and quantitative analysis as they apply to agriculture and related industries. Prerequisite: Ch 103. Three lecture-recitations; 2 three-hour laboratory periods.

UPPER-DIVISION COURSES

Ch 321, 322, 323. **Metallurgical Chemistry.** Three terms, 3 hours each term.

Analysis of limestone, iron ores, phosphorus in iron ores, determination of manganese, sulphur, copper, arsenic, etc. Prerequisite: Ch 232 or equivalent. Offered alternate years. Offered 1938-39.

Ch 330, 331. **Physiological Chemistry.** Two hours winter term, 3 hours spring term.

Designed for students in home economics, pharmacy, and bacteriology. Prerequisite: Ch 251 or 227. One lecture-recitation period and 1 three-hour laboratory winter term; 2 lecture-recitation and 1 three-hour laboratory periods spring term.

Ch 340. **Elementary Physical Chemistry.** One term, 3 hours.

A nonmathematical course designed for those who desire a knowledge of the elements of physical chemistry. Discussion of such topics as kinetic theory, atomic structure, molecular weights, classification of elements, solubility, ionization, colloids, hydrogen-ion measurements, and electro-chemistry. Prerequisite: Ch 203 or equivalent.

Ch 351, 352, 353. **Agricultural and Biochemical Analysis.** Three terms, 3 hours each term.

Students registering in these courses are supposed to have some special interest, as in fertilizers, insecticides and fungicides, feeding stuffs, creamery products, horticultural products, irrigation and drainage waters. Intensive reading is required in addition to laboratory work on principles involved in manufacturing and utilization. Prerequisite: Ch 232. Three three-hour laboratory periods.

Ch 370. **Glass Blowing.** Any term, 1 hour.

Practice in the manipulation of glass and assembling setups. Two two-hour laboratory periods.

Ch 401. **Research.** Terms and hours to be arranged.

Ch 403. **Thesis.** Terms and hours to be arranged.

Ch 405. **Reading and Conference.** Terms and hours to be arranged.

Ch 407. **Seminar.** One hour each term.

Ch 411, 412, 413. **Advanced Inorganic Chemistry.** (g) Three terms, 2 hours each term.

The chemical elements are first discussed as regards their practical and theoretical importance. Finally, such topics as radioactivity, the periodic table, and atomic structure are taken up. Prerequisite: a minimum of two years' work in chemistry. Two lectures.

- Ch 414, 415. **Inorganic Preparations.** (g) Terms and hours to be arranged.
The preparation and purification of typical inorganic compounds.
Prerequisite: Ch 231, 232, or their equivalent.
- Ch 418. **History of Chemistry.** (G) One term, 2 hours.
Rise and development of chemical theories and laws. Prerequisite:
Ch 206 or equivalent.
- Ch 420, 421, 422. **Advanced Analytical Chemistry.** (g) Three terms, 3 hours
each term.
Laboratory study acquainting the student with special analytical
procedure such as those of electro-analysis, fuel analysis, analysis of
nonferrous alloys, water, iron and steel, etc. Prerequisite: Ch 231-233.
- Ch 423. **Microchemical Analysis.** (g) Fall term, 3 hours.
Quantitative analysis by micro and semi-micro methods. Prerequi-
site: Ch 233.
- Ch 424. **Advanced Laboratory Methods.** (G) Winter term, 3 hours.
Instruction and practice in manipulation of optical and electrical
instruments, high vacuum, high and low temperature control. Not
offered 1938-39. Prerequisite: Ch 233, Ph 311.
- Ch 425. **Chemical Microscopy.** (g) Spring term, 3 hours.
Microscopic, qualitative, inorganic analysis. Prerequisite: Ch 231.
- Ch 426. **Gas, Oil, and Fuel Analysis.** (g) One term, 3 hours.
The analysis of natural, artificial, and flue gases and gas calorim-
etry; the analysis and calorimetry of coal, and analysis and physical
testing of oils. Prerequisite: Ch 233.
- Ch 427, 428. **Physico-chemical Methods of Analysis.** (G) Two terms, 3
hours each term.
Designed to familiarize the student with special analytical apparat-
us and methods. Work with nephelometer, colorimeter, refracto-
meter, centrifuge, indicators, electrometric methods of determining
pH, electrolytic separation of metals, and electrometric titration
methods, including the use of various types of electrodes and conduc-
tivity methods. Prerequisite: Ch 231-233, Ch 440-442. One lecture; 2
laboratory periods.
- Ch 430, 431, 432. **Organic Chemistry.** (g) Three terms, 4 hours each term.
The chemistry of the compounds of carbon. Deals with com-
pounds which are important from the theoretical, technical, and bio-
logical standpoints. The first two terms are devoted to aliphatic
compounds and the third term to those of the aromatic series. Prerequisite:
two years of college chemistry. Three lectures; 1 laboratory period.
- Ch 433. **Organic Analysis.** (G) Spring term, 5 hours.
Qualitative tests and analysis of organic compounds and mixtures.
Prerequisite: Ch 227, 232, 432. Two lectures; 3 three-hour laboratory
periods.
- Ch 434. **Organic Combustion Analysis.** (G) One term, 3 hours.
Quantitative analysis of organic compounds. Prerequisite: Ch
227, 232, 432.

- Ch 435, 436. **Organic Preparations.** (G) Terms and hours to be arranged.
The more important methods of synthesis, such as Grignard, Friedel-Craft's, Perkin's reaction, and others are studied. Prerequisite: Ch 227 or Ch 432.
- Ch 437, 438. **Organic Chemistry.** (G) Fall and winter terms, 2 hours each term.
A continuation of Ch 430, 431, 432. Emphasis placed upon the methods of synthesis, interpretation of reactions, and structure of organic compounds. Two lectures.
- Ch 440, 441, 442. **Physical Chemistry.** (g) Three terms, 4 hours each term.
A study of the more important principles of physical and electrochemistry. The laboratory work includes molecular-weight determinations, properties of liquids, conductance of solutions, velocity of reactions, and electrochemical measurements. Prerequisite: knowledge of analytical chemistry. Two lectures; 2 three-hour laboratory periods.
- Ch 443. **Chemical Literature.** (G) Fall term, 1 hour.
Designed to train the advanced student in the use of the chemical literature and to instruct him in the character of various chemical journals, dictionaries, reference books, and other sources of information pertaining to chemistry and related fields. Prerequisite: senior or graduate standing.
- Ch 445, 446. **Chemical Thermodynamics.** (G) Two terms, 3 hours each term.
Application of the principles of thermodynamics to chemical phenomena; heats of reaction, entropy, free energy, chemical equilibrium, activity, etc.
- Ch 447. **Electrochemistry.** (G) One term, 3 hours.
A study of theoretical and applied electrochemistry.
- Ch 448, 449. **Colloidal Chemistry.** (G) Two terms, 3 hours each term.
A study of the properties and preparation of substances in the colloidal state. Laboratory courses Ch 467 and 468 accompany this course. Prerequisite: two years of college chemistry. Three lectures.
- Ch 450, 451. **Biochemistry.** (G) Fall and winter terms, 3 to 5 hours each term.
A general sequence dealing with the chemistry of both plant and animal organisms, their tissue constituents, nutrition and metabolism. Prerequisite: organic chemistry.
- Ch 452. **Animal Physiological Chemistry.** (G) Spring term, 3 to 5 hours.
Prerequisite: Ch 451.
- Ch 453. **Plant Physiological Chemistry.** (G) Spring term, 5 hours.
Prerequisite: Ch 451.
- Ch 454, 455, 456. **Agricultural Biochemical Methods.** (G) Three terms, hours to be arranged.
Offered as an aid to students planning to enter research in plant or animal industries. Laboratory methods in Ch 454 are general in scope and application; those in Ch 455 and Ch 456 are specific in application to

groups of plant and animal compounds and to enzymes that accomplish transformations in living bodies. Prerequisite: suitable preparation in quantitative analysis and organic chemistry.

Ch 460, 461, 462. **Pulp and Paper Chemistry.** (G) Three terms, 3 hours each term.

A study of the chemistry of cellulose and of the fundamental chemical processes of the pulp and paper industry. Prerequisite: two years of college chemistry.

Ch 467, 468. **Colloidal Chemistry Laboratory.** (G) Two terms, 1 hour each term.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

Ch 501. **Research.** Terms and hours to be arranged.

Ch 503. **Thesis.** Terms and hours to be arranged.

Qualified students will have all the facilities of the laboratory at their disposal and will receive the advice and assistance of the department.

Ch 505. **Reading and Conference.** Terms and hours to be arranged.

Ch 507. **Seminar.** Any term, 1 hour each term.

A reading knowledge of German and French is expected.

Ch 520, 521, 522. **Advanced Analytical Chemistry.** Three terms, 2 hours each term.

Special analytical procedures adapted to those enrolling. Prerequisite: Ch 231, 232, 233.

Ch 530, 531, 532. **Advanced Organic Chemistry.** Three terms, 2 hours each term.

Dye intermediates, dyes, and free radicals. The theoretical aspects of the subjects offered in 1938-39 will be emphasized by discussions of theories of valence, chemical reactivity, catalysis, etc., as these are related to this particular group of compounds. Prerequisite: Ch 227, 432.

Ch 540, 541, 542. **Advanced Physical Chemistry.** Three terms, 2 hours each term.

Atomic structure from the chemical standpoint; kinetic theory of gases; newer theories of solutions; phase rule and its applications. Prerequisite: Ch 442. Offered alternate years. Not offered 1938-39.

Ch 543, 544, 545. **Advanced Physical Chemistry.** Three terms, 2 hours each term.

Solubility; properties of liquids, surface tension, dielectric constant, vapor pressure, and other topics; kinetics of chemical reactions; newer theories of valence; photochemistry. Prerequisite: Ch 442. Offered alternate years. Offered 1938-39.

Entomology

ENTOMOLOGY courses are planned to acquaint the student with the proper relationship of entomology to general agriculture and forestry and to train students for commercial honey production, prepare students for State and Federal service in economic entomology, and to meet the needs of students from other departments who desire work in entomology. Advanced work is offered in three fields: applied entomology, bee culture, and forest entomology.

Advanced courses are planned to equip students specializing in entomology with a fundamental ground-work in the science sufficient to prepare them for effective service in applied entomology and to fit them for advanced research study.

The student who intends to engage in research work or college teaching should clearly appreciate the fact that the four-year curriculum does not give him adequate preparation for a career in these fields. Additional study at the graduate level of from one to three years is essential. Certain types of commercial and inspection work may not require more training than is represented by the bachelor's degree.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Ent 201, 202, 203. General Entomology. Three terms, 3 hours each term.

Designed as basic instruction for students planning to take a major or a minor in entomology. Elementary work in morphology, taxonomy, general technique, and biology of insects. Two lectures; 1 three-hour laboratory period.

Ent 211. Principles of Economic Entomology. Fall or winter term, 3 hours.

Designed primarily for agriculture students. A consideration of typical economic forms of insects in the principal orders and more important families, and of the principles of insect-pest control. Two recitations; 1 three-hour laboratory period.

Ent 223. Elementary Entomology. Winter term, 2 hours.

Designed primarily for prospective teachers of high-school biology and others interested in insects from the biological point of view. Insects in their relation to human welfare, their collection, preservation, classification, and the rearing of living forms are emphasized. When possible this course should be accompanied by Ent 224. Two lectures.

Ent 224. Elementary Entomology Laboratory. Winter term, 1 hour.

Designed as a laboratory course to accompany Ent 223. Field trips and laboratory work acquaint the student with the habits, methods of study, and classification of the more common forms of insects. One three-hour laboratory period.

Ent 234. Entomology for Engineers. Fall or spring term, 2 hours.

Designed to acquaint engineering students, who will deal with timbers, lumber, and wood products, with the defects in wood caused by insects and how to combat them. Two lectures.

Ent 235. **Practical Bee Culture.** Spring term, 2 hours.

A practical lecture course dealing with the habits and life history of the honey bee, the management of bees for honey production and the pollination of fruit and seed crops. When possible this course should be accompanied by Ent 236. Two lectures.

Ent 236. **Practical Bee Culture Laboratory.** Spring term, 1 hour.

Designed to accompany Ent 235 and to give practical training in the assembling of equipment and the management of bees for honey production or the pollination of crops. One three-hour laboratory period.

UPPER-DIVISION COURSES

Ent 311, 312, 313. **Entomological Field Work.** Terms and hours to be arranged.

Field work, performed between sophomore and junior years or between junior and senior years, in connection with some state or Federal service; a written report based on an approved outline. Spring, summer, or fall; for summer work registration should be made and fee paid before close of spring term. Prerequisite: permission of instructor.

Ent 321. **Principles of Forest Entomology.** Fall or spring term, 3 hours.

A general introduction to entomology for forestry students. A survey of the forest losses due to insects, the groups responsible, and a consideration of typical examples of the various groups and methods of prevention and control. Required of forestry and logging-engineering students. Two lectures; 1 two-hour laboratory period.

Ent 322, 323. **Forest Entomology.** Winter and spring terms, 3 hours each term.

An intensive study of insects injurious to forests and forest products, forest-insect surveys, and the principles of forest-insect control. Prerequisite: Ent 321. Two lectures; 1 two-hour laboratory period.

Ent 331, 332, 333. **Principles of Bee Culture.** Three terms, 3 hours each term.

Designed to give an understanding of the principles on which practical management is based. Special attention is given to bee behavior, etiology and control of bee diseases, principles of management for commercial honey production, sources and utilization of nectar and pollen, and the application of business methods to the industry. Two recitations; 1 three-hour laboratory period.

Ent 341. **Aquatic Entomology.** Spring term, 3 hours.

Studies involving the classification of aquatic insects, their ecologies, life histories, and economic importance as food of game fishes. Emphasis is placed upon the techniques of conducting lake and stream surveys. One lecture or recitation; 2 three-hour laboratory periods or field work.

Ent 351. **Insect Morphology.** Fall term, 3 hours.

A study of the fundamentals of external, internal, and comparative morphology of insects, including adaptive structure and their utility, and wing venation. Especial attention is given to structures used in classification. Prerequisite: Ent 203. One recitation; 2 three-hour laboratory periods.

Ent 352. Entomological Nomenclature and Literature. Winter term, 3 hours.

A survey of rules, regulations, and practices in entomological nomenclature; the International Code; sources of entomological literature; Bureau of Entomology; periodicals and books; bibliographies.

Ent 353. Historical Entomology. Fall term, 3 hours.

The insects of the ancients; early works on entomology; beginnings in America; early entomological workers in America; introduced pests; development of the Bureau of Entomology; early work in Oregon.

Ent 373. Entomological Technique. Spring term, 3 hours.

Designed to acquaint the student with methods of rearing living insects, collecting and preserving insects and the preparation of insect material for study. For major students in entomology and for prospective teachers of biology. The laboratory work is adapted to the needs of the student. Prerequisite: Ent 201, 211, or 223. One lecture; 2 three-hour laboratory periods.

Ent 401. Research. Terms and hours to be arranged.

Ent 403. Thesis. Terms and hours to be arranged.

Ent 405. Reading and Conference. Terms and hours to be arranged.

Ent 407. Seminar. One hour each term.

Reading, discussing, and abstracting of the leading articles on entomological topics as they appear in current scientific literature.

Ent 411, 412, 413. Economic Entomology. (g) Three terms, 3 hours each term.

An intensive consideration of specific insect pests of farm, garden, and orchard, man, and domestic animals, particularly of the Pacific Coast, and their control; latest developments in insecticides and their uses. Two recitations or lectures; 1 three-hour laboratory period. Prerequisite: Ent 203 or equivalent.

Ent 415. Principles of Insect Control. (G) Fall or spring term, 3 hours.

Pests of special groups, such as fruit insects, truck-crop insects, insects affecting man and animals, greenhouse and field-crop insects; control measures and principles. Prerequisite: Ent 211 or equivalent. Two lectures, 1 laboratory period.

Ent 423. Advanced Forest Entomology. (g) Any term, 4 hours.

An intensive study of the bark beetles injurious to forest trees. Prerequisite: Ent 323 or equivalent. Two lectures; 2 two-hour laboratory periods.

Ent 451, 452, 453. Insect Taxonomy. (g) Three terms, 3 hours each term.

The classification of insects of the several orders; intensive study of insects of selected groups; attention to phylogenetic relationships and distribution. Prerequisite: Ent 203 or equivalent. Two recitations; 1 three-hour laboratory period.

Ent 471, 472, 473. Advanced Entomology. (G) Three terms, 3 hours each term.

Fall term, insect morphology—atomy, histology, embryology, and postembryonic development (1 lecture, 2 three-hour laboratory

periods). Winter term, insect physiology—life processes of insects (2 lectures, 1 three-hour laboratory period). Spring term, insect ecology—environmental factors and their influence on insect development and distribution (2 lectures, 1 three-hour laboratory period). Prerequisite: Ent 203, general physiology or equivalent, desirable.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

- Ent 501. Research. Terms and hours to be arranged.
- Ent 503. Thesis. Terms and hours to be arranged.
- Ent 505. Reading and Conference. Terms and hours to be arranged.
- Ent 507. Seminar. Terms and hours to be arranged.

Geology

THE courses in geology are planned to afford a foundation in the allied fields and a thorough training in geological subjects. Such training is essential to an appreciation of the importance of these subjects in our civilization and serves as a foundation for graduate work leading to the advanced degrees. The state of Oregon offers unusually rich fields for the graduate student working in many phases of physiographical, geological, or paleontological sciences. The department is equipped to afford facilities for graduate work in these fields.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

- G 201, 202, 203. **Geology.** Three terms, 3 hours each term.
An introductory year sequence dealing with those processes of nature by which the surface of the earth has been built up, deformed, and torn down. A study of the natural history and the occurrence of the common rocks and useful minerals, and an outline of the history of the earth and significant events in the history of life. Three lectures. Professor Allison.
- G 204, 205, 206. **Geology Laboratory.** Three terms, 1 hour each term.
Laboratory and field work to accompany G 201, 202, 203 for all students desiring a more intimate knowledge of geology.
- G 280, 281, 282. **Introduction to Field Geology.** Three terms, 1 or 2 hours each term.
A course which may be conducted in the summer, during which time trips to regions of significant geology will be taken. This course is available to students in geology who wish to learn something of geology in nature's own laboratory. Prerequisite: G 201, 202.

UPPER-DIVISION COURSES

G 312, 313, 314. Mineralogy. Three terms, 4 hours each term.

Physical and chemical methods useful in the recognition of materials of which the earth is composed. Fall term, crystallography and physical mineralogy. Winter term, petrographic methods, emphasizing optical microphysical and microchemical techniques. Spring term, descriptive mineralogy. Special attention is given to application of methods of identification. Prerequisite: chemistry. Two lectures; 2 laboratory periods. Assistant Professor Wilkinson.

G 321. Structural Geology. Spring term, 4 hours.

Study of origin, interpretation and mapping of minor rock structures and joints, faults, and folds. Prerequisite: G 201, 202. Three lectures; 1 laboratory or field period. Professor Allison.

G 322. Physiography. Winter term, 4 hours.

Study of the principles of geomorphology or the development of the surface features of the earth by erosion, deposition, earth movements and volcanism. Three lectures; 1 laboratory or field period. Professor Allison.

G 323. Stratigraphy. Fall term, 4 hours.

The genesis and subsequent history of stratified rocks including a study of the geologic processes concerned with sedimentation and cementation. Prerequisite: G 201, 202, 203. Three lectures; 1 laboratory or field period. Professor Allison.

G 324. Engineering Geology. One term, 3 hours.

A special course covering the general field from the engineering standpoint. Open to other than engineering students.

G 330. Life of the Past. Fall term, 3 hours.

The general principles of the history of life as recorded in the fossil record. Several groups of invertebrates are studied as illustrations of biological principles and for their relationships to higher animals. Professor Packard.

G 331. Geologic History of Vertebrates. Winter term, 3 hours.

A brief consideration of the rise and development of the vertebrates with special attention to certain groups of ancient animals that once lived on the Pacific Coast. Professor Packard.

G 332. Geologic History of Man. Spring term, 3 hours.

A study of the physical and cultural development of the ancient types of men, as shown by their fossil remains, their implements and art. Professor Packard.

G 340, 341. Invertebrate Paleontology. Two terms, 4 hours each term.

A study of major groups of fossil invertebrates and the characteristics of important West Coast genera. Two class periods and 2 laboratory periods a week. (The third term of the year sequence is Bot 410.) Professor Packard.

G 350. Rocks and Minerals. Fall term, 3 hours.

This course gives the student having a general interest in geology the opportunity to become acquainted with rocks and minerals with-

out having to meet the requirements of the more technical courses. Can be combined with term courses in physiography and Oregon geology to form a junior sequence. Of interest to a student majoring in general science and especially useful to one expecting to teach general science. Assistant Professor Wilkinson.

G 352. Geology of Oregon. Spring term, 3 hours.

Affords opportunity to obtain a general knowledge of the geology of the state without having to meet the technical requirements imposed for a professional geology major. Can be combined with term courses in rocks and minerals and physiography to form a sequence. Of interest to a student majoring in general science and especially useful to one expecting to teach general science. Professor Hodge.

G 380. Advanced Field Geology. Nine hours.

A general course in geologic mapping and surveying methods and an intensive study of a small area so chosen as to include a wide range of special problems. This work is conducted in a summer camp of four weeks. The course may be taken with full credit for a series of summers, since a different area is studied each season.

G 401. Research. Terms and hours to be arranged.

G 403. Thesis. Terms and hours to be arranged.

G 405. Reading and Conference. Terms and hours to be arranged.

G 407. Seminar. Any term, 1 hour each term.

G 412, 413, 414. Earth Materials. (G) Three terms, 4 hours each term.

Fall term: Mineral resources, with special attention to the sight identification, geologic occurrence, and use of the rock-forming economic and rare minerals. Winter term: Ore deposits, with emphasis on the classification, origin, and occurrence of ore deposits. Spring term: Petrography and petrogenesis of igneous rocks; megascopic and microscopic study of typical rocks from classical localities. Prerequisite: G 312, 313, 314. Professor Hodge.

G 424. Advanced Paleontology. (G) Term and hours to be arranged.

Special work assigned to meet the requirements of the advanced student. Prerequisite: G 340, 341. Professor Packard.

G 431. Geologic History of North America. (G) One term, 4 hours.

The geologic development of the North American continent. Prerequisite: stratigraphy. Professor Allison.

G 432. Geologic History of the Pacific Coast. (G) One term, 4 hours.

The geologic history of the Pacific Coast of North America. Prerequisite: stratigraphy and paleontology. Professor Allison.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

G 501. Research. Terms and hours to be arranged.

G 503. Thesis. Terms and hours to be arranged.

- G 505. Reading and Conference. Terms and hours to be arranged.
- G 507. Seminar. Terms and hours to be arranged.
- G 512, 513, 514. **Microscopy.** Three terms, hours to be arranged.
A study of the use and theory of the microscope in the recognition and determination of the properties of organic and inorganic materials. Professor Hodge.
- G 520. **Advanced Economic Geology.** Terms and hours to be arranged.
Special work assigned to meet the requirements of advanced students in metallic and nonmetallic mineral deposits. Professor Hodge.
- G 580. **Graduate Field Geology.** Terms and hours to be arranged.
Advanced field problems assigned to meet the requirements of the graduate student.

Mathematics

THE courses in mathematics are designed to provide for the general student the training in rigorous thinking and analytical processes which is a fundamental part of a well-balanced education; to supply the mathematical preparation desirable for students in professional schools; to prepare prospective teachers; and finally to give advanced and graduate work for those who specialize in mathematics or science.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

- Mth 10. **Elementary Algebra.** One term, 4 hours.
For students entering with less than one year of high-school algebra.
- Mth 20. **Elementary Geometry.** One term, 4 hours.
For students entering without high-school geometry.
- Mth 100. **Intermediate Algebra.** One term, 4 hours.
For students entering with not more than one year of high-school algebra.
- Mth 101, 102, 103. **Unified Mathematics.** Three terms, 4 hours each term.
Trigonometry, graphs, algebra, elements of calculus, and analytic geometry.
- Mth 105. **College Algebra.** One term, 4 hours.
- Mth 106. **Trigonometry.** One term, 4 hours.
- Mth 108. **Mathematics of Finance.** One term, 4 hours.
Courses Mth 100, 108, 109 or Mth 105, 108, 109 form a year sequence for students planning to major in business administration.
- Mth 109. **Elements of Statistics.** One term, 4 hours.
Mth 100, 106, 109, or Mth 105, 106, 109 form a year sequence for forestry freshmen.

- Mth 201, 202, 203. **Differential and Integral Calculus.** Three terms, 4 hours each term.
Prerequisite: Unified Mathematics or equivalent.
- Mth 221, 222. **Introduction to Calculus.** Two terms, 4 hours each term.
A brief course in differential and integral calculus primarily for engineering students. Prerequisite: Unified Mathematics or equivalent.

UPPER-DIVISION COURSES

- Mth 311. **History of Mathematics.** One term, 3 hours.
A course tracing the development of ancient, medieval, and modern mathematics. Prerequisite: Unified Mathematics or equivalent.
- Mth 321, 322, 323. **Analytical Mechanics.** Three terms, 3 hours each term.
Fall term, statics. Winter term, dynamics of a particle. Spring term, dynamics of rigid body.
- Mth 331. **Applied Mathematics.** One term, 3 hours.
A problem course in the applications of the calculus, including applications of hyperbolic functions. Special attention is given to the mathematical formulation of practical problems. Prerequisite: calculus.
- Mth 341. **Projective Geometry.** One term, 3 hours.
A course in synthetic projective geometry, useful for prospective teachers of mathematics. Prerequisite: Unified Mathematics or equivalent.
- Mth 405. **Reading and Conference.** Terms and hours to be arranged.
- Mth 411. **Theory of Equations and Determinants.** (G) One term, 3 hours.
Properties and methods of solution of algebraic equations, and a brief study of determinants and their applications. Prerequisite: Unified Mathematics or equivalent.
- Mth 412. **Higher Algebra.** (G) One term, 3 hours.
A study of determinants, linear dependence, matrices, linear transformations, invariants, and quadratic forms. Prerequisite: calculus.
- Mth 413. **Advanced Plane Analytic Geometry.** (g) One term, 3 hours.
A more advanced treatment of the subject, intended for students of fair mathematical maturity. Prerequisite: calculus.
- Mth 414. **Solid Analytic Geometry.** (G) One term, 3 hours.
Prerequisite: calculus.
- Mth 415. **Modern Geometry.** (G) One term, 3 hours.
Euclidean geometry from a modern point of view. Prerequisite: calculus.
- Mth 416. **Projective Geometry.** (G) One term, 3 hours.
Introduction to analytic and synthetic projective geometry. Prerequisite: calculus.
- Mth 421, 422. **Differential Equations.** (g) Two terms, 3 hours each term.
A practical study of the solution of ordinary and partial differential equations. Prerequisite: calculus.

- Mth 424. **Theory of Measurements.** (g) One term, 3 hours.
Theory of errors, method of least squares, and adjustment of observations. Prerequisite: calculus.
- Mth 425. **Vector Analysis.** (G) One term, 3 hours.
Prerequisite: calculus.
- Mth 426. **Mathematical Theory of Probability.** (G) One term, 3 hours.
Methods of calculating probabilities with applications to scientific problems. Prerequisite: calculus.
- Mth 431, 432. **Advanced Calculus.** (G) Two terms, 3 hours each term.
Selected topics not covered in the first year of calculus. Prerequisite: calculus.
- Mth 435. **Numerical Calculus.** (G) One term, 3 hours.
Finite differences, interpolation, numerical differentiation and integration, and numerical solution of differential equations. Prerequisite: differential equations.
- Mth 441, 442. **Mathematical Theory of Statistics.** (G) Two terms, 3 hours each term.
Statistical constants; simple and multiple correlation; business cycles; frequency curves; theory of sampling. Prerequisite: calculus.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G)
may be taken for graduate credit.

- Mth 501. **Research.** Terms and hours to be arranged.
- Mth 503. **Thesis.** Terms and hours to be arranged.
- Mth 505. **Reading and Conference.** Terms and hours to be arranged.
- Mth 507. **Seminar.** Terms and hours to be arranged.
- Mth 511, 512, 513. **Functions of a Complex Variable.** Three terms, 3 hours each term.
An introduction to analytic functions, fundamental for advanced study in mathematics.
- Mth 514. **Calculus of Variations.** One term, 3 hours.
- Mth 516. **Potential Theory.** One term, 3 hours.
A study of the Newtonian and other potential functions.
- Mth 521, 522, 523. **Differential Equations of Mathematical Physics.** Three terms, 3 hours each term.
Ordinary and partial linear differential equations and boundary value problems, with applications.
- Mth 531, 532, 533. **Advanced Analytical Mechanics.** Three terms, 3 hours each term.
Generalized coordinates, Lagrange's equations, Hamilton's principal, Hamilton's canonical equations, contact transformations. One or more of the topics, special relativity, tensor analysis, statistical mechanics, or the theory of the top, will be included. Prerequisite: Mth 321, 322, 323, or equivalent.

Mth 541. **Theory of Elasticity.** One term, 3 hours.

The mechanics of elastic solids; applications to the strength, resistance, and deformation of materials.

Mth 544, 545. **Hydrodynamics.** Two terms, 3 hours each term.

The mechanics of fluids, with special reference to liquids, but including also some applications to air and other gases.

Nursing Education

WHILE the first two years of the Nursing Education Degree Curriculum as given at the State College are devoted chiefly to general and basic subjects in preparation for the professional training at the Medical School and in an affiliated hospital, a year sequence is required during the freshman year in the backgrounds of the nursing profession. The instruction is given by a member of the nursing-education faculty of the University of Oregon Medical School.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Nur 211, 212, 213. **Backgrounds of Nursing.** Three terms, 3 hours each term.

A study of the historical backgrounds of modern social and health movements, the relation of these to the evolution of nursing as a profession, and present aims and problems in nursing at home and abroad. Associate Professor Oswald.

Physics

STUDENTS planning to major in physics should offer a maximum of high-school mathematics and physics for entrance. The lower-division program should include mathematics through the calculus, general chemistry, and ordinarily two years of physics. Those planning for graduate study and research should also lay the foundations of a reading knowledge of German or French, or both. In special cases courses in closely related departments, involving considerable study of physical principles, may be accepted as major work.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Ph 111, 112, 113. **Engineering Physics.** Three terms, 3 hours each term.

Studies in general physics adapted to students in engineering. This sequence is started fall term and also winter term. One lecture; 2 recitations; 2 one-hour laboratory periods. Professor Weniger and others.

Ph 161. **Rudiments of Photography.** Any term, 2 hours.

A manipulation course intended for students not having the science prerequisites for Ph 361. One lecture; 1 two-hour laboratory period. Assistant Professor Garman.

Ph 201, 202, 203. **General Physics.** Three terms, 4 hours each term.

A general study covering mechanics, sound, heat, light, electricity, and an introduction to modern physics. Two lectures; 2 recitations; 1 two-hour laboratory period. Professor Anderson.

Ph 204, 205, 206. **Astronomy and Meteorology.** Three terms, 3 hours each term.

Year sequence descriptive rather than mathematical. Fall term, astronomy, emphasis on solar system. Winter term, meteorology, and the physics of the atmosphere (weather not suitable for astronomical observations). Spring term, astronomy, emphasis on types and groupings of stars. Students may enter any term. Three lectures or equivalent in observational and laboratory work. Professor Anderson.

Ph 211, 212. **Qualitative Physics.** Fall and winter terms, 3 hours each term.

A sequence giving the "how" and "why" of the most important applications of mechanics, heat, sound, light, and electricity and magnetism. Five periods per week devoted to demonstration lectures or informal discussions. Assistant Professor Yunker.

Ph 214. **Household Physics.** Winter term, 3 hours.

The principles of physics with special attention to applications in the home. Lectures, demonstrations, and discussion. Five periods. Assistant Professor Yunker.

UPPER-DIVISION COURSES

Ph 311, 312, 313. **Introduction to Modern Physics.** Three terms, 3 hours each term.

A continuation of General (or Engineering) Physics dealing with the chief discoveries since the closing years of the last century, together with the necessary introductory material thereto. Fall term, kinetic theory, the electron, radiation, radio-activity. Winter term, photoelectricity, thermionic emission, X-rays, modern applications of electronic devices. Spring term, conduction of electricity through gases, artificial transmutation, cosmic rays. A student may enter this course any term. Two lectures; 1 two-hour laboratory period. Assistant Professor Brady.

Ph 321, 322, 323. **Physical Measurements.** Three terms, 3 hours each term.

Fall term, electrical measurements; winter term, optical measurements; spring term, radio-frequency measurements. Prerequisite: calculus. Two lectures; 2 two-hour laboratory periods. Assistant Professors Varner and Yunker.

Ph 330. **Fundamentals of Radio.** Spring term, 3 hours.

The underlying physical principles; present-day radio circuits; construction and use of transmitting and receiving equipment. One lecture; 2 two-hour laboratory periods. Assistant Professor Yunker.

Ph 331, 332, 333. **Radio Communication.** Three terms, 3 hours each term.

Theory of radio transmission and reception; study of vacuum tubes; radio and audio frequency measurements; special problems. Prerequisite: one year of college physics and consent of instructor. Two lectures or recitations; 1 two-hour laboratory period. Assistant Professor Yunker.

- Ph 343. **Acoustics.** One term, 3 hours.
A study of the acoustics of buildings. Three lectures; occasional laboratory. Assistant Professor Morgan.
- Ph 361. **Photography.** Any term, 3 hours.
Theoretical and practical photography for the beginner: the hand camera, negative making, developing and printing, toning, enlarging, lantern slides. Prerequisite: college chemistry or physics or previous photographic experience, with consent of instructor. Offered each term. One lecture; 2 two-hour laboratory periods. Assistant Professor Garman.
- Ph 362. **Photography.** Winter term, 3 hours.
Commercial phases of photography: view cameras, copying, flash-lights, indoor lighting, color correction, distant views, etc. Prerequisite: Ph 361. One lecture; 2 two-hour laboratory periods. Assistant Professor Garman.
- Ph 363. **Photography.** Spring term, 3 hours.
The making of pleasing pictures: composition, carbon and carbonyl printing, paper negatives, diffusion, enlarging negatives, etc. Prerequisite: Ph 361. One lecture; 2 two-hour laboratory periods. Assistant Professor Garman.
- Ph 380. **Laboratory Arts.** Terms and hours to be arranged.
The construction, repair, and adjustment of physical apparatus. If desired, the study of the administration of the physical laboratory and points regarding home-made apparatus for high schools. Lectures, assigned readings, and laboratory.
- Ph 381. **History of Physics.** One term, 3 hours.
Three lectures.
- Ph 396. **Practical Astronomy.** One term, 3 hours.
Determination of time, latitude, longitude, and azimuth by astronomical methods. Prerequisite: Ph 206 and trigonometry. One lecture; 2 observation periods. Professor Anderson.
- Ph 401. **Research.** Terms and hours to be arranged.
- Ph 403. **Thesis.** Terms and hours to be arranged.
- Ph 405. **Reading and Conference.** Terms and hours to be arranged.
- Ph 407. **Seminar.** One hour each term.
- Ph 421, 422, 423. **Introduction to Theoretical Physics.** (G) Three terms, 3 hours each term.
A mathematical treatment of the theories of classical physics. Prerequisite: Ph 313. Three lectures, Assistant Professor Brady.
- Ph 461, 462, 463. **Advanced Photography.** (G) Three terms, 3 hours each term.
Work in special fields such as color photography, photomicrography, microscopic motion pictures, miniature camera technique, etc. Prerequisite: Ph 362. One lecture; 2 two-hour laboratory periods. Assistant Professor Garman.

- Ph 464. **The Physics of Light Production.** (g) One term, 3 hours.
A study of radiation and the development of modern illuminants.
Two lectures; 1 two-hour laboratory period. Professor Weniger.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G)
may be taken for graduate credit.

Courses at the graduate level are given when warranted by demand. A student may expect ordinarily to be able to take the courses necessary for his advanced degree during his normal period of graduate residence.

- Ph 501. **Research.** Terms and hours to be arranged.
- Ph 503. **Thesis.** Terms and hours to be arranged.
- Ph 505. **Reading and Conference.** Terms and hours to be arranged.
- Ph 507. **Seminar.** Terms and hours to be arranged.
- Ph 524, 525, 526. **Advanced Mathematical Physics.** Three terms, hours to be arranged.
Lectures and assigned readings. The topics treated will be varied from year to year to suit the needs of the students.
- Ph 531, 532, 533. **Advanced Electrical Theory.** Three terms, 3 hours each term.
A mathematical discussion of the classical and modern theories of electricity. Assistant Professor Varner.
- Ph 534, 535, 536. **Advanced Electrical Laboratory.** Three terms, 1 or 2 hours each term.
To be taken with Ph 531, 532, 533. Assistant Professor Varner.
- Ph 551, 552, 553. **Theory of Heat.** Three terms, 3 hours each term.
Therodynamics and the kinetic theory. Especially for students in physics and physical chemistry and those interested in industrial applications. Three lectures. Assistant Professor Varner.
- Ph 561, 562, 563. **Optics.** Three terms, 3 hours each term.
Physical optics; theory of optical instruments; spectroscopy. Prerequisite: Ph 322. Two lectures; 1 three-hour laboratory period. Professor Weniger.
- Ph 571, 572, 573. **Modern Physical Theories.** Three terms, 3 hours each term.
A discussion of such topics as the electron theory, relativity, the quantum theory, and wave mechanics. Three lectures. Prerequisite: Ph 423. Assistant Professor Morgan.
- Ph 576. **Quantum Mechanics.** One term, 3 hours.
A study of modern theories based on matrices, tensors, Schrodinger's equation, Heisenberg principle, and Dirac's transformation theory. Three lectures. Prerequisite: Ph 573.
- Ph 591, 592. **Cosmic Physics.** Two terms, 3 hours each term.
A study of the physical characteristics and behavior of the stellar universe with special emphasis upon the problems of the earth and the solar system. Three lectures.

Ph 593. **Geophysics.** One term, 3 hours.

Prerequisite: G 321, Ch 203, and differential equations. Three lectures.

Zoology

IN the lower-division courses the purpose is to furnish the student with effective grounding in the principles of animal biology and in laboratory methods. These courses also form the basis for technical and professional work in the applied fields of zoology. The upper-division courses provide for training in the special fields of the science and an acquaintance with recent developments. Advanced study courses and seminars introduce the student to research and give opportunity for advanced work in selected subjects.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Z 130. **Principles of Zoology.** Spring term, 3 hours.

The distribution, habits, and functions of animals with reference to their economic importance. Two lectures; 1 three-hour laboratory period.

Z 201, 202, 203. **General Zoology.** Three terms, 3 hours each term.

An introductory study dealing with principles of animal biology. For premedical students, pharmacy, physical education, psychology, fish and game management students, and others desiring a fundamental course in general zoology. Two lectures; 1 three-hour laboratory period.

Z 204, 205, 206. **Vertebrate Zoology.** Three terms, 4 hours each term.

The elements of comparative anatomy, gross and microscopic, and of vertebrate embryology. Two lectures; 6 hours laboratory.

Z 209, 210. **Elementary Human Anatomy.** Fall and winter terms, 3 hours each term.

For students in physical education and others desiring a course dealing with the organization of the human body. Two lectures; 1 laboratory period.

Z 211. **Elementary Human Physiology.** Spring term, 5 hours.

For students in home economics, physical education, prenursing, and others desiring a general course in the principles of human physiology. Three lectures; 2 laboratory periods.

UPPER-DIVISION COURSES

Z 306, 307, 308. **Physiology.** Three terms, 3 hours each term.

The functions of the various systems of the human body. During the spring term applied phases of physiology are considered. Prerequisite: general zoology. Two lectures; 1 laboratory period.

- Z 311. **Animal Ecology.** Spring term, 3 hours.
Animal associations and habitats; succession of animal communities; environmental factors; variation and regulation of animal numbers; movements of animals; social organization and behavior. Two lectures; 1 laboratory period.
- Z 313. **Field Zoology.** Spring term, 3 hours.
The local vertebrates, their taxonomic arrangement, habits, and distribution. Two lectures; 3 hours of laboratory or field work.
- Z 314. **Evolution and Eugenics.** Fall term, 3 hours.
A study of the various ideas concerning the origin, development, and relation of organisms with emphasis on human welfare.
- Z 315. **Genetics.** Winter term, 3 hours.
A study of heredity and variation in plants and animals. Special emphasis on such topics as heredity versus environment, inheritance of acquired characteristics, the glands of internal secretion and development, Mendelian principles of heredity, newer developments in heredity, and heredity in man.
- Z 321. **Economic Ornithology.** Fall term, 3 hours.
Habits, life histories and economic importance of northwestern birds with special reference to game and predatory birds. Two lectures; 1 three-hour laboratory period.
- Z 322. **Economic Mammalogy.** Winter term, 3 hours.
Classification, distribution, life histories and economic relationships of game, fur-bearing and destructive mammals. Two lectures; 1 laboratory period.
- Z 323. **Biology of Fishes.** Spring term, 3 hours.
A brief consideration of the game and commercial fishes, especially of Oregon; classification, life histories, habits; problems associated with the propagation and utilization of fishes. Two lectures; 1 laboratory period.
- Z 375. **Histology.** Fall term, 3 hours.
A study of the tissues of higher animals. One lecture; 6 hours laboratory.
- Z 376. **Microtechnique.** Winter term, 3 hours.
Study and practice in the principal methods of preparing animal tissues for microscopic study. One lecture; 6 hours laboratory.
- Z 377. **Embryology of Higher Vertebrates.** Spring term, 3 hours.
A study of the morphology and physiology of the early development of mammals. One lecture; 6 hours laboratory.
- Z 401. **Research.** Terms and hours to be arranged.
- Z 403. **Thesis.** Terms and hours to be arranged.
- Z 405. **Reading and Conference.** Terms and hours to be arranged.
Readings and reports on special topics.
- Z 407. **Seminar.** Any term, 1 hour each term.

- Z 411, 412, 413. **General Physiology.** (G) Three terms, 3 hours each term.
The principles of physiology and their application to life processes in animals. Prerequisite: general zoology, general chemistry, and organic chemistry. Two lectures; 1 three-hour laboratory period.
- Z 431, 432. **Invertebrate Zoology.** (G) Fall and winter terms, 4 hours each term.
The structure, classification, distribution, and life histories of the invertebrates. Two lectures; 2 laboratory periods. Prerequisite: two years of zoology.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

- Z 501. **Research.** Terms and hours to be arranged.
- Z 503. **Thesis.** Terms and hours to be arranged.
- Z 505. **Reading and Conference.** Terms and hours to be arranged.
- Z 507. **Seminar.** Terms and hours to be arranged.
- Z 536. **Parasitology.** One term, 3 hours.
A consideration of the role played by animals in the production of disease.
- Z 537. **Cytology.** One term, 3 hours.
A study of the structure and function of the cell with special reference to the behavior and distribution of chromosomes.

SCIENCE AT THE UNIVERSITY

By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in biological science, physical science, and mathematics was confined to the School of Science at the State College, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the State College and the University.

The lower-division work in botany, chemistry, geology, mathematics, physics, and zoology is essentially the same at both institutions. While it is recommended that students intending to major in these sciences enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the University, and transfer to the State College for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.

At both institutions, the lower-division program is intended, not only to lay the foundation for specialization in science, but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the University offers upper-division service courses in science for students in other fields.

The following lower-division and service courses in science are available at the University:

GENERAL SCIENCE

BiS 101, 102, 103. Biological-Science Survey. Three terms, 4 hours each term.
PhS 101, 102, 103. Physical-Science Survey. Three terms, 4 hours each term.

BOTANY

LOWER-DIVISION COURSES

Bot 101, 102, 103. General Botany. Three terms, 3 hours each term.
Bot 204. The Lower Plants. Fall term, 4 hours.
Bot 205. The Higher Plants. Winter term, 4 hours.
Bot 206. Systematic Botany. Spring term, 4 hours.
Bot 217, 218. Field Botany. Fall and winter terms, 2 or 3 hours each term.
Bot 219. Economic Botany. Spring term, 3 hours.

CHEMISTRY

LOWER-DIVISION COURSES

Ch 101, 102, 103. Elementary Chemistry. Three terms, 4 hours each term.
Ch 104, 105, 106. General Chemistry. Three terms, 4 hours each term.
Ch 211, 212, 213. Introductory Analytical and Physical Chemistry. Three terms, 4 or 5 hours each term.
Ch 220. Analytical Chemistry. Fall term, 4 hours.
Ch 221, 222. Elementary Organic Chemistry. Fall and winter terms, 3 hours each term.
Ch 223. Elementary Biochemistry. Spring term, 4 hours.
Ch 226, 227. Organic Chemistry. Two terms, 4 hours each term.
Ch 231. Qualitative Analysis. Spring term, 4 hours.
Ch 232. Quantitative Analysis. Fall or spring term, 3 to 5 hours each term.
Ch 233. Quantitative Analysis. Winter term, 3 to 5 hours.

UPPER-DIVISION SERVICE COURSE

Ch 340. Physical Chemistry. Spring term, 3 hours.

GEOLOGY

LOWER-DIVISION COURSES

G 101, 102, 103. General Geology. Three terms, 3 hours each term.
G 104, 105, 106. General Geology Laboratory. Three terms, 1 hour each term.
G 201, 202, 203. Introduction to Field Geology. Three terms, 1 to 3 hours each term.
G 283, 284. Introduction to the Study of Fossils. Winter and spring terms, 3 hours each term.
G 290, 291. An Introduction to the Geology of Oregon. Fall and winter terms, 3 hours each term.
G 293. Stratigraphy. One term, 2 or 3 hours.

MATHEMATICS

LOWER-DIVISION COURSES

Mth 10. Elements of Algebra. One term, 4 hours.
Mth 100. Intermediate Algebra. One term, 4 hours.
Mth 101. College Algebra. One term, 4 hours.
Mth 102. Plane Trigonometry. One term, 4 hours.
Mth 105. Elementary Analysis I. One term, 4 hours.
Mth 106. Elementary Analysis II. One term, 4 hours.
Mth 107. Elementary Analysis III. One term, 4 hours.
Mth 108. Mathematics of Finance. One term, 4 hours.
Mth 111, 112, 113. Introduction to Mathematical Analysis. Three terms, 2 hours each term.
Mth 200. Analytical Geometry. Fall term, 4 hours.
Mth 201, 202. Differential and Integral Calculus (Brief Course). Winter and spring terms, 4 hours each term.
Mth 203, 204, 205. Differential and Integral Calculus. Three terms, 4 hours each term.
Mth 207. Elements of Statistics. One term, 4 hours.
Mth 209. Mathematics of Life Insurance. One term, 3 or 4 hours.
Mth 215. Analytical Trigonometry. One term, 3 hours.

UPPER-DIVISION SERVICE COURSES

Mth 311. Mathematical Statistics. One term, 3 hours.
Mth 314. Higher Algebra. One term, 3 hours.
Mth 317. Elements of Projective Geometry. One term, 3 hours.
Mth 318. Theory of Equations. One term, 3 hours.
Mth 319. History of Elementary Mathematics. One term, 3 hours.
Mth 333. Elements of Modern Geometry. One term, 3 hours.

NURSING EDUCATION

LOWER-DIVISION COURSES

Nur 211, 212, 213. Backgrounds of Nursing. Three terms, 3 hours each term.

PHYSICS

LOWER-DIVISION COURSES

Ph 101, 102, 103. Essentials of Physics. Three terms, 2 hours each term.
Ph 104, 105, 106. Essentials of Physics Laboratory. Three terms, 1 hour each term.
Ph 201, 202, 203. General Physics. Three terms, 4 or 5 hours each term.
Ph 207, 208, 209. Descriptive Astronomy. Three terms, 3 hours each term.
Ph 211, 212, 213. Advanced General Physics. Three terms, 3 hours each term.

UPPER-DIVISION SERVICE COURSE

Ph 346. Sound. Winter term, 3 hours.

ZOOLOGY

LOWER-DIVISION COURSES

Z 005. Elementary Problems in Zoology. Terms and hours to be arranged.
Z 104, 105, 106. General Zoology. Three terms, 3 hours each term.
Z 111, 112, 113. Human Growth and Development. Three terms, 3 hours each term.
Z 204, 205, 206. Vertebrate Zoology. Three terms, 4 hours each term.
Z 213. Field Zoology. Spring term, 3 hours.
Z 250. Microtechnique. Winter or spring term, 2 hours.

UPPER-DIVISION SERVICE COURSES

Z 311, 312, 313. Elementary Human Physiology. Three terms, 3 hours each term.
Z 314. Evolution. Fall term, 2 hours.
Z 315. Heredity. Winter term, 2 hours.
Z 316. Eugenics. Spring term, 2 hours.

Lower Division and Service Departments

Faculty

MAHLON ELLWOOD SMITH, Ph.D., Dean of Lower Division and Service Departments.

GERTRUDE FULKERSON, Secretary to the Dean.

ARTS AND LETTERS

English

SIGURD HARLAN PETERSON, Ph.D., Professor of English; Head of Department.

FREDERICK BERCHTOLD, A.M., Litt.D., Professor Emeritus of English.

MAHLON ELLWOOD SMITH, Ph.D., Professor of English.

JOHN M KIERZEK, Ph.D., Professor of English.

DANIEL THOMAS ORDEMAN, Ph.D., Associate Professor of English.

RALPH COLBY, Ph.D., Associate Professor of English.

GERTRUDE ELIZABETH McELFRESH, A.M., Assistant Professor of English.

LAURIN BURTON BALDWIN, A.M., D.D., Assistant Professor of English.

HERBERT BENJAMIN NELSON, M.A., Assistant Professor of English.

ELEANOR CALDWELL INGALLS, M.A., Instructor in English.

ROBERT RAY REICHART, M.S., Instructor in English.

BEATRICE BUTLER BEEBE, M.A., Instructor in English.

HERBERT ELLSWORTH CHILDS, Ph.D., Instructor in English.

CLARK MIXON EMERY, M.A., Instructor in English.

GAINEFORD J HALL, M.A., Instructor in English.

AUDRED ROBERTS, A.B., Assistant Instructor in English.

Modern Languages

MELISSA MARGARET MARTIN, A.M., Professor of Modern Languages; Chairman of Department.

EDITH CARTER KUNEY, A.M., Associate Professor of Modern Languages.

MARY EUNICE LEWIS, M.A., Associate Professor of Modern Languages.

Speech

CHARLES BUREN MITCHELL, M.A., Professor of Speech; Head of Department.

ELIZABETH MARIA BARNES, B.L.I., Associate Professor of Speech.

EARL WILLIAM WELLS, J.D., Associate Professor of Speech.

PAUL XENOPHON KNOLL, M.S., Assistant Professor of Speech.

DELOSS PALMER YOUNG, B.S., Assistant Professor of Speech and Dramatics.

SOCIAL SCIENCE

Economics

MILTON NELS NELSON, Ph.D., Professor of Economics; Head of Department.
 WILLIAM HENRY DREESEN, Ph.D., Professor of Economics.
 ROBERT HORNIMAN DANN, M.A., Associate Professor of Economics.

History

EARNEST VANCOURT VAUGHN, Ph.D., Professor of History; In Charge of Department.
 JOSEPH WALDO ELLISON, Ph.D., Professor of History.

Philosophy

ERNEST WILLIAM WARRINGTON, M.A., Professor of Philosophy; Head of Department.

Political Science

ULYSSES GRANT DUBACH, Ph.D., Professor of Political Science; Head of Department.
 FRANK ABBOTT MAGRUDER, Ph.D., Professor of Political Science.
 DAN WILLIAMS POLING, B.S., Assistant Professor of Political Science.

Psychology

OTHNIEL ROBERT CHAMBERS, Ph.D., Professor of Psychology; In Charge of Department.
 JESSE FRANKLIN BRUMBAUGH, A.M., Professor of Psychology.

Sociology

GLENN ALMER BAKKUM, Ph.D., Professor of Sociology; Chairman of Department.
 ROBERT HORNIMAN DANN, M.A., Associate Professor of Sociology.

ARCHITECTURE AND ALLIED ARTS

Art and Architecture

JOHN LEO FAIRBANKS, Professor of Art and Architecture; Head of Department.
 HERBERT REEVES SINNARD, M.S., Assistant Professor of Architecture.
 IDA MARTHA MATSEN, A.M., Associate Professor of Art.
 DOROTHY MAY BOURKE, B.A., Assistant Professor of Art.
 THERON HARMS EGBERT, B.Arch., Instructor in Art and Architecture.

Landscape Architecture

ARTHUR LEE PECK, B.S., B.A., Professor of Landscape Architecture; Head of Department.
 FREDERICK ALEXANDER CUTHBERT, M.L.D., Associate Professor of Landscape Architecture.
 WILLIAM DORR LEGG, M.L.D., Assistant Professor of Landscape Architecture.

BUSINESS ADMINISTRATION

CURTIS KELLEY, M.B.A., Associate Professor of Business Administration; Acting Head of Department.

FRANK LESLIE ROBINSON, M. Acct., Associate Professor of Accounting.

JEROME LLOYD LEMASTER, M.A., Associate Professor of Business Administration.

DANIEL BARTON DELOACH, Ph.D., Assistant Professor of Business Administration.

BAYARD O WHEELER, M.A., Assistant Professor of Business Administration.

ROBERT ADOLPH STEINER, M.B.A., Instructor in Business Administration.

JOURNALISM

FRED MURIEL SHIDELER, B.S., Assistant Professor of Journalism; In Charge of Department.

*CHARLES JARVIS MCINTOSH, B.S., B.S.D., Professor of Industrial Editing.

MUSIC

PAUL PETRI, Director of Music; Professor of Singing and Conductor of Choruses; Head of Department.

HARRY LYNDEN BEARD, M.A., Professor of Music; Conductor of R.O.T.C. Band.

LILLIAN JEFFREYS PETRI, Professor of Piano and Music Theory.

DELBERT WARREN MOORE, B.A., Professor of Stringed Instruments; Conductor of Orchestras.

FLORENCE BOWDEN, B.A., Instructor in Cello, Violin, and Fretted Instruments; Conductor of Mandolin and Guitar Club.

IRIS GRAY, B.Mus., Instructor in Piano.

RELIGION

ERNEST WILLIAM WARRINGTON, M.A., Professor of Religion; Head of Department.

General Statement

ALL departments of instruction at the State College not included in the major departments and schools, except the departments of Military Science and Tactics and Physical Education, are administered under the Dean of Lower Division and Service Departments. In this administrative unit are the several departments of arts and letters and social science, architecture and allied arts, business administration, journalism, and music.

Under the plan adopted for the Oregon State System of Higher Education, major work in these fields is confined to the University. The work at the State College in these fields parallels the lower-division work at the

*Will teach part time 1938-39.

University. Similarly, lower-division work is offered at the University in the following fields in which major work is confined to the State College: the biological and physical sciences (including mathematics) and home economics. At each institution, in addition to the lower-division work, upper-division service courses are offered in the nonmajor departments for students in other fields.

A student can complete the first two years of work in any of these fields at the nonmajor institution, and transfer to the major institution at the beginning of the junior year with fundamental requirements for upper-division work fully met.

In the organization and administration of the instruction in the nonmajor departments at the two institutions, the deans of the major schools serve as advisers to the end that the offerings shall bear a proper relation to the work of the major school. The deans of major schools at the University who thus serve in an advisory relation to lower-division and service work at the State College are the following:

CLARENCE VALENTINE BOYER, Ph.D., Dean and Director of Arts and Letters.

JAMES HENRY GILBERT, Ph.D., Dean and Director of Social Science.

ELLIS FULLER LAWRENCE, M.S., F.A.I.A., Dean and Director of Architecture and Allied Arts.

VICTOR PIERPONT MORRIS, Ph.D., Dean and Director of Business Administration.

ERIC WILLIAM ALLEN, A.B., Dean and Director of Journalism.

JOHN JACOB LANDBURY, Mus.D., Dean and Director of Music.

RALPH WALDO LEIGHTON, Ph.D., Acting Dean and Director of Physical Education.

In addition to the departments already named, the Department of Religion at the State College is administered under the same organization.

Arts and Letters

LOWER-division and service courses in arts and letters are offered at the State College. By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in arts and letters was confined to the College of Arts and Letters at the University, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the University and the State College.

The lower-division work in English, German, French, and Spanish is essentially the same at both institutions. While it is recommended that students intending to major in these fields enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the State College, and transfer to the University for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.

At both institutions, the lower-division program is intended, not only to lay the foundation for specialization in arts and letters, but also to serve the

needs of students majoring in other fields. In addition to the lower-division work, the State College offers upper-division service courses in arts and letters for students in other fields.

English

THE lower-division courses in English are intended to supply the training in writing necessary to every educated man, to afford a cultural background for those students who are limited to two years of work in the field of English, and to present the necessary foundation work for the continuation of English as a major at the University.

Literature. The study of English literature begins with an introduction in the form of either a historical presentation of the tradition of English literature or an examination of the motives and ideas of literature. This is followed by a more detailed study of periods, epochs, and centuries of English literary movements; a careful analysis of the chief literary forms such as the novel, drama, and poetry; and a more intensive study of the major authors.

Written English. The purpose of the study and practice of written English is technical accuracy in the fundamental forms of composition, the development of the power of expression, and the survey of special art forms such as versification, play-writing, essays, and short story.

English K. All entering students are required to take an examination in English. Those who fail in this examination are enrolled in a writing course called English K, the object of which is the diagnosis and correction of defects manifested in the placement examination. Those who pass the examination enter the regular freshman course (Eng 111, 112, 113).

COURSES IN LITERATURE

LOWER-DIVISION COURSES

- *Eng 101, 102, 103. **Literature Survey.** Three terms, 3 hours each term.
A general outline course in the history of English literature. Fall term: nineteenth century. Winter term: from the beginnings to the seventeenth century. Spring term: seventeenth and eighteenth centuries. Three lectures or recitations. Associate Professor Ordeman.
- *Eng 104, 105, 106. **Introduction to Literature.** Three terms, 3 hours each term.
The purpose is to stimulate appreciation and criticism of literature. Study of prose in the first term, prose and some poetry in the second, and poetry in the third. The selections used, especially in introducing the course, are mostly contemporary or modern. The emphasis throughout is on ideas and motives. Three lectures or recitations. Professors Peterson and Kierzek, Associate Professors Ordeman and Colby.
- Eng 161. **American Literature.** Fall or spring term, 3 hours.
Study of American literature from its beginnings to the present day. Three lectures or recitations. Professor Peterson and Associate Professor Ordeman.

*Students intending to major in English should take either Eng 101-103 or Eng 104-106.

- Eng 201, 202, 203. **Shakespeare.** Three terms, 3 hours each term.
Study of the important historical plays, comedies, and tragedies. Courses in sequence but may be taken separately. Prescribed for major. Lectures or recitations. Professor Smith.
- Eng 231. **Directed Recreational Reading.** Any term, 1 or 2 hours each term.
Fiction, travel, adventure, biography, etc. Readings and discussions based on the principle of interest. Aims to serve as a guide to leisure reading. Does not satisfy group requirements. Mr. Childs.
- Eng 261, 262. **Individual Authors.** Fall term, 3 hours.
Each term devoted to the study of a single author—Tennyson 1938-39. Lectures or recitations. Professor Smith.
- Eng 263. **Great Books.** Winter term, 3 hours.
Survey of some of the world's great books, including the Bible, the *Odyssey*, *Arabian Nights*, *Divine Comedy*, *Autobiography of Benvenuto Cellini*, *Don Quixote*, *Pilgrim's Progress*, *Gulliver's Travels*, and *Faust*. The emphasis is on the contribution each has made to western culture—that is, on elements of enduring greatness. Three lectures or discussion periods. Professor Smith.
- Eng 264, 265, 266. **Continental European Literature.** Three terms, 3 hours each term.
The study of Continental European literature in approved translations. Lectures and reports. Fall term, Romance literature; winter term, Germanic; spring term, Slavic. Associate Professor Colby.
- Eng 271, 272, 273. **Contemporary Literature.** Three terms, 3 hours each term.
This sequence takes up in successive terms the contemporary American novel, modern drama, and American poetry. Three lectures or recitations. Professor Kierzek.
- Eng 274. **The Short Story.** Spring term, 3 hours.
The development of the American short story; analysis of recognized masterpieces as well as of the best present-day magazine stories, with the idea of developing critical taste in reading. Professor Peterson.
- Eng 275. **The Bible as Literature.** Spring term, 3 hours.
Designed to stimulate and enlarge appreciation of the art and beauty of the literature of the Bible. Questions of theology and dogmas of religion are avoided. Assignments include passages which fall under the chief literary types, such as folk-lore, story telling, history, poetry, drama, wisdom literature, oratory, and the essay. Three lectures or recitations. Assistant Professor Baldwin.
- Eng 276. **The Novel.** Winter term, 3 hours.
A rapid survey of the development of the English novel. Through lectures and assigned readings, the aim is to enrich the student's background of knowledge in the field of the novel and thus to prepare him for critical appreciation of fiction. Professor Peterson.

COURSES IN WRITTEN ENGLISH

LOWER-DIVISION COURSES

English K. Fall or winter term, 1 hour.

A one-term course in the mechanics of composition for those who fail to pass the English placement examination. The student must pass the English placement examination or English K before he is permitted to register for any other written English course. Three recitations.

Eng 111, 112, 113. English Composition. Three terms, 3 hours each term.

A year sequence in the fundamentals of English composition and rhetoric, with frequent written themes in the various forms of discourse. Special attention is paid to correctness in fundamentals and to the organization of papers. Prerequisite: English placement examination. Three recitations. Professor Kierzek and Staff.

Eng 118. Technical Report Writing. Spring term, 3 hours.

Study of technical reports with practice in writing them. As far as possible definite application of principles learned is made to specific needs and interests of students having papers in progress during the term. A variety of reports is studied. Prerequisite: Eng 111, 112, 113, or equivalent. Three recitations. Associate Professor Ordeman.

Eng 211. Essay Writing. Fall term, 3 hours.

An advanced course in composition devoted to the study and perfection of style, and to the study of the various forms and models of the essay. Prerequisite: Eng 111, 112, 113. Three recitations. Associate Professor Ordeman.

Eng 213, 214, 215. Short Story Writing. Three terms, 2 hours each term.

Year sequence designed to develop proficiency in the art of writing the short story. Courses in sequence but may be taken separately. Prerequisite: consent of instructor. Two recitations. Professor Peterson.

Eng 217. Business English. Any term, 3 hours.

A complete review and study of modern practices in business correspondence, organized primarily for students preparing for a business career. Attention is paid to the analysis and to the writing of all types of correspondence. Prerequisite: Eng 111, 112, 113. Three recitations. Assistant Professor Nelson.

Eng 218. Advanced Composition. Winter term, 3 hours.

An advanced study of composition for those interested in the problems of creative expression and prose style. Prerequisite: Eng 111, 112, 113. Three recitations.

UPPER-DIVISION SERVICE COURSE

Eng 324. English Composition for Teachers. Spring term, 3 hours.

For students expecting to teach English in high schools. Practice in writing and a review of the rules of composition. Prerequisite: Eng 111, 112, 113. Three recitations. Assistant Professor Nelson.

Modern Languages

IN THE department of Modern Languages instruction is offered in French, German, and Spanish. The lower-division and service courses in these languages are intended to meet not only the cultural needs of all students but also the foreign language requirements found in scientific and technical curricula and needed in connection with various vocations. The student will find at the State College all courses needed in preparing for major work in the languages as offered at the University.

Students who enter with one unit of high-school French, German, or Spanish and wish to continue the study of the language should register for First-year French, First-year German or First-year Spanish. Those entering with two units of entrance credit in a language should register for the second-year college course; those with three or more entrance units should register for the course in the literature of the language. Students having other preparation and students entering from colleges offering more or fewer hours per week in a course should confer with the instructor.

COURSES IN GERMAN

LOWER-DIVISION COURSES

Ger 1, 2, 3. **First-Year German.** Three terms, 4 hours each term.*

Rudiments of the language; oral and written exercises; reading and translation of easy prose and poetry. Four recitations. Professor Martin and Associate Professor Lewis.

Ger 4, 5, 6. **Second-Year German.** Three terms, 4 hours each term.

Grammar, composition, and conversation. Translation of standard German authors. Prerequisite: Ger 1, 2, 3 or one year of college or two years of high-school German. Four recitations. Associate Professor Lewis.

Ger 201, 202, 203. **German Literature.** Three terms, 3 hours each term.

(Third-year German.) Advanced texts are used. Prerequisite: Ger 4, 5, 6 or equivalent. Three recitations. Associate Professor Lewis.

UPPER-DIVISION SERVICE COURSES

(Courses 300-399 are open to lower-division students.)

Ger 311, 312, 313. **German Literature.** Three terms, 3 hours each term.

Advanced texts are used. Prerequisite: Ger 4, 5, 6 or equivalent. Not open to students who have taken Ger 201-203. Three recitations. Associate Professor Lewis.

Ger 320, 321, 322. **Scientific German.** Three terms, 3 hours each term.

Recommended to students interested in science or medicine. Articles on chemistry, physics, biology, anatomy, embryology, comparative anatomy, surgery, and the history of medicine are read, as well as current clinical literature. Prerequisite: consent of instructor. Three recitations. Associate Professor Lewis.

*A special section of Ger 1, 2, 3 for engineering students is offered for 3 hours each term.

COURSES IN ROMANCE LANGUAGES: FRENCH

LOWER-DIVISION COURSES

- RL 1, 2, 3. **First-Year French.** Three terms, 4 hours each term.
Grammar, pronunciation, composition, conversation. Translation of easy French prose and poetry. Four recitations. Associate Professor Kuney.
- RL 4, 5, 6. **Second-Year French.** Three terms, 4 hours each term.
Review of grammar, composition, conversation, reading of modern French authors. Prerequisite: RL 1, 2, 3 or one year of college or two years of high-school French or equivalent. Four recitations. Associate Professor Kuney.
- RL 201, 202, 203. **French Literature.** Three terms, 3 hours each term.
(Third-year French.) Reading of masterpieces of various periods. A general survey of French literature. Prerequisite: two years of college French or the equivalent. Three lectures or recitations. Associate Professor Kuney.
- RL 211, 212, 213. **Directed Reading in French.** Three terms, 1 hour each term.
Reading in French in the field of the student's major. Open to students who have had the equivalent of second-year college French, and in approved cases, to students majoring in science, after one year of college French. One conference each week with instructor. Enrollment limited. Associate Professor Kuney.

UPPER-DIVISION SERVICE COURSES

- RL 311, 312, 313. **French Literature.** Three terms, 3 hours each term.
(Third-year French.) Reading of masterpieces of various periods. A general survey of French literature. Prerequisite: two years of college French or the equivalent. Not open to students who have taken RL 201-203. Three lectures or recitations. Associate Professor Kuney.

COURSES IN ROMANCE LANGUAGES: SPANISH

LOWER-DIVISION COURSES

- RL 11, 12, 13. **First-Year Spanish.** Three terms, 4 hours each term.
Grammar, composition, conversation, translation of easy prose. Four recitations. Professor Martin.
- RL 14, 15, 16. **Second-Year Spanish.** Three terms, 4 hours each term.
Review of grammar, composition, conversation, reading of modern Spanish authors. Prerequisite: RL 11, 12, 13 or one year of college or two years of high-school Spanish. Four recitations. Professor Martin.
- RL 207, 208, 209. **Spanish Literature.** Three terms, 3 hours each term.
(Third-year Spanish.) Reading of masterpieces of various periods. A general survey of Spanish literature. Prerequisite: two years of college Spanish or the equivalent. Three lectures or recitations. Professor Martin.

RL 214, 215, 216. **Directed Reading in Spanish.** Three terms, 1 hour each term.

Reading in Spanish in the field of the student's major. Open to students who have had the equivalent of second-year college Spanish. One conference each week with instructor. Enrollment limited. Professor Martin.

UPPER-DIVISION SERVICE COURSES

RL 341, 342, 343. **Spanish Literature.** Three terms, 3 hours each term.

(Third-year Spanish.) Reading of masterpieces of various periods. A general survey of Spanish literature. Prerequisite: two years of college Spanish or the equivalent. Not open to students who have taken RL 207-209. Three lectures or recitations. Professor Martin.

Speech

INSTRUCTION in speech has for its purpose to build strength of personality by aiding students in the development of clear, original thinking and by giving training in the correlation, organization, and presentation of knowledge gained through study and experience. Much drill and criticism are given on organization of material, on platform work, and on the principles that underlie effective reading and speaking. The training goes far in helping to overcome self-consciousness and other emotional inhibitions, and in aiding to build up a strong personal address.

Courses in interpretation and community drama are conducted not only as a means of rounding out the speech training, but also as an aid to prospective teachers and other community leaders in the directing of plays and in the making of stage-settings, costumes, and other necessary equipment.

Courses in speech are required in a number of professional curricula. Such training is regarded as of great value to all students preparing for leadership in any field, including prospective teachers of vocational subjects, agricultural agents, home demonstration agents, club leaders, homemakers, and others.

Many plays, intramural and intercollegiate debates, extempore speaking and oratorical contests take place on the campus each year, and much individual attention is given to students who wish to prepare for such work.

Speech Correction. A clinic is maintained by the department for those who are handicapped with the various speech impediments, such as stammering, lisp, nasality, and the like. Advice and treatment are given for both organic and functional difficulties. An attempt is made to understand the factors in the life of the individual which have caused any emotional difficulties, and when they are located an attempt is made to eradicate them. For each student wishing to take this work individual conferences are given during which his speech difficulties receive special consideration.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Sp 111, 112, 113. **Extempore Speaking.** Three terms, 3 hours each term.

First term: Practice in the development and presentation of original speeches on topics of special interest to the students; vocabu-

lary building and pronunciation; some study of voice, gesture, bearing, and other elements of effectiveness in presentation; criticism on organization of material; organization is stressed. Second term: Practice in the construction and presentation of original speeches; study of techniques in the use of body and voice as elements of effectiveness in delivery; criticism on organization and presentation; delivery is stressed. Third term: Intensive drill in the technique of delivery, with a consideration of speeches for special occasions. Professor Mitchell, Associate Professor Wells, Assistant Professor Knoll.

Sp 120. Voice and Diction. Spring term, 3 hours.

Proper use of the vocal mechanism; tone production and the production of elemental speech sounds; phonetics as a basis for pronunciation and distinctness of utterance; vocabulary building. Individual practice employing basic principles which underlie good speech for social, business, platform, and radio use. Associate Professor Barnes.

Sp 121. Interpretation I. Any term, 3 hours.

Analysis of material for thought content and purposes. Study and application of principles involving emotional reactions which give color and interest to speech. Expressive voice. Correction of erroneous habits of speech; overcoming artificiality, affectation, and self-consciousness; development of poise and bodily release. Associate Professor Barnes, Assistant Professor Young.

Sp 122. Interpretation II. Any term, 3 hours.

Study of impersonation in its various forms. Character analysis and characterization are stressed through the study of the monolog and other forms of dramatic literature including short plays. Prerequisite: Sp 121. Associate Professor Barnes, Assistant Professor Young.

Sp 123. Interpretation III. Spring term, 3 hours.

Interpretation of poetry: psychology of audience reaction to material presented; the speech chorus; advanced work in expressive voice. Prerequisite: Sp 120. Associate Professor Barnes.

Sp 211, 212, 213. Oratory Squad. Three terms, 2 hours each term.

Preparation and delivery of original manuscript speeches. Consent of instructor must be obtained before registration. Credit in only one of these courses may be earned in any academic year. These courses are used as a means of preparation for intercollegiate competition. Prerequisite: Sp 111, 221. Two recitations. Professor Mitchell, Associate Professor Wells.

Sp 214, 215, 216. Extempore Speaking Squad. Three terms, 2 hours each term.

Intensive drill in extempore speaking in preparation for intercollegiate competition. Consent of instructor must be obtained before registration. Credit in only one of these courses may be earned in any academic year. Prerequisite: Sp 111, 112. Two recitations. Associate Professor Wells.

Sp 217, 218, 219. Debating. Three terms, 2 hours each term.

Application of the principles of argumentation to debating; analysis and brief-drawing. Each student participates in several debates.

Criticism on delivery and on the selection and handling of evidence in both constructive argument and refutation. Assigned readings. Credit in only one of these courses may be earned in any one year. Prerequisite: Sp 111, 220, and consent of instructor. Two recitations. Professor Mitchell, Assistant Professor Knoll.

Sp 220. Argumentation. Fall or spring term, 3 hours.

Consideration of the theory of argumentation; practical work in brief-drawing, collection and handling of evidence, and construction of argumentative speeches. Each student works out several briefs and delivers several speeches. Criticism on presentation and construction. Prerequisite: Sp 111. Three recitations. Assistant Professor Knoll.

Sp 221. Speech Composition. Fall term, 3 hours.

Text-book work, study of models, lectures, composition exercises, the writing of a term speech. This course is maintained as an aid to a mastery of effective style in speaking. Prerequisite: Sp 111. Three recitations. Professor Mitchell, Associate Professor Wells.

Sp 222. The Extended Address. Spring term, 3 hours.

Construction and presentation of the extended address. Each student prepares and presents several long speeches. The psychology of public speaking involving the principles of persuasion is considered. Assigned readings. Students should confer with instructor before electing this course. Section limited to ten students. Prerequisite: Sp 111, 112. Three recitations. Professor Mitchell.

Sp 231. Parliamentary Procedure. Spring term, 3 hours.

This course covers the principles of parliamentary usage applied in deliberative assembly, conference, and panel discussion. It gives each student an opportunity to serve as chairman and secretary of several meetings during the term. Much practice is afforded in the conducting of various types of group discussions, in the presentation of motions, and impromptu speaking under the supervision of a critic. Assigned readings. Three recitations. Associate Professor Wells.

Sp 234, 235, 236. Radio Speaking. Three terms, 3 hours each term.

Voice and diction as they pertain to speaking over the radio; study of the special techniques of radio; preparation of radio speeches and continuity; program building. Practice before the microphone and in the broadcasting of dramatic and other types of material over KOAC. Prerequisite: Sp 111, 120, or consent of instructor. Professor Mitchell.

Sp 244. Stagecraft and Lighting. Any term, 3 hours.

In this course consideration is given to the problems involved in the construction of scenery and stage properties. A study is made of lighting and lighting equipment. Practical experience is gained in lighting, stage management, and the construction of different types of settings, including realistic and suggestive. Associate Professor Young.

Sp 247, 248, 249. Community Drama. Three terms, 3 hours each term.

Designed to meet the needs of community leaders. The community-drama idea; plays suitable for use in school or community; the staff; make-up; stage setting and costumes; modern tendencies in stage setting and costuming; directing and play production. Groups of one-act plays are produced at the end of each of the first two terms. Laboratory

work in conducting rehearsals and producing plays. Students are given actual experience in producing plays effectively at little expense. Prerequisite: consent of instructor. Associate Professor Barnes.

Sp 250. **Speech Defects.** Spring term, 3 hours.

Survey of the various speech defects, their causes and methods of cure. Intended primarily for students in home economics, especially those in the nursery school for teachers, and others whose careers necessitate an intelligent understanding of the speech problems of the child. Designed also to give a background of understanding to those who have special defects. Offered alternate years. Associate Professor Wells.

Sp 251. **Workshop Theater Players.** Any term, 1 to 3 hours each term.

Credit is given for actual participation in campus productions upon recommendation of the instructor in charge. Total credit not to exceed 6 hours. Professor Mitchell, Associate Professor Barnes, Assistant Professor Young.

Social Science

LOWER-division and service courses in social science are offered at the State College. By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in social science was confined to the College of Social Science at the University, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the University and the State College.

The lower-division work in economics, history, political science, psychology, and sociology is essentially the same at both institutions. While it is recommended that students intending to major in these fields enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the State College, and transfer to the University for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.

At both institutions, the lower-division program is intended, not only to lay the foundation for specialization in social science, but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the State College offers upper-division service courses in the social sciences for students in other fields.

General Social Science

CERTAIN phases of the instructional work in social science are of general character, being broader in scope and objectives than any of the departments. Instruction of this type is given through the survey for freshmen and sophomores, which aims to give the student a comprehensive view of social science as a division of knowledge. The subject-matter is nontechnical and is adapted to the student interested in social science more as a cultural subject than for any other specific purpose. The survey may serve as satisfaction of a Lower-Division Social-Science group requirement

but is not usually considered as prerequisite to advanced courses in specialized social sciences.

SOCIAL-SCIENCE SURVEY COURSES

LOWER-DIVISION COURSES

SSc 101, 102, 103. Background of Social Science. Three terms, 3 hours each term.

A study of the factors and forces which constitute the make-up of society. The validity of the thought process and opinions of the students with respect to social phenomena are challenged. An analysis is made of scientific methods and the possibilities and limitations of application in the social sciences. An attempt is made to acquaint the student with the findings of psychology in regard to bias and prejudices, egoism of the crowd, habit responses, complexes, and factors of wise thinking. Insight, rather than mere information, is the aim. Associate Professor Dann.

Economics

ECONOMICS instruction at the State College, including lower-division and service courses, is intended to meet the cultural and informational needs of all students interested in economic problems in relation to citizenship, and to supply a lower-division foundation for law, business, or public service, or for majoring in economics at the University. The courses are also selected with a view to meeting the prescriptions found in technical curricula and needed in connection with various vocational lines.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Ec 201, 202, 203. Principles of Economics. Three terms, 3 hours each term.

The principles that underlie production, exchange, and distribution. Practical problems, such as monetary and banking reform, trade regulations, taxation, labor movements, regulation of railways and public utilities are considered. Professors Nelson, Dreesen, Associate Professor Dann, Assistant Professor DeLoach.

Ec 211. Outlines of Economics. Any term, 4 hours.

A study of economic institutions and their relation to individual and group conduct. An analysis of income flow and of the production, distribution and exchange of wealth; their impact upon the consumer under varying political-economic systems. A brief survey of marketing, the pricing process, money, tariff, farm problems, labor, and business cycles. Recommended for home economics majors. Not open to students planning to major in business administration. Assistant Professor Wheeler.

Ec 212. Outlines of Economics. Fall or spring term, 3 hours.

An abridgment of Ec 201, 202, 203. A rapid survey of the principles of economics and of economic institutions with special reference to

the interests of students in the professional and technical schools. Restricted to science and upper-division professional and technical school students. Associate Professor Dann.

UPPER-DIVISION SERVICE COURSES

Prescribed in major curricula in degree-granting schools at the State College and also available as electives to students majoring in such schools.

Ec 413. Money and Banking. (g) Spring term, 4 hours.

Money: The nature and functions of money; the factors affecting price, and their relation to business conditions; brief history of the various forms of money; present problems and conditions. Banking: Functions of banks; history of banking, including our national banking system, with emphasis upon the Federal Reserve Bank Act; comparison of our banking system with those of foreign countries. Assigned readings, open to students who have completed a course in introductory economics. Professor Dreesen.

Ec 418. Public Finance. (g) Winter term, 4 hours.

Public expenditures, local, state, and national; brief history of reforms calculated to secure efficiency in these expenditures; forms of taxes, customs, and fees whereby revenues are raised; present systems of land taxation studied in the light of proposed reforms; special attention to war finance; bonds versus taxes in public finance; management of national and local debts. Assigned readings. Four recitations. Open to students who have completed a course in introductory economics. Professor Dreesen.

Ec 425. Labor Problems. (g) Fall term, 4 hours.

The conditions under which laborers have worked since the advent of the industrial revolution. Topics especially emphasized are: trade union policies; strikes and lockouts; trade agreements; conciliation and arbitration; immigration; unemployment; women and children in industry; prison labor; industrial education, etc. Open to students who have completed introductory courses in economics or sociology. Associate Professor Dann.

Ec 435. Transportation. (g) Spring term, 4 hours.

Brief historical review of the development of systems of transportation; organization and financing of different systems; effect of competition in the railroad business; freight classification and the making of rates and fares; the necessity of government control and attempts at regulation by state and Federal governments. Open to students who have completed a course in introductory economics. Professor Dreesen.

Ec 440. International Trade. (g) Fall term, 4 hours.

The theory of international trade; nature and effects of government interference in the form of bounties, subsidies, import and export duties; the commercial policies of the more important nations; consular service; foreign exchange and international banking systems; ocean routes and carriers; foreign trade organizations. Prerequisite: Ec 201, 202, 203, or Ec 211. Professor Dreesen.

Ec 475, 476, 477. Current Economic Theory and Problems. (g) Three terms, 3 hours each term.

Economic theories and their application to current economic problems; the economics of the New Deal in relation to selected topics

such as value, price, distribution, money and credit, public credit and finance, foreign trade and exchange, international and intercommunity debtor-creditor problems, tariffs, imperialism, international and domestic cartels and trusts, marketing and transportation, and others. Open to students who have completed a course in introductory economics. Professor Nelson.

GRADUATE SERVICE COURSES

Courses numbered 400-499 and designated (g) may be taken for credit toward a graduate minor.

History

HISTORY courses are intended to supply the necessary background for intelligent citizenship. The aim of the several courses is to afford an opportunity for a survey of world history and the development of western civilization together with a more detailed study of the English people, the British Empire, and the history of America from the earliest period to the present. The courses also prepare students to major in history at the University.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Hst 201, 202, 203. **History of Western Civilization.** Three terms, 3 hours each term.

Survey of the origins and development of western civilization from early times to the present; particular attention to social, economic, and political factors, and the relation of the past to contemporary civilization. Professors Vaughn and Ellison.

Hst 207, 208. **England and the British Empire.** Fall and winter terms, 3 hours each term.

The constitutional and political history of England; the expansion and present position of the British Empire. Hst 207, 208 when followed by Hst 209 satisfy group requirement in Social Science. Professor Vaughn.

Hst 209. **The World Since 1914.** Spring term, 3 hours.

The war and the problems of reconstruction in the light of their historical antecedents and causes studied with reference to evaluation of current events and sources. With Hst 207, 208, satisfies sophomore social-science group requirement. Professor Vaughn.

Hst 224, 225, 226. **History of American Civilization.** Three terms, 3 hours each term.

The rise and development of American civilization from the beginning to the present; special attention to economic, social, and cultural life, political changes, and international relations. Professor Ellison.

UPPER-DIVISION SERVICE COURSE

Hst 377. **History of Oregon.** Spring term, 3 hours.

This course aims to present a fairly detailed survey of the political, economic, social, and cultural development of Oregon and the Pacific Northwest from the beginning to the present. Lectures, readings, reports. Professor Ellison.

Philosophy

LOWER-division instruction in philosophy is intended both for students who anticipate more advanced study of philosophy and for those who desire a brief introductory study only.

LOWER-DIVISION COURSES

Phl 211, 212, 213. **Practical Life Philosophies.** Three terms, 2 hours each term.

Intended to develop in the student the habit of reflective thinking. The student is asked to apply the process of critical thinking to his own judgment and evaluations of life, the world, himself, and human society. The starting point and constant reference of the instruction is to actual practical "life philosophies"; e.g., the traditional Christian ethics; the "American gospel according to Benjamin Franklin"; the ultra-modern idealisms, realisms, and naturalisms; Nietzscheanism; the new Epicureanism of Anatole France; Marxist socialism; the neo-Christianity of men like Kropotkin and Tolstoy. Professor Warrington.

Political Science

THE courses in political science are designed primarily for a training in intelligent citizenship and effective participation in public affairs. They aim to give the student an active interest in the structure of political life, the operation of governments, and an understanding of current political questions. Graduates of professional and technical schools are expected to take an active part in the affairs of government and through courses in political science are trained for the responsibilities of public life. The courses also prepare students to major in political science at the University.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

PS 201, 202, 203. **Modern Governments.** Three terms, 4 hours each term.

(1) American National Government with special attention to contemporary reforms; (2) State and Local Governments with attention to practical operation and contemporary reforms in Oregon; (3) European Governments, a comparative study of the principal European countries with particular attention to England, France, and Germany. Professors Dubach and Magruder.

PS 212. **American National Government.** Any term, 3 hours.

An abridgment of PS 201. Restricted to professional and technical school students. Professors Dubach and Magruder.

PS 231, 232, 233. **Current Affairs.** Three terms, 2 hours each term.

The story of man's activities as told in the press and by telegraph, cable and radio. Major emphasis is given to political and economic questions, though outstanding developments in science, arts, and related fields are discussed. Individual current happenings are in every instance related to established principles and existing organizations.

UPPER-DIVISION SERVICE COURSES

Prescribed in major curricula in degree-granting schools at the State College and also available as electives to students majoring in such schools.

- PS 415. **Municipal Government.** (g) Spring term, 3 hours.
Consideration of the organization, functions, and present-day problems of city and town government. The cities of the Northwest receive special attention. Professor Magruder.
- PS 417. **International Relations.** (g) Fall term, 3 hours.
Nature and history of international relations, the League of Nations and the World Court, together with a study of political and economic realities affecting international interdependence. How the United States conducts her foreign affairs; how she deals with her protectorates; causes of international wars; the League of Nations; the World Court; general survey of contemporary world conditions. Professor Magruder.
- PS 418. **Latin-American Relations.** (g) Winter term, 3 hours.
Critical study of resources, population, social and political movements; form of government, particularly emphasizing the effects on inter-American relationships. Professor Dubach.
- PS 419. **Pacific Area Relations.** (g) Spring term, 4 hours.
Study of races; trade conditions; Chinese-Japanese relations; Russo-Japanese affairs; the possessions of the United States in the Pacific. Professor Dubach.

GRADUATE SERVICE COURSES

Courses numbered 400-499 and designated (g) may be taken for credit toward a graduate minor.

Psychology

PSYCHOLOGY courses are intended to meet the needs of students desiring a foundation in psychology for work in education, either general or vocational; to prepare students to major in psychology at the University; and to meet the service needs of various schools and departments that require psychology as a part of their program of training.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

- Psy 111. **Mental Hygiene.** Any term, 3 hours.
The conditions of healthy mental development and normal reactions to life and the college environment; the habits, attitudes, and reactions of the normal mind. No credit is given to students who have taken Ed 101. Professor Chambers.
- Psy 112, 113, 114. **Introduction to Reflective Thinking.** Three terms, 3 hours each term.
Intended to develop in the student the habit of reflective thinking by self-examination and through the interpretation of fact, conduct, and experience. The student is asked to apply the processes of critical

thinking to his habitual judgments and valuations of life, the world, himself, and human society. Professor Brumbaugh.

Psy 201, 202, 203. **Elementary Psychology.** Three terms, 3 hours each term.

An introductory study of the material of general experimental psychology, learning, memory, perception, imagination, sensation, attention, reasoning, instinct, emotion, will, etc. Professor Chambers.

Psy 204, 205, 206. **Elementary Psychology Laboratory.** Three terms, 1 hour each term.

An introduction to laboratory experimental methods. Operated in coordination with Psy 201, 202, 203, which must be taken at the same time. One laboratory period each week. Professor Chambers.

Psy 211. **Outlines of Psychology.** Any term, 6 hours.

A study of the fundamental facts of human equipment and behavior; instinct, emotion, sensation, feeling, memory, imagination, suggestion, will, reason, and personality. Professor Chambers.

Psy 212, 213, 214. **Logic.** Three terms, 3 hours each term.

A study of the forms and methods of knowledge, the general nature of scientific method and the function and limits of human understanding. The organization of knowledge for effective presentation, the problem of inference and the nature of evidence. Professor Brumbaugh.

Sociology

ALL the lower-division instruction in sociology, like that in the related social sciences, is intended to contribute to the task of training for good citizenship through a better understanding of the principles that govern human associations and relationships. Particular attention is given to attitudes and habits of mind and characteristic reactions to public events and social institutions. An insight is given into contemporary social problems. Fundamental instruction is provided for students who may later wish to major in sociology at the University. Courses are also designed to meet the needs of those who are majoring in home economics and allied fields.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Soc 201, 202, 203. **Elements of Sociology.** Three terms, 3 hours each term.

Analysis of social organization and culture, human nature; social changes and movements as affected by culture, biological and physical environmental factors, and a brief survey of the various social problems as well as methods of investigation. Professor Bakkum and Associate Professor Dann.

Soc 211. **General Sociology.** Any term, 4 hours.

Analysis of the phenomena of group life, embracing social origins; a comparative study of group behavior and social institutions; a study of sociological principles and their application to modern social problems. Professor Bakkum and Associate Professor Dann.

Soc 212. **General Sociology.** Any term, 3 hours.

An abridgment of Soc 211. Restricted to science and upper-division professional and technical school students. Professor Bakkum.

UPPER-DIVISION SERVICE COURSES

Prescribed in major curricula in degree-granting schools at the State College and also available as electives to students majoring in such schools.

Soc 312. **The Family.** Winter term, 3 hours.

A survey of the evolution of matrimonial institutions; the modern legal status of marriage; economic and social aspects of the modern family; women in industry and the new woman's movement in relation to the family; a comparative study of the divorce problem. Open only to juniors and seniors. Associate Professor Dann.

Soc 314. **Educational Sociology.** Spring term, 3 hours.

A study of the field of sociology from the educational point of view; social institutions in their origin and development; social activities in their relation to institutions and the individual; social control or the molding of social institutions and the directing of social activities; different methods of social investigation and their comparative results. Students in the School of Education may count this course toward the 36 required hours in education. Prerequisite: an introductory course in sociology. Professor Bakkum.

Soc 364. **Rural Sociology.** Fall term, 3 hours.

Problems of rural life and rural institutions contrasted with the problems of urban living. Attention is given to the community, the family, the school, the church, recreation and welfare activities as they find their expression in the rural setting. Opportunity for field observation of rural life. Professor Bakkum.

Soc 411, 412. **Social Problems.** (g) Winter and spring terms, 2 or 3 hours each term.

Designed to orient the student in applied sociology. An analysis of current group disorganization, institutional decline, and social maladjustment of individuals, along with a study of positive processes of reorganization and reconstruction. Some time is devoted to field observations of social problems. The contents of the work are varied from time to time to meet the needs of particular groups of students. Soc 411 is not prerequisite to Soc 412. Students in the School of Education whose work in either of the terms in this sequence covers social education may count 3 hours of credit so earned toward the 36 required hours of education, if approved by the Dean. Prerequisite: basic work in general sociology. Professor Bakkum.

Soc 474. **Social Psychology.** (g) Fall term, 3 hours.

Analysis of group attitudes, social values, crowd behavior, fashion, custom, public opinion and forces forming it. Factors in personality, elements and types of racial, and group consciousness. Prerequisite: Basic work in introductory psychology and introductory sociology. Three recitations. Professor Bakkum.

GRADUATE SERVICE COURSES

Courses numbered 400-499 and designated (g) may be taken for credit toward a graduate minor.

Architecture and Allied Arts

LOWER-division and service courses in architecture and allied arts are offered at the State College. By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in architecture and allied arts was confined to the School of Architecture and Allied Arts at the University, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the University and the State College.

Students in landscape architecture may take the first two years of the five-year curriculum at either the State College or the University. Students taking the first two years at the University take the third year at the State College, and return to the University for the last two years of the curriculum.

The lower-division work in art and architecture is essentially the same at both institutions. While it is recommended that students intending to major in art or architecture enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the State College, and transfer to the University for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.*

At both institutions, the lower-division program is intended, not only to lay the foundation for specialization in architecture and allied arts, but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the State College offers upper-division service courses in architecture and allied arts for students in other fields.

Suggested Curriculum in Landscape Architecture

MR. PECK, Adviser at the State College and Head of Department
MR. CUTHBERT, Adviser at the University

A student majoring in landscape architecture takes one year of his professional training at the State College, studying plant material, plant propagation, soils, surveying, and other practical phases of the profession. The student who does his lower-division work at the University will spend his third year at Corvallis, and return to Eugene for the last two years of the curriculum. A student may, however, spend his first two years at the State College, completing during these years the required professional work offered at Corvallis, and transfer to the University for the last three years of professional work. Curricula for students who begin at Eugene and for those who begin at Corvallis are printed below.†

*Under present budget conditions, however, such students may be required to take at the University certain required lower-division work not at present offered at the State College.

†Work in a foreign language is not required for the Bachelor of Landscape Architecture degree. Students wishing to earn the Bachelor of Arts degree will take a modern foreign language during their freshman and sophomore years, and will complete group requirements in Language and Literature or Social Science in the fourth year of the curriculum.

FOR STUDENTS TAKING FIRST TWO YEARS AT STATE COLLEGE

	Term hours		
	F	W	S
Graphics (AA 111, 112, 212).....	2	2	2
General Botany (Bot 201, 202, 203).....	3	3	3
Landscape Architecture (LA 279).....	2	2	3
History and Literature of Landscape Architecture (LA 356, 357, 358).....	2	2	2
English Composition (Eng 111, 112, 113).....	3	3	3
Lower-Division Architectural Design (AA 297).....	2	---	---
Construction (AA 120).....	---	1	---
¹ Military Science (men) and Physical Education.....	2	2	2
² Group requirement in Language and Literature or Social Science.....	3	3	3
	17	16	18

Second Year (State College)

Architectural Design (AA 297).....	---	1	1
Lower-Division Landscape Design (LA 290).....	2	2	2
Plane Surveying (CE 226, 223).....	3	---	3
Plant Propagation (Hrt 311).....	---	3	---
Maintenance and Construction (LA 359, 360, 361).....	2	2	2
Plant Materials (LA 326, 327, 328).....	3	3	3
Soil Improvement (Sls 215).....	2	---	---
Military Science (men) and Physical Education.....	2	2	2
Electives.....	3	4	4
	17	17	17

Third Year (University)

Lower-Division Architectural Design continued, Lower-Division Drawing, Architectural History, Construction, Upper-Division Landscape Design, Plant Composition, and electives.

Fourth and Fifth Years (University)

Same as for Students Beginning at University (see below).

FOR STUDENTS TAKING FIRST TWO YEARS AT UNIVERSITY

First and Second Years (University)

Graphics, Architectural Design, Drawing, Landscape Architecture, Architectural History, Construction, Landscape Design, Botany, English Composition, group requirement and electives.

Third Year (State College)

	Term hours		
	F	W	S
Plant Materials (LA 326, 327, 328).....	3	3	3
History and Literature of Landscape Architecture (LA 356, 357, 358).....	2	2	2
Plane Surveying (CE 226, 223).....	3	---	3
Maintenance and Construction (LA 359, 360, 361).....	2	2	2
Plant Propagation (Hrt 311).....	---	3	---
Soil Improvement (Sls 215).....	2	---	---
Upper-Division Landscape Design (LA 390).....	2	2	2
Engineering or plant electives.....	2	3	2
Graphics II (AA 212).....	---	---	2
	16	15	16

Fourth and Fifth Years (University)

Upper-Division Landscape Design, Civilization and Art Epochs, Construction, Plant Composition, City Planning, Real Estate, City Government, Business Law, Office Practice, Field Practice, group requirement or electives.

Suggested Curriculum in Structural Design in Architecture

Joint Curriculum—First Two Years at Eugene in School of Architecture and Allied Arts, Last Two Years at Corvallis in School of Engineering—see SCHOOL OF ENGINEERING.

¹General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education. Women take Social Ethics (PE 131) one term.

²Students taking modern language will complete group requirements third year at the University.

Art and Architecture

FUNDAMENTAL instruction in drawing, painting, architectural theory, design, composition, and color is offered in the Department of Art and Architecture, together with training in art appreciation. Students majoring in other fields may take art or architecture as a minor.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

AA 111, 112. **Graphics I.** Two terms, 2 hours each term.

First year. The principles of orthographic projection or descriptive geometry are studied, application being made to the construction of plans and elevations; projections of points, lines, and planes; and correct location of shades and shadows for design problems.

AA 114, 115, 116. **Survey of Creative Arts (Art Appreciation).** Three terms, 1 to 3 hours each term.

A study of the principles and practices of the arts. The aim is an understanding of why men had the urge to produce the arts in the first place; the types of usefulness the arts serve today; how function, color, scale, textures, and proportions enter into one's personal habits of appreciation. The three terms are independent of each other and need not be taken in sequence.

AA 120. **Construction.** Spring term, 1 hour.

Introduction to architectural elements by means of individual research and observation. The sketching of existing examples, supplemented by class discussion.

AA 160, 161, 162. **Color and Composition.** Three terms, 3 hours each term.

Elementary study of relations of line, areas, mass, neutral values and color values for pictures, decorations, and interior schemes. Applies to both creative processes and appreciation. Adapted to needs of home economics group.

AA 178, 179, 180. **House Planning and Architectural Drawing.** Three terms, 2 or 3 hours each term.

Small-house construction, detail drawing, and architectural drafting, with particular reference to the needs of students majoring in industrial arts.

AA 212. **Graphics II.** One term, 2 hours.

Second year. Continuation of AA 112. Completion of the work in shades and shadows. Practical methods of constructing perspectives are developed.

AA 290. **Lower-Division Painting.** Six terms, 2 or 3 hours each term.

First year, studies from still life; figure, and landscape; application of the principles of arrangement in relation to the background. Various mediums are employed. Second year, advanced studies from still life and from the human figure. Individual achievement in technique is encouraged.

AA 291. Lower-Division Drawing. Six terms, 2 or 3 hours each term.

The first year includes the analysis of forms by shading and perspective. It leads to an understanding of essential structure. Problems in simple and direct expression of structure, by use of different mediums, is adapted to the needs of various groups. The second year continues the study of forms and combinations of forms. Elementary study of the human figure. Interrelationships of forms and adaptation to decoration.

AA 295. Lower-Division Decorative Design. Six terms, 2 or 3 hours each term.

First year, study of the principles underlying the various arrangements of lines, shapes, neutral tones and colors for purposes of decorative expression. Second year, further problems in decorative arrangements. The aim is to build up the student's capacities to plan a design for a given purpose and to carry out his designs in material with increasing critical powers.

AA 297. Lower-Division Architectural Design. Any term, 1 to 5 hours each term.

Fundamental principles of architectural design are studied by means of plans and renderings of architectural details.

Landscape Architecture

ALL instruction in landscape design is correlated with the instruction in closely related arts. In addition to the landscape courses, the student is instructed also in plant propagation, soils, surveying, and other practical phases of the profession. The campus constitutes an out-of-door living laboratory of unusual interest and value to students in landscape architecture.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

LA 179. Landscape Architecture (Descriptive). Fall term, 2 hours.

A lecture course planned to introduce the student to the subject as it is applied to home-ground layouts, city parks, national parks, the wilderness areas, city plans, and modern garden cities. Good taste and general information. No drawing. Two lectures and periodical quiz hours. Assistant Professor Legg.

LA 279. Landscape Architecture. Any term 2 or 3 hours.

This course is designed to fit the needs of all students. Definite principles controlling layout and organization of different kinds of property are introduced. Enough drafting is done so that the student will learn to express himself in a satisfactory manner. Study is made of problems in improvement work on home grounds, rural and urban. One or two two-hour drafting periods; one lecture. Professor Peck.

LA 290. Lower-Division Landscape Design. Three terms, 2 hours each term.

Design of small residence properties, the ordinary city lot, town-house property, and suburban residence properties involving not more

than three acres. Prerequisite: LA 279. Associate Professor Cuthbert and Assistant Professor Legg.

UPPER-DIVISION COURSES

- LA 326, 327, 328. **Plant Materials.** Three terms, 3 hours each term.
The study of trees, shrubs, vines, and perennials and their uses in plant composition. Professor Peck.
- LA 356, 357, 358. **History and Literature of Landscape Architecture.** Three terms, 2 hours each term.
These courses acquaint the student with history and literature of the art. Professor Peck.
- LA 359, 360, 361. **Maintenance and Construction.** Three terms, 2 hours each term.
Concise and practical knowledge of the maintenance of parks, estates, cemeteries, and golf courses. Landscape construction work involving the handling of earth, such as golf-course construction, and the building of tennis courts, walks, roads, and water effects. Professor Peck and Assistant Professor Legg.
- LA 379. **Landscape Architecture.** Spring term, 3 hours.
For forestry students. The arrangement of features and elements in ranger stations, recreation areas, state parks, overlooks, and summer-home sites; enough drafting to enable the student to express himself on paper by means of landscape plans. Assigned readings. Prerequisite: LA 279. Two lectures; 1 two-hour drafting period. Professor Peck.
- LA 382, 383, 384. **Layout of Small Properties.** Three terms, 2 or 3 hours each term.
Arranged for students in landscape maintenance. The city lot, small suburban properties, and other graduated studies of ground arrangement. Sketch plans, finished renderings, and contour problems are presented. Two three-hour laboratory periods. Prerequisite: LA 279, 290. Assistant Professor Legg.
- LA 390. **Upper-Division Landscape Design.** Three terms, 2 hours each term.
Continuation and enlargement of LA 290. Associate Professor Cuthbert and Assistant Professor Legg.
- LA 392, 393, 394. **Planting Plans.** Three terms, 2 hours each term.
Arranged for students in landscape maintenance. The drawing of planting plans; estimates of costs; construction and seasonal care of the planting areas worked up by students. Two three-hour laboratory periods. Prerequisite: LA 279, 326, 327, 328, 382, 383, 384. Assistant Professor Legg.

Business Administration

LOWER-division and service courses in business administration are offered at the State College. By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in business administration was confined to the School of Business Administra-

tion at the University, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the University and the State College. Teacher training in business administration was assigned to the University. Secretarial science was allocated to the State College under the administration of the Dean and Director of Business Administration. Teacher training in secretarial science was also assigned to the State College. In May 1933, the work in secretarial science was organized by authority of the State Board into a four-year curriculum (see SECRETARIAL SCIENCE).

The lower-division work in business administration (as distinct from secretarial science) is essentially the same at both institutions. While it is recommended that students intending to major in business administration enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the State College, and transfer to the University for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.

At both institutions, the lower-division program is intended, not only to lay the foundation for specialization in business administration, but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the State College offers upper-division service courses in business administration for students in other fields.

Lower-Division Curricula. At the upper-division and graduate level in the School of Business Administration at the University the student may select one of a number of fields of specialization. Programs of study are worked out for lower-division students at the State College according to their special objectives.

Facilities. The instruction in business administration at the State College is centered in Commerce Hall, in which are located classrooms and laboratories for instruction in business subjects. The same building houses the instructional work in secretarial science. The courses and laboratories teaching the use of the mimeograph, duplicating, adding, computing and bookkeeping machines are available to all students taking business courses.

Description of Courses

COURSES IN BUSINESS ADMINISTRATION

LOWER-DIVISION COURSES

BA 111, 112, 113. Constructive Accounting. Three terms, 4 hours each term.

An introduction to the field of accounting and business administration. Technique of account construction and preparation of financial statements. Application of accounting principles to practical business problems, including a study of proprietorship from the standpoint of the single owner, the partnership, and the corporation. Required of all students planning to major and prerequisite to all advanced work in business administration. Associate Professors Robinson and Kelley, Assistant Professors DeLoach and Wheeler, Mr. Steiner.

BA 211. Retail Accounting. Fall term, 3 hours.

A study of accounting records peculiar to retail stores. Practice sets are assigned for the purpose of familiarizing the student with the necessary forms and retail accounting routine. Prerequisite: BA 111, 112, 113. Associate Professor Robinson, Assistant Professor DeLoach.

BA 212. Principles of Cost Accounting. Winter term, 3 hours.

A consideration of the basic principles of cost accounting, departmentalization, expense allocation, and the differences to be noted between accounting systems with which a cost system is tied in and accounting systems with no cost system involved. Problems and practice sets furnish the student with a working familiarity. Prerequisite: BA 111, 112, 113, or BA 385, 386. Associate Professor Robinson, Assistant Professor DeLoach.

BA 213. Analysis of Financial Statements. Spring term, 3 hours.

Managerial accounting, including accounting theory and practice for effective management and control of industrial and trading concerns. Emphasis is laid on the preparation, analysis, and interpretation of balance sheets and operating reports. Prerequisite: BA 111, 112, 113, or BA 385, 386. Associate Professor Robinson.

BA 214. Federal and State Tax Forms. Winter term, 3 hours.

For students who have had one year of accounting or its equivalent. Income and other tax laws, state and national; problems involving calculation and preparation of tax returns; special attention to exemptions and their part in the returns. Not open to students planning to major in business administration. Associate Professor Kelley.

BA 221. Elements of Organization and Production. Fall or winter term, 4 hours.

A consideration of the principles of the science and philosophy of management as applied to industrial concerns. Functional management, including time study records, standardization, and planning, as applied by Taylor and subsequent industrial managers. Required of all students planning to major in business administration. Associate Professor Kelley.

BA 222. Elements of Finance. Any term, 4 hours.

A brief survey of financial institutions with attention to the possible use of each by the business man. A further study of the financial problems involved in the launching of a business enterprise, expansion, budgetary control, credits and collections, borrowing and management of earnings. Required of all students planning to major in business administration. Prerequisite: BA 111, 112, 113, or equivalent. Associate Professors LeMaster and Kelley.

BA 223. Elements of Marketing. Winter or spring term, 4 hours.

A study of the methods, policies, and problems involved in marketing raw materials and manufactured products. Deals with private and cooperative marketing channels, auctions, exchanges, primary and secondary middlemen, and such marketing functions as demand creation, assembly, standardization, packaging, financing, risk-taking, distribution, and market news. Required of all students planning to major in business administration. Assistant Professor DeLoach.

BA 256. Business Law. Any term, 4 hours.

An introductory course in business law correlating fundamental principles with selected cases and specially prepared problems illustrating their application to typical business situations. The history of legal systems and legal institutions; the source of obligations—contracts, torts, quasi contracts, domestic status, and trusts—with special attention to interpretation and discharge and incidental treatment of bankruptcy, suretyship, and insurance. Associate Professor LeMaster.

BA 257. Business Law. Any term, 4 hours.

An intermediate course involving (1) agency—creation, operation, and discharge; (2) negotiable instruments—classification, creation, business uses, liabilities of primary and secondary parties, discharge, and incidental banking functions; (3) personal property—nature of, sale of, bailment and pledge of, conditional sale of, and mortgage of (i.e., chattel mortgages). Associate Professor LeMaster.

BA 258. Business Law. Any term, 4 hours.

A concluding course dealing with (1) specialized business and business organization with primary attention to corporations and partnerships and incidental treatment of joint adventure, unincorporated non-profit associations, business trusts, and joint stock companies; and (2) the law of real property including estates between vendor and vendee, mortgagor and mortgagee, landlord and tenant, and of the estate of the surviving spouse including dower, courtesy, and homestead. Associate Professor LeMaster.

UPPER-DIVISION SERVICE COURSES

BA 361. Accounting Fundamentals. Fall or winter term, 3 hours.

Principally for students in agriculture. Deals with the basic principles of accounting rather than technique, special consideration being given to the accounting problems encountered in the various fields of agriculture with some emphasis on determination of costs of operation. Open to forestry and industrial arts students; not open to students planning to major in business administration. Associate Professor Robinson.

BA 385. Accounting for Technical Students. Any term, 3 hours.

An abbreviated course covering the general principles of accounting, designed especially for nonbusiness students. Emphasis is placed on accounting principles, rather than technique. The ultimate aim is to prepare the student to read and interpret accounting facts, rather than to construct accounts. Not open to students planning to major in business administration. Associate Professor Robinson.

BA 386. Accounting for Technical Students. Winter or spring term, 3 hours.

A continuation of BA 385 covering the general principles of accounting. Not open to students planning to major in business administration. Associate Professor Robinson.

BA 403. Special Problems for Technical Students. (g) Any term, 1 to 5 hours each term.

An opportunity to do supervised individual work in some field of special application and interest. Subjects chosen must be approved by the major professor. Prerequisite: senior or graduate standing. Staff.

BA 413. Production Management. Fall term, 4 hours.

An analysis of the problems of production, factory organization, and factory management. Studied from the point of view of the production manager. Prerequisite: BA 221. Associate Professor Kelley.

BA 414. Personnel Management. (g) Fall term, 4 hours.

Principles of scientific management, job analysis, systematic hiring, placing and promoting, methods of wage payment, turnover prob-

lems, labor's participation in management, the public's concern in such participation. Recommended for seniors in forestry and juniors and seniors in engineering and home economics who expect to employ and manage men or women. Three recitations. Assistant Professor DeLoach.

BA 463. Investments. (g) Spring term, 3 hours.

A study of the special phases of investments; markets and the price of securities; their demand and supply; the computing of earnings; government, state, county, municipal, and corporation bonds and real estate loans as investment securities; the stock exchange. Prerequisite: BA 221, 222, 223. Associate Professor Kelley and Assistant Professor Wheeler.

BA 469. Business and Agricultural Statistics. (g) Fall term, 3 hours.

Sources of business and agricultural statistics; study of statistical devices used in fields of business and agriculture, such as summary numbers, indices of trends, and seasonal variation; and problems involved in comparing statistical results. Consent of instructor must be obtained before registering. Assistant Professor DeLoach.

BA 470. Business Statistics. (g) Winter term, 3 hours.

A quantitative and theoretical study of business fluctuations. Evaluation of nature, suggested causes, and remedies for cyclical perturbations. Examination of types, methods and adequacy of economic and business forecasting. Prerequisite: consent of instructor. Assistant Professor Wheeler.

GRADUATE SERVICE COURSES

Courses numbered 400-499 and designated (g) may be taken for credit toward a graduate minor.

BA 494. Cost Accounting for Industrials. (g) Winter or spring term, 3 hours.

The principles and methods of factory cost accounting, with application to practical problems. Phases of industrial management necessary to the installation and operation of a modern cost system. Prerequisite: BA 386. Associate Professor Robinson, Assistant Professor DeLoach.

Journalism

LOWER-division and service courses in journalism are offered at the State College. By action of the State Board of Higher Education on April 30, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in journalism was confined to the School of Journalism at the University, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the University and the State College.

The lower-division work in journalism is essentially the same at both institutions. While it is recommended that students intending to major in journalism enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the State College, and transfer to the University

for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.

At both institutions, the lower-division program is intended, not only to lay the foundation for specialization in journalism, but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the State College offers upper-division service courses in journalism for students in other fields.

The elementary courses, in addition to furnishing a certain cultural background in newspaper methods, are intended to introduce students to the fundamentals of news writing. These courses also enable students to get additional benefit out of work on the *DAILY BAROMETER*, student newspaper, and serve to some extent as a training school in this work in an endeavor to keep student publications on a high plane. Journalistic instruction is also given which is designed to train students enrolled in the technical and professional schools to write competently for newspapers and magazines on the subjects or in the fields in which they are specializing. These courses are intended to meet the needs of a large number of persons who, either in public service or in private life, have occasion to prepare material for the press on industrial or technical subjects. Training is also offered in the popularization of scientific material for the press.

A full journalistic training combined with a technical specialty may be arranged in a four- or five-year curriculum utilizing the facilities at both the University and the State College.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

- J 111, 112. **Elementary Journalism.** Two terms, 3 hours each term.
Fundamental principles of news writing. Intended to introduce to the students of the various technical schools the journalistic style of writing and to acquaint them with the workings of the press, both general and technical. J 111 is required for eligibility to the editorial staffs of student publications. J 111 offered each term; J 112, winter term. Special sections for professional schools where enrollment justifies.
- J 211. **Copyediting.** Fall or spring term, 3 hours.
Copy reading, head writing, proof reading, and make-up. Actual experience is given in editing copy for publication. Required for all students in advanced positions on the *Barometer*. Prerequisite: J 111.
- J 223. **Editorial Writing.** Fall term, 3 hours.
Materials, style, and arrangement of periodical editorials are considered. Training is given in writing editorials. Principles of policy and ethics are studied and applied. The make-up of the editorial page of farm and trade journals is given attention. Prerequisite: J 111.

UPPER-DIVISION SERVICE COURSES

- J 312. **Special Feature Articles.** Winter term, 3 hours.
Writing of special articles along the line of the student's own major. Study of the media of such articles. Practice in popularization of scientific material. Prerequisite: J 111.

J 313. Public Information Methods. Winter term, 3 hours.

Planning and executing of informational campaigns, through such media as newspapers, posters, radio, circular letters. Methods of informing the public of public affairs and other enterprises in which it has an interest. Adapted to the special needs of students in science and the professional schools. Prerequisite: J 111.

J 314. Technical Writing. Any term, 3 hours.

Writing and editing of popular and scientific bulletins. Preparing reports and writing articles for scientific publications. Preparing radio manuscripts. Intended primarily for research workers in the fields of agriculture, home economics, engineering, and other technical fields and for extension workers and college teachers in fields of agriculture and home economics. Prerequisite: J 111.

Music

LOWER-division and service courses in music are offered at the State College. By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in music was confined to the School of Music at the University, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the University and the State College.

The lower-division work in music is essentially the same at both institutions. While it is recommended that students intending to major in music enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the State College, and transfer to the University for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.

At both institutions, the lower-division program is intended not only to lay the foundation for specialization in music but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the State College offers upper-division service courses in music for students in other fields.

Music is recognized at the State College as of fundamental value in the development of personality, enriching the life of every man or woman who learns to appreciate it. In the training of every young woman preparing for homemaking, in supplementing the resources of the teacher and others, music is regarded as of special importance. The institution maintains a noteworthy program of musical activities, together with exceptional opportunities for music study. The faculty in music has been selected with great care, numbering among its members musicians of the highest rank, who, through study and concert work in the large musical centers of this country and Europe, bring to their students the highest ideals prevailing in these centers. The assistant instructors employ the same methods as their superiors, thus preparing the less advanced students for effective study under the principal instructors when they later enter upon more advanced study.

Training and experience in performance before the microphone of radio station KOAC are valuable features in all phases of the work.

Musical Activities. Musical organizations at the State College include the R. O. T. C. Band, the Band, the Orchestra, the Glee Club, the Madrigal Club and the Mandolin Club. Under the direction of the faculty in music a series of Sunday afternoon Vesper Concerts is presented throughout the college year. The Orchestra, the Glee Club, and the Mandolin Club give programs both entertaining and educational in character. Recitals by members of the faculty and by the more advanced students are also given.

Scholarships. A number of free scholarships for private study are available to worthy, talented pupils. Examinations for these are held during the first week of any term. Application is made to the Director.

Courses. Students enter the State College with varying degrees of proficiency in music. Consequently a considerable range of music courses has been provided. For students carrying a heavy program of required work, many of the courses permit carrying from one to three hours credit, while for students in curricula providing opportunity for more elective work, more credit may be carried with the approval of the Director, as determined by the individual student's previous preparation.

Students who have had sufficient preparation may pursue advanced study in music under one of the principal instructors. So far as their music work is concerned such students are artist students of the music faculty; they are registered in the State College only in so far as they may be pursuing regular courses, either as carrying a full major curriculum in one of the degree-granting schools or as optional or special students, not candidates for a degree.

Students who are preparing to enter some field of teaching for which training is given at the State College may take a minor norm in music designed to fit them to take charge of high-school choruses, bands, and orchestras in connection with their other teaching. For the minor norm see SCHOOL OF EDUCATION.

Applied Music. Courses are offered in all phases of applied music at the State College, including piano, organ, singing, violin and violoncello, pletral instruments, and band instruments. Students may study any phase of applied music throughout four years, taking from one to four term hours in any term according to the course pursued. The maximum credit in applied music acceptable toward a B.A. or B.S. degree is twelve term hours.

At all stages of instruction in applied music, training is given in analysis of material.

Group instruction in voice, stringed instruments, and band instruments is available to students pursuing the minor norm in music in the School of Education (see courses Mus 191, 192).

PIANO. Instruction in piano is offered to meet the needs of students in various stages of proficiency from the beginner to the artist student. Thorough foundation in technique is developed on a highly scientific basis. Monthly group meetings of the more advanced students give an opportunity to accustom the students to play before others. Students may take from one to six term hours each term and are required to devote from one to three hours daily to practice.

VOICE. Students who wish to develop their singing voices are offered excellent opportunity for instruction. Each student is treated individually and is assigned exercises and songs according to his stage of vocal development. For the more advanced students opportunity to sing before various campus audien-

ces and over the radio is provided. Students may take from one to four term hours each term, requiring from one-half to two hours daily practice.

VIOLIN AND VIOLONCELLO. Instruction in violin and violoncello is available to suit the requirements of the student, from beginner to finished artist. To those of adequate ability opportunity is afforded to play in the symphony orchestra and in similar groups and to appear as soloists before various campus audiences and over the radio. Students may take from one to six term hours each term, requiring from one to three hours daily practice.

PLECTRAL INSTRUMENTS. Mandolin, guitar and banjo instruction is available at reasonable cost. Students reaching a fair degree of proficiency have opportunity to join the Mandolin and Guitar Club, which meets weekly for ensemble playing. Students may take two term hours each term, requiring one hour daily practice.

BAND INSTRUMENTS. Courses in band instruments include cornet, trombone, clarinet, oboe, bassoon, baritone, saxophone, flute, Bb bass, Eb bass, drums, French horn, bells, and xylophone.

Regulations. Students are expected to consult the Director regarding regulations governing registration, attendance, public performance of music students, etc.

Equipment. The entire top floor of the Administration Building is devoted to studios, offices, and other needs of the work in music. Ample facilities for teaching and practicing are provided.

Tuition and Fees. Private lessons are one-half hour in length. Class lessons are fifty minutes in length. All fees are payable strictly in advance.

INDIVIDUAL INSTRUCTION	Per term	
	One lesson a week	Two lessons a week
<i>Piano</i>		
Mrs. Petri	\$30.00	\$60.00
Miss Gray	18.00	36.00
<i>Voice</i>		
Mr. Petri	30.00	60.00
<i>Violin, Viola, Cello</i>		
Mr. Moore	18.00	36.00
Miss Bowden	15.00	30.00
<i>Banjo, Guitar, and other Small Strings</i>		
Miss Bowden	15.00	30.00
<i>Band Instruments</i>		
Mr. Beard	15.00	30.00
<i>Theory and Allied Subjects</i>		
Private Instruction	30.00	60.00
*GROUP INSTRUCTION (see Mus 191, 192)		
<i>Voice</i>		
Mr. Petri	15.00	-----
<i>Stringed Instruments</i>		
Mr. Moore	7.50	-----
<i>Band Instruments</i>		
Mr. Beard	7.50	-----

*Group instruction is not given to classes of fewer than four.

RENTAL

	Two lessons a week
<i>Piano Rental</i>	
$\frac{1}{2}$ hour a day, a term (for voice students only).....	\$ 3.00
1 hour a day, a term.....	5.00
2 hours a day, a term.....	7.50
3 hours a day, a term.....	10.00
4 hours a day, a term.....	12.50
<i>Orchestra Instruments Rental</i>	
Viola, cello, bassoon, and oboe are available for practice purposes for \$3.00 per term for one hour weekly. Bassoon and oboe players must furnish their own reeds, and viola and cello students must replace broken strings with new ones. Any damage done to the instruments through carelessness or negligence of student must be repaired at student's expense.	
<i>Studio Rental</i>	
1 hour a day, a term (without use of piano).....	2.50

DESCRIPTION OF COURSES

Mus 111, 112, 113. **Harmony I, II, III.** Three terms, 3 hours each term.

Laws of overtone; origin and history of diatonic scale system; scale drills; melodic principles developed from tetrachord relations, and awakening of harmonic consciousness; triads, dominant and diminished seventh chords; recognition of by-tones; keyboard drills; ear drills; free harmonization of melodies; original melody writing; simple transposition and modulation. Three periods.

Mus 121. **Appreciation of Music.** Any term, 1 hour.

Illustrated lectures, using the phonograph and other means to stimulate and arouse interest in good music. Elementary in nature. Required of home economics students; elective to others. Two lectures.

Mus 122, 123. **Appreciation of Music.** Winter and spring terms, 1 hour each term.

Continuation of Mus 121. The construction of the symphony explained so as to enhance enjoyment of the phonographic reproduction; study of the stories of favorite grand operas with phonographic reproductions. Elective to all students who have taken Mus 121.

Mus 127, 128, 129. **Music Fundamentals.** Three terms, 1 hour each term.

Musical terminology and embellishments; acoustics; Pythagorean, mean tone, and well-tempered systems of tuning; elements of musical form; song form, suite, sonata, symphony, oratorio, opera, etc.

Mus 147, 148, 149. **Sightsinging and Ear Training.** Three terms, 1 hour each term.

Writing from tonal dictation, singing melodies, rhythmic problems; rhythmic dictation. One recitation.

Mus 190. **Individual Instruction.** Any term, 1 to 4 hours each term.

Individual instruction, any six terms, in piano, organ, voice, violin, plectral instruments, and band instruments.

Mus 191. **Group Instruction in Voice.** Two terms, 1 hour each term.

Open only to students pursuing the minor norm in music in the School of Education.

Mus 192. Group Instruction in Stringed Instruments and Band Instruments. Any term, 2 hours each term.

Group instruction is not intended to supplant individual instruction, but has its own advantages: first, economy; second, extra interest of those participating; third, the benefit of composition. Classes of four or more may be organized for any stringed instrument or band instrument.

Mus 211, 212, 213. Harmony IV, V, VI. Three terms, 3 hours each term.

Continuation of Mus 113. Use of secondary chords in free harmonization of melodies; ear perception of these as substitutes for primary chords; four-voice treatment of original melodies. Free harmonization of melodies that modulate; ear drills in recognition of key changes; keyboard modulation from chord patterns. Two periods.

Mus 221, 222, 223. History of Music. Three terms, 2 hours each term.

Evolution of music from the ancient and medieval systems; the Gregorian Chant; the classical period through Bach and Beethoven; the classical musical forms; the romantic and modern periods; the opera. The lectures are liberally supplemented through the use of the phonograph and other means. Prerequisite: Mus 127, 128, 129. Two lectures.

Mus 290. The College Chorus. Three terms, 1 hour each term.

For students who can pass the necessary vocal test. Glee and Madrigal Clubs. Three periods.

Mus 291, 292, 293. Orchestral Conducting (Elementary). Three terms, 2 hours each term.

A practical study of the elements of conducting. Organization and management of the amateur orchestra, progressive materials, studies in transposition, simple arrangements, manipulation of the various instruments, technique of the baton, and actual experience in orchestral conducting.

Mus 295. Band. Three terms, 1 hour each term.

This organization is maintained for women students who have been active in their respective high-school bands and wish to continue with this type of musical expression. Open to all who can pass the necessary test. Two periods.

UPPER-DIVISION SERVICE COURSES

Mus 311. Strict Counterpoint. Fall term, 3 hours.

Analysis of Bach fugues continued. Prerequisite: Mus 213. Two periods.

Mus 312. Canon and Fugue. Winter term, 3 hours.

Prerequisite: Mus 311. Two periods.

Mus 313. Modern Harmony. Spring term, 3 hours.

Modern interval successions; modern chord structure and resolution; scales other than diatonic; free harmonization of melodies with contrapuntal voice written in. Prerequisite: Mus 312. Two periods.

Mus 324, 325, 326. Advanced Conducting and Orchestration. Three terms, 2 hours each term.

A further study of applied orchestral conducting, designed for the advanced student. The fine points of conducting, scoring, and arranging for full symphonic orchestra; thorough acquaintance with the lit-

erature suitable for such a group. An orchestra is made available for this study. Prerequisite: Mus 321, 322, 323.

Mus 331, 332, 333. **Band Organization.** Three terms, 2 hours each term.

Designed to give the training and technique necessary to the band conductor. The technique and repertoire of band instruments; organizing and developing ensembles; band administration; instrumentation; elementary arranging; use of the baton.

Mus 334, 335, 336. **Band Organization.** Three terms, 2 hours each term.

Continuation of Mus 331, 332, 333. Organization and administration of the military and concert band; rehearsal methods; use of the baton; expression; grouping and coloring; score building and arranging; score reading; dictation; transposition; study of the various clefs; repertoire; program building. The student is given frequent opportunity to conduct the concert band in public performance of a standard overture or other composition of recognized merit. Prerequisite: Mus 331, 332, 333.

Mus 390. **Individual Instruction.** Any term, 1 to 4 hours each term.

Continuation of Mus 190. Individual instruction, any six terms, in piano, organ, voice, violin, plectral instruments, and band instruments.

Mus 391. **The College Orchestra.** Three terms, 1 hour each term.

For students who play orchestral instruments and who can pass the necessary test. Three periods each week.

Mus 411. **Modern Harmony.** Fall term, 3 hours.

Continuation of Mus 313. Dual chord structure; lack of tonality; lack of melody and definite form traced and analyzed. Prerequisite: Mus 313. Two periods.

Mus 433. **Glee Club Conducting.** Spring term, 1 hour.

The elements of high school chorus conducting, including baton technique, study of choral arrangements suitable for high-school students, and other topics. For students who have completed all other requirements of a minor norm in music in the School of Education.

Religion

ESTABLISHMENT of a chair of Religion was authorized in 1928, and the first courses were offered in the fall term of 1928-29. While the State College has given cordial encouragement to the inauguration of instruction in Religion open to all the students of the institution, the Department of Religion is sponsored and financed entirely by private auspices and is administered by a board of control composed of State College leaders and representatives of the religious interests of the state. The Department of Religion is nonsectarian in spirit and organization. The instruction is planned in accordance with the same standards of authoritative scholarship recognized in other departments of the institution.

The purpose of the Department of Religion is threefold:

(1) The courses in Religion seek to develop an appreciation of the nature and processes of religion in the light of conditions affecting life today, thus enabling students to make such adjustments as will vitalize religion for them.

(2) The courses are determined for the most part by the needs of the larger group of students at the College, who are preparing for service in the fields of science, engineering, agriculture, home economics, teaching, etc.

(3) Special attention is given to the religious training of these students who anticipate lay-leadership in the churches of their local communities, as well as to those who plan to enter social service or the religious vocations, such as missionary work, the ministry, directors of religious education, pastor's assistant, professional leadership of religious organizations, etc.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

R 211. **The New Testament and Its Historical Background.** Winter term, 2 hours.

Special attention is given to the times and conditions out of which the New Testament writings came and the problems which gave rise to the Christian movement. Two recitations. Professor Warrington.

R 220. **The Sermon on the Mount.** Fall term, 1 hour.

An intensive study of a limited New Testament passage. Consideration is given to the content of Jesus' teaching as embodied in the selected passage, and to the nontechnical method of Bible study. One recitation. Professor Warrington.

R 225. **The Prophets and Their Message.** Spring term, 1 hour.

The early Hebrew prophets as heralds of a new day, spokesmen of a new idealism; significance of the prophets and the value of their messages for the present day. One recitation. Professor Warrington.

Eng 275. **The Bible as Literature.** Spring term, 3 hours.

Given by the Department of English. Designed to stimulate and enlarge appreciation of the art and beauty of the literature of the Bible. Questions of theology and dogmas of religion are avoided. Assignments include passages which fall under the chief literary types, such as folk-lore, story telling, history, poetry, drama, wisdom literature, oratory, and the essay. Three lectures or recitations. Assistant Professor Baldwin.

UPPER-DIVISION COURSES

R 370. **Principles of Religious Leadership.** Spring term, 2 hours.

The class is open only to those on the campus or in the local community who are engaged, during the term, in some religious activity. In the theory work consideration is given to the psychology of human nature, work with individuals, group thinking, social conditions determining program, value of social activities, place of the Bible in religious education, and similar topics. Two recitations. Professor Warrington.

R 461. **Religious Orientation.** Fall term, 3 hours.

A study of the present status of religion; the effect upon religious thought of the new scientific discoveries and significant trends in pres-

ent-day life; such questions will be discussed as the nature and function of religion in a world of change, the basis of authority in religion, evaluation of the concept of God. Three lectures. Professor Warrington.

R 462. History of Great Religions. Winter term, 3 hours.

A comparative study of the religions that command a large following today, such as Hinduism, Buddhism, Confucianism, Judaism, Christianity, and Islam. It is intended to introduce the student to the essential facts about each religion studied. Three lectures. Professor Warrington.

R 463. Psychology of Religion. Spring term, 3 hours.

The bearing of psychology upon religious thought and life; the effects upon human personality of such religious processes as faith, prayer, worship; the function of these as noted in a study of such modern leaders as Gandhi, Schweitzer, and Kagawa. Three lectures. Professor Warrington.

School of Agriculture

Faculty

WILLIAM ALFRED SCHOENFELD, M.B.A., Dean of the School of Agriculture.
FREDERICK EARL PRICE, B.S., Assistant Dean of Agriculture.
JEAN DORRANCE, Secretary to the Dean.
WILLIAM MARTIN LANGAN, Secretary, School of Agriculture.

DIVISION OF AGRICULTURAL ECONOMICS

ERMINE LAWRENCE POTTER, M.S., Professor of Agricultural Economics; In Charge, Division of Agricultural Economics.

Agricultural Economics

MILTON NELS NELSON, Ph.D., Professor of Agricultural Economics.

Farm Management

ARNOLD STEWART BURRIER, M.S., Professor of Farm Management.
HENRY DESBOROUGH SCUDDER, B.S., Professor of Farm Management.
*GUSTAV WESLEY KUHLMAN, M.S., Associate Professor of Farm Management.
ALVIN WILBUR WHEELER, B.S., Graduate Assistant in Farm Management.

DIVISION OF ANIMAL INDUSTRIES

PHILIP MARTIN BRANDT, A.M., Professor of Dairy Husbandry; In Charge, Division of Animal Industries.

Animal Husbandry

RAY GEORGE JOHNSON, B.S., Professor of Animal Husbandry.
ORAN MILTON NELSON, M.S., Professor of Animal Husbandry.
BENJAMIN WILLIAM RODENWOLD, M.S., Assistant Professor of Animal Husbandry.
ALFRED WEAVER OLIVER, M.S., Assistant Professor of Animal Husbandry.

Dairy Husbandry

GUSTAV HANS WILSTER, Ph.D., Professor of Dairy Manufacturing.
IDWAL RALPH JONES, Ph.D., Associate Professor of Dairy Husbandry.
HOWARD NOTSON COLMAN, B.A., B.S., Assistant Professor of Dairy Husbandry.
HAROLD PLYMPTON EWALT, B.S., Instructor in Dairy Husbandry.

Fish and Game Management

ROLAND EUGENE DIMICK, M.S., Professor of Fish and Game Management.
FRANCIS FRIDAY GRIFFITHS, Ph.D., Instructor in Fish and Game Management.

*On leave of absence.

Poultry Husbandry

HUBERT ELMER COSBY, Professor of Poultry Husbandry.
 FRANK LESTER KNOWLTON, M.S., Professor of Poultry Husbandry.
 WILBUR TARLETON COONEY, B.S., Instructor in Poultry Husbandry.

Veterinary Medicine

BENNETT THOMAS SIMMS, D.V.M., Professor of Veterinary Medicine.
 JAMES NIVEN SHAW, B.S., D.V.M., Associate Professor of Veterinary Medicine.
 OTTO HERBERT MUTH, D.V.M., M.S., Associate Professor of Veterinary Medicine.
 ROBERT WATSON DOUGHERTY, B.S., D.V.M., Instructor in Veterinary Medicine.
 ROLAND SCOTT, B.S., D.V.M., Instructor in Veterinary Medicine.

DIVISION OF PLANT INDUSTRIES

GEORGE ROBERT HYSLOP, B.S., Professor of Farm Crops; In Charge, Division of Plant Industries.

Farm Crops

DONALD DAVID HILL, Ph.D., Associate Professor of Farm Crops.
 LINDEN ELI HARRIS, M.S., Assistant Professor of Farm Crops.
 ROBERT ESTES FORE, Ph.D., Assistant Professor of Farm Crops.
 HAROLD ETHAN FINNELL, M.S., Assistant Professor of Farm Crops.
 HOWARD GIBSON, B.S., Graduate Assistant in Farm Crops.
 LEROY ROBERT HANSON, B.S., Graduate Assistant in Farm Crops.

Horticulture

WALTER SHELDON BROWN, M.S., D.Sc., Professor of Horticulture.
 HENRY HARTMAN, M.S., Professor of Horticulture.
 ARTHUR GEORGE BRISTOW BOUQUET, M.S., Professor of Vegetable Crops.
 ERNEST HERMAN WIEGAND, B.S.A., Professor of Food Products Industries.
 WILLIS PIERRE DURUZ, Ph.D., Professor of Pomology.
 THOMAS ONSDORFF, M.S., Assistant Professor of Food Products Industries.

Soils

WILBUR LOUIS POWERS, Ph.D., Professor of Soils.
 CHARLES VLADIS RUZEK, M.S., Professor of Soil Fertility.
 ROSCOE ELMO STEPHENSON, Ph.D., Associate Professor of Soils.
 EDWARD FRITCHOFF TORGERSON, B.S., Associate Professor of Soils.

AGRICULTURAL EDUCATION, AGRICULTURAL ENGINEERING,
 EXTENSION METHODS

Agricultural Education

HEBER HOWARD GIBSON, A.M., Professor of Agricultural Education.
 RUSSELL MONROE ADAMS, M.S., Critic Teacher in Agricultural Education.

Agricultural Engineering

WILLIAM JAMES GILMORE, B.C.E., B.S., Professor of Agricultural Engineering.
 CLYDE WALKER, M.S., Associate Professor of Agricultural Engineering.
 HERBERT REEVES SINNARD, M.S., R.A., Associate Professor of Agricultural Engineering.
 RALPH NICHOLAS LUNDE, B.S., Assistant Professor of Agricultural Engineering.

Extension Methods

FRANK LLEWELLYN BALLARD, B.S., Professor of Extension Methods.

AZALEA LINFIELD SAGER, M.A., Professor and State Leader of Home Economics Extension.

General Statement

UNDERGRADUATE curricula leading to the bachelor's degree are offered in the School of Agriculture in general agriculture; in the broad fields of agricultural economics, animal industries, and plant industries; in agricultural education; in agricultural engineering; and in agricultural technology. In most of the curricula the student during his first year pursues a program of basic and introductory work called the common freshman year. Within some of the curricular divisions, a common sophomore year is provided.

The several baccalaureate curricula, each leading to the degree of Bachelor of Science, are outlined as follows:

GENERAL AGRICULTURE

A four-year curriculum providing liberal opportunity for students to major in agriculture and carry a minor in some other field, such as business administration, social science, or education..... Pages 196-197

AGRICULTURAL ECONOMICS

A four-year curriculum—common freshman and sophomore years; differentiated junior and senior curricula in AGRICULTURAL ECONOMICS and in FARM MANAGEMENT.....Pages 197-198

ANIMAL INDUSTRIES

Four-year curricula—common freshman and sophomore years; basic junior and senior curriculum, providing opportunity to major in ANIMAL HUSBANDRY, DAIRY PRODUCTION, DAIRY MANUFACTURING or POULTRY HUSBANDRY, with an option in RANGE AND RANGE LIVESTOCK MANAGEMENTPages 198-200
A four-year curriculum in FISH AND GAME MANAGEMENT.....Pages 200-201

PLANT INDUSTRIES

Four-year curricula—common freshman and sophomore years; differentiated junior and senior curricula in FARM CROPS and in SOILS, with an option in SOIL CONSERVATION; and in HORTICULTURE, with options in POMOLOGY and VEGETABLE CROPS.....Pages 201-203
A four-year curriculum in FOOD PRODUCTS INDUSTRIES.....Page 204
A four-year curriculum in LANDSCAPE CONSTRUCTION AND MAINTENANCEPages 204-205

AGRICULTURAL EDUCATION

A four-year curriculum preparing students to teach agriculture....Pages 205-206

AGRICULTURAL ENGINEERING

A four-year curriculum in AGRICULTURAL ENGINEERING, with an option in SOIL CONSERVATION ENGINEERING.....Pages 206-207

AGRICULTURAL TECHNOLOGY

A four-year curriculum combining a major in agriculture and a minor in science Pages 207-208

In addition, the School of Agriculture offers a two-year curriculum leading to a Certificate in Agriculture (see page 72). The purpose is to provide training for students who are farming or planning to engage in farming or in nontechnical phases of agriculture, who are unable to take a four-year curricu-

lum. Students who have maintained a good scholarship standing through the two-year curriculum are in a good position to continue for two additional years and obtain the bachelor's degree.

TWO-YEAR CURRICULUM

A curriculum leading to a Certificate in Agriculture.....Page 208

Opportunities for Graduates. The curricula in agriculture are planned to train young men or women to become better farmers, stockmen, dairy-men, poultrymen, or fruit or truck growers; to be efficient managers of farm or orchard properties, commercial creameries, cheese plants and ice-cream factories, market-milk plants, and other business enterprises in which a knowledge of practical and scientific agriculture is of value; to serve as agricultural advisers and land appraisers for banks, trust companies, land companies and realtors, as specialists in the United States Department of Agriculture or in agricultural colleges as teachers, investigators, extension specialists, county agricultural agents, 4-H club leaders, or as teachers of agriculture in secondary schools or in charge of control laboratories in manufacturing industries related to agriculture.

The curriculum in landscape maintenance trains students for the practical application of landscaping principles to problems in the field, as in the management of estates, superintendency of cemeteries and parks, ornamental nursery stock industry, teaching the practical phases of ornamental gardening, maintenance of golf courses, contracting and construction on new properties, and in other similar occupations.

The curriculum in agricultural engineering prepares for college extension, experiment station, and government work in agricultural engineering; sales and development work with manufacturers of implements such as tractors and farm equipment; agricultural specialists with building materials and equipment companies; the commercial field, including the farm implement and lumber retail business; teaching of vocational agriculture; service as managers or operators of farms where the knowledge of drainage, farm structures, and machinery and power equipment is important.

In the food products industries curriculum the aim is to train students in the fields of canning, preserving, fruit juice and vinegar making, carbonated-beverage manufacturing, pickling, dehydrating, and the by-products of these industries; and for service as buyers of raw materials, salesmen, food brokers, food inspectors, food chemists, food bacteriologists, food research workers, and instructors in foods.

The curriculum in agricultural technology leads to technical work in the industries handling agricultural and related products and to specialized lines in state or Federal research and regulatory work; to service as dairy or milling chemists, dairy or agricultural bacteriologists, insecticide, fertilizer, or seed analysts, transportation or refrigeration specialists, specialists in processing of agricultural products, nursery and quarantine inspectors, managers of warehouses or elevators, and plant explorers.

The Bachelor's Degree. The degree of Bachelor of Science is granted on the completion of any of the four-year curricula, which include a total of 192 term hours of credit (including Military Science and Physical Education.) See pages 72-73 for complete information.

Advanced Degrees. Opportunities are provided in all the departments of the School of Agriculture for graduates of the State College or other accredited colleges or universities to do graduate work leading to the degree of Master of Science. The degree of Doctor of Philosophy is offered

in the Division of Agricultural Economics, the Division of Animal Industries, and the Division of Plant Industries. The requirements for the advanced degrees are printed under GRADUATE DIVISION:

Annual Cannery and Cannery Fieldmen's School. Founded in 1921, this short course has developed into a full two-weeks school. It is designed primarily for those engaged in commercial canning, freezing, preserving, pickling, and allied industries. This is the only course of its kind in the United States giving complete instruction in canning. The registration includes owners, officers, foremen, mechanics, and all other workers in the industry as well as selling agents and representatives of allied industries. The course is given annually—usually the first two weeks in February. The 1939 school will be held February 6-18.

Annual Short Course and Conference in Dairy Manufacturing. The 1939 short course and conference in dairy manufacturing will be held February 13-27. The course is of special interest to buttermakers and ice-cream makers. The annual convention of the Oregon Dairy Manufacturers Association is expected to be held during the short course.

Curricula for Undergraduates

Common Freshman Year

Freshman curriculum for all students in four-year agriculture curricula except as indicated under certain curricula.

	Term hours		
	F	W	S
English Composition (Eng 111, 112, 113).....	3	3	3
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
General Botany (Bot 201, 202).....	3	3	---
Principles of Zoology (Z 130).....	---	---	3
Elements of Agronomy (FC 111).....	3	---	or (3)
Elements of Horticulture (Hrt 111).....	(3)	---	or 3
¹ Introduction to Animal Husbandry (AI 121).....	(3)	or (3)	or 3
² Introduction to Poultry Husbandry (AI 123).....	---	3	---
Agricultural Resources (AEc 111).....	3	---	---
Agricultural Engineering (AE 111).....	(3)	or 3	---
² Physical Education.....	1	1	1
Military Science.....	1	1	1
	17	17	17

Curriculum in General Agriculture

B.S. Degree

Sophomore Year

(See Common Freshman Year above.)

	Term hours		
	F	W	S
Principles of Economics (Ec 201, 202, 203).....	3	3	3
Soils (Sls 211, 212).....	3	3	---
Soil Drainage and Irrigation (Sls 213).....	---	---	3
Principles of Farm Management (FM 211).....	---	---	3
Forage and Root Crop Production (FC 211).....	3	---	or (3)
General Bacteriology (Bac 204).....	---	3	---
Introduction to Dairy Husbandry (AI 122).....	---	3	---
Physical Education.....	1	1	1
Military Science.....	1	1	1
Electives.....	6	3	6
	17	17	17

¹Stock Judging I (AI 111) may be substituted for AI 121 or AI 123 by students who will major in animal industries who wish to qualify for the stock judging team. AI 121 and AI 123 must be taken in the sophomore year if not taken in the freshman year.

²General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education. Women take Social Ethics (PE 131) one term.

	Junior Year		
	Term hours		
	F	W	S
Principles of Economic Entomology (Ent 211).....	(3) or 3	3	---
Elementary Journalism (J 111).....	---	3	---
Extempore Speaking (Sp 111).....	3	---	---
¹ Electives.....	12	9	14
	15	15	14
Senior Year			
² Technical Writing (J 314).....	---	3	---
American National Government (PS 212).....	3	---	---
¹ Electives.....	12	12	14
	15	15	14

Curricula in Agricultural Economics

B.S. Degree

Agricultural Economics Farm Management

Sophomore Year

(See Common Freshman Year, page 196)

	Term hours		
	F	W	S
Principles of Economics (Ec 201, 202, 203).....	3	3	3
Agricultural Statistics (AEc 221).....	---	3	---
Agricultural Economics (AEc 211).....	---	---	3
General Bacteriology (Bac 204).....	---	3	---
Principles of Farm Management (FM 211).....	---	---	3
Introduction to Dairy Husbandry (AI 122).....	---	3	---
Forage and Root Crop Production (FC 211).....	---	---	3
Soils (SIs 211, 212).....	3	3	---
Soil Drainage and Irrigation (SIs 213).....	---	---	3
Farm Accounting (FM 311).....	3	---	---
Military Science.....	1	1	1
Physical Education.....	1	1	1
Electives.....	6	---	---
	17	17	17

AGRICULTURAL ECONOMICS^{3, 4}

Junior Year

Extempore Speaking (Sp 111).....	3	---	---
Elementary Journalism (J 111).....	---	3	---
Principles of Agricultural Marketing (AEc 441).....	4	---	---
Marketing Organizations (AEc 442).....	---	---	3
Constructive Accounting (BA 111, 112, 113).....	4	4	4
Public Finance (Ec 418).....	---	4	---
Money and Banking (Ec 413).....	---	---	4
⁵ Electives in Plant Industries or Military Science.....	3	3	3
Electives.....	2	2	---
	16	16	14

¹Electives leading to specific objectives are chosen in conference with the Dean of Agriculture and must include a minimum of 36 upper-division hours in agriculture.

²Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

³Students who have completed the first two years of any agricultural curriculum or who have a Junior Certificate from the Lower Division are admitted to junior standing in agricultural economics. The curriculum outlined is intended as a suggestion rather than as a requirement and is modified to fit the needs and previous training of the individual student. Especial modifications are made for students desiring more intensive training in rural finance, marketing, cooperation, or land economics.

⁴The curriculum for students majoring in the marketing of agricultural products is given in cooperation with the production departments concerned. In general, students follow the curriculum outlined for agricultural economics, including courses in the handling, grading, and storage given in the production departments, and courses in accounting and advertising given in the Department of Business Administration. Students may major in the marketing of fruits and vegetables; dairy, poultry, and dairy and poultry products; livestock and livestock products.

⁵Students with the Junior Certificate from the Lower Division or with other similar freshman and sophomore training are required to take AEc 111 and AEc 221 and to choose electives in Plant and Animal Industries.

	Senior Year		
	Term hours		
	F	W	S
International Trade (Ec 440)	4	---	---
Land Economics (AEC 421)	3	---	---
General Advertising (SS 439)	---	---	3
Farm Credits (AEC 431)	---	3	---
Transportation (Ec 435)	---	---	4
Current Economic Theory and Problems (Ec 475, 476)	3	3	---
Business Law (BA 256)	---	4	---
American National Government (PS 212)	---	3	---
*Technical Writing (J 314)	3	---	---
*Electives in Plant and Animal Industries or Military Science	3	3	3
Electives	---	---	3
	16	16	13
FARM MANAGEMENT			
Junior Year			
Operation Efficiency (FM 312)	---	3	---
Farm Organization (FM 313)	3	---	---
Enterprise Costs and Profits (FM 414)	---	---	3
Animal Breeding (AI 315)	---	3	---
Animal Nutrition (AI 411)	---	---	4
Extempore Speaking (Sp 111)	3	---	---
Principles of Economic Entomology (Ent 211)	3	---	---
Elementary Journalism (J 111)	---	3	---
Electives	6	6	8
	15	15	15
Senior Year			
Enterprise Costs and Profits (FM 415)	2	---	---
Applied Farm Management (FM 412, 413)	3	3	---
Agricultural Land Economics (FM 416)	---	3	---
Agricultural Appraisal (FM 417)	---	---	3
Farm Credits (AEC 431)	---	3	---
American National Government (PS 212)	3	---	---
*Technical Writing (J 314)	3	---	---
Electives	7	6	11
	18	15	14

Curricula in Animal Industries³

B.S. Degree

Dairy Production *Animal Husbandry*
Dairy Manufacturing *Poultry Husbandry*
Fish and Game Management

Sophomore Year⁴

(See Common Freshman Year, page 196, taken by all students in animal industries except those in fish and game management. For the freshman and sophomore curriculum in fish and game management see pages 200-201.)

	Term hours		
	F	W	S
Principles of Economics (Ec 201, 202, 203)	3	3	3
Organic and Agricultural Biochemistry (Ch 251)	5	---	---
Elementary Journalism (J 111)	---	3	---
Forage and Root Crop Production (FC 211)	---	---	3
General Bacteriology (Bac 204)	---	3	---
Principles of Farm Management (FM 211)	---	---	3
*Anatomy of Domestic Animals (VM 211)	3	---	---
Physiology of Domestic Animals (VM 221, 222)	---	3	3
Introduction to Dairy Husbandry (AI 122)	3	or (3)	or (3)
Stock Judging I (AI 111)	---	3	---
Electives	1	---	3
Physical Education	1	1	1
Military Science	1	1	1
	17	17	17

¹Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

²Electives leading to specific objectives are chosen in conference with the Dean of Agriculture and must include a minimum of 36 upper-division hours in agriculture.

³At the graduate level major work is also offered in veterinary medicine.

⁴Students who will specialize in (1) the science phases of animal industries, (2) dairy manufacturing, or (3) range and range-livestock management may make certain substitutions in the curriculum in consultation with the head of the Division of Animal Industries.

⁵Students who intend to major in poultry husbandry should take Anatomy of the Fowl (VM 311) in place of VM 211.

ANIMAL HUSBANDRY

Junior Year¹

	Term hours		
	F	W	S
Stock Judging II (AH 211)	---	---	3
Breeds of Livestock I, II (AH 315, 316)	3	3	---
Animal Nutrition (AI 411)	4	3	---
Animal Breeding (AI 315)	---	3	---
Livestock Feeding (AH 412)	---	5	---
Extempore Speaking (Sp 111)	---	---	3
Farm Accounting (FM 311)	3	---	---
Electives	5	4	9
	15	15	15

Senior Year¹

Livestock Economics (AH 424)	---	---	5
Reproduction Problems (AH 423)	---	3	---
Diseases of Livestock (VM 441, 442, 443)	3	3	3
Soils (Sls 211, 212)	3	3	---
American National Government (PS 212)	---	3	---
Business Law (BA 257)	4	---	---
*Technical Writing (J 314)	3	---	---
Electives	3	3	5
	16	15	13

OPTIONS

Students specializing in *range and range-livestock management* are required to take the following courses in the junior and senior years.

Junior Year

	Term hours		
	F	W	S
Range and Pasture Botany (Bot 314)	3	---	---
Range Improvement and Maintenance (FC 319)	---	3	---
Fish and Game Management (FG 351, 352, 353)	3	3	3
Systematic Botany (Bot 313)	---	---	4

Senior Year

Economics, Laws, and History of the Range (AEc 461)	3	---	---
Management of Livestock on the Range (AH 419, 420)	---	3	3
Principles of Plant Physiology (Bot 331)	---	---	4
Principles of Plant Ecology (Bot 341)	---	4	---

DAIRY PRODUCTION

Junior Year

Dairy Herd Management (DH 322)	---	3	---
Dairy Breed Types (DH 321)	---	---	3
Dairy Products Standards (DH 315)	---	1	---
Animal Nutrition (AI 411)	4	---	---
Animal Breeding (AI 315)	---	3	---
Farm Accounting (FM 311)	3	---	---
Soils (Sls 211, 212)	3	3	---
Extempore Speaking (Sp 111)	---	---	3
Business Law (BA 257)	---	---	4
Electives	5	5	5
	15	15	15

Senior Year

Breeding Dairy Cattle (DH 421)	---	3	---
Dairy Cattle Feeding (DH 422)	---	---	3
Dairy Products Manufacturing (DH 312, 313, 314)	3	3	3
Seminar (DH 407)	1	1	1
Diseases of Livestock (VM 441, 442, 443)	3	3	3
American National Government (PS 212)	3	---	---
*Technical Writing (J 314)	3	---	---
Electives	3	5	4
	16	15	14

¹Students who will specialize in (1) the science phases of animal industries, (2) dairy manufacturing, or (3) range and range-livestock management may make certain substitutions in the curriculum in consultation with the head of the Division of Animal Industries.

²Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

DAIRY MANUFACTURING

	Junior Year			Term hours		
	F	W	S	F	W	S
Dairy Products Manufacturing (DH 312, 313, 314).....	4	4	4			
Market Milk (DH 311).....						3
Dairy Bacteriology (Bac 411, 412).....	3	3				
Dairy Herd Management (DH 322).....		3				
Quantitative Analysis (Ch 231).....	5					
Extempore Speaking (Sp 111).....						3
Dairy Breed Types (DH 321).....						3
Dairy Products Standards (DH 315).....		1				
¹ Electives.....	3	4				3
	15	15				16

Senior Year

Dairy Technology (DH 411, 412, 413).....	3	3	3			
American National Government (PS 212).....	3					
Agricultural and Biochemical Analysis (Ch 352).....		3				
Dairy Cattle Feeding (DH 422).....						3
Seminar (DH 407).....	1	1	1			
² Technical Writing (J 314).....	3					
Electives.....	5	7				7
	15	14				14

POULTRY HUSBANDRY

Junior Year

Poultry Housing (PH 331).....	3					
Poultry Judging (PH 341).....		2				
Incubation and Brooding (PH 321).....						4
Diseases of Poultry and Game Birds (VM 351).....						3
Extempore Speaking (Sp 111).....						3
Animal Nutrition (AI 411).....	4					
Animal Breeding (AI 315).....		3				
Farm Accounting (FM 311).....	3					
Soils (SIs 211, 212).....	3	3				
Electives.....	3	7				5
	16	15				15

Senior Year

Poultry Feeding (PH 411).....	4					
Marketing Poultry Products (PH 421).....		4				
Poultry Plant Management (PH 431).....						4
Poultry Breeding (PH 441).....						4
Seminar (PH 407).....	1	1	1			
American National Government (PS 212).....		3				
² Technical Writing (J 314).....	3					
Electives.....	7	6				5
	15	14				14

FISH AND GAME MANAGEMENT

Freshman Year

English Composition (Eng 111, 112, 113).....	3	3	3			
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3			
General Zoology (Z 201, 202, 203).....	3	3	3			
Wildlife Conservation (FG 251).....	3					
Elements of Agronomy (FC 111).....		3				
Introduction to Animal Husbandry (AI 121).....						3
General Forestry (F 211).....	3					
Forest Administration (F 212).....		3				
Agricultural Engineering (AE 111).....						3
³ Physical Education.....	1	1	1			
Military Science.....	1	1	1			
	17	17				17

¹Suggested elective fall term: Business English (Eng 217).

²Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

³General Hygiene (PE 150), 2 term hours, is taken one term in place of Physical Education.

	Term hours		
	F	W	S
Sophomore Year			
Economics and Social Science.....	3	3	3
General Botany (Bot 201, 202, 203).....	3	3	3
Economic Ornithology (Z 321).....	3	---	---
Economic Mammalogy (Z 322).....	---	3	---
Animal Ecology (Z 311).....	---	---	3
General Bacteriology (Bac 204, 205).....	3	3	---
Biology of Fishes (Z 323).....	---	---	3
Anatomy of Domestic Animals (VM 211).....	3	---	---
Physiology of Domestic Animals (VM 221, 222).....	---	3	3
Physical Education.....	1	1	1
Military Science.....	1	1	1
	17	17	17
Junior Year			
Range and Pasture Botany (Bot 314).....	3	---	---
Principles of Plant Ecology (Bot 341).....	---	4	---
Elementary Journalism (J 111).....	---	---	3
Nutrition of Wild Animals (AI 410).....	---	---	4
Extempore Speaking (Sp 111).....	3	---	---
Fish and Game Management (FG 351, 352, 353).....	3	3	3
Anatomy of the Fowl (VM 311).....	---	3	---
Diseases of Poultry and Game Birds (VM 351).....	---	---	3
Parasitic Diseases of Domestic and Game Animals (VM 361).....	---	3	---
Principles of Economic Entomology (Ent 211).....	3	---	---
Electives.....	3	3	3
	15	16	16
Senior Year			
Wildlife Food Crops (FC 318).....	3	---	---
Management of Livestock on the Range (AH 419, 420).....	---	3	3
Management of Game Birds (FG 451).....	---	3	---
Management of Game Fish (FG 454).....	3	---	---
Management of Big Game (FG 457).....	---	3	---
Management of Fur Bearers (FG 460).....	---	---	3
Animal Breeding (AI 315).....	---	3	---
American National Government (PS 212).....	---	---	3
Seminar (FG 407).....	1	1	1
¹ Technical Writing (J 314).....	3	---	---
Electives.....	4	3	4
	14	16	14

Curricula in Plant Industries

B.S. Degree

Farm Crops *Horticulture*
Soils *Food Products Industries*
 Landscape Construction and Maintenance

(See Common Freshman Year, page 196, taken by all students in plant industries except those in food products industries and in landscape construction and maintenance. For the freshman and sophomore curriculum in food products industries see page 204. For the freshman and sophomore curriculum in landscape construction and maintenance see pages 204-205.)

	Term hours		
	F	W	S
Sophomore Year			
Principles of Economics (Ec 201, 202, 203).....	3	3	3
Soils (SIs 211, 212).....	3	3	---
Soil Drainage and Irrigation (SIs 213).....	---	---	3
Organic and Agricultural Biochemistry (Ch 251).....	5	---	---
Principles of Farm Management (FM 211).....	---	---	3
Principles of Plant Physiology (Bot 331).....	---	---	4
Forage and Root-Crop Production (FC 211).....	3	---	---
General Bacteriology (Bac 204).....	---	3	---
Introduction to Dairy Husbandry (AI 122).....	---	3	---
Plant Propagation (Hrt 311).....	1	3	---
Physical Education.....	1	1	1
Military Science.....	1	1	1
Elective.....	---	---	1
	16	17	16

¹Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

	Term hours		
	F	W	S
FARM CROPS			
Junior Year			
Cereal Production Lectures (FC 322)	3	---	---
Extempore Speaking (Sp 111)	---	---	3
Cereal Morphology (FC 323)	2	---	---
Forage and Related Crops (FC 324)	---	---	3
Principles of Agricultural Breeding (FC 315)	3	---	---
Principles of Plant Pathology (Bot 351)	4	---	---
Farm Accounting (FM 311)	---	3	---
Elementary Journalism (J 111)	---	3	---
Principles of Economic Entomology (Ent 211)	3	3	---
¹ Electives	3	6	9
	15	15	15
Senior Year			
Crop Inspection (FC 411)	---	4	---
Seed Production (FC 414)	3	---	---
Crop Breeding (FC 415)	---	---	5
Soil Fertility Lectures (SIs 424)	---	3	---
Soil Fertility Laboratory (SIs 425)	---	2	---
Crop Efficiency (FC 421)	---	---	3
Business Law (BA 256)	4	---	---
American National Government (PS 212)	---	---	3
Seminar (FC 407)	1	1	1
Animal Nutrition (AI 411)	4	---	---
² Technical Writing (J 314)	---	3	---
¹ Electives	3	3	3
	15	16	15

	Term hours		
	F	W	S
SOILS			
Junior Year			
Extempore Speaking (Sp 111)	3	---	---
Principles of Agricultural Breeding (FC 315)	3	---	---
Animal Nutrition (AI 411) or Fruit Production (Pom 415)	---	---	4
Farm Accounting (FM 311)	---	3	---
Farm Motors and Tractors (AE 311)	---	---	3
Irrigation Farming (SIs 311)	3	---	---
Western Land and Water Laws (SIs 411)	---	3	---
Soil Survey (SIs 432)	---	---	3
Soil Bacteriology (Bac 421)	4	---	---
Agricultural Land Economics (FM 416)	---	3	---
Principles of Economic Entomology (Ent 211)	---	3	---
Elementary Journalism (J 111)	---	---	3
Electives	2	3	3
	15	15	16
Senior Year			
American National Government (PS 212)	---	3	---
Soil Physics Lectures (SIs 421)	3	---	---
Soil Physics Laboratory (SIs 422)	2	---	---
Soil Fertility Lectures (SIs 424)	---	3	---
Soil Fertility Laboratory (SIs 425)	---	2	---
Soil Management (SIs 428)	---	---	5
Irrigation Investigations (SIs 414)	3	---	---
Seminar (SIs 407)	1	1	1
² Technical Writing (J 314)	---	3	---
¹ Electives	6	3	9
	15	15	15

OPTIONS

Students majoring in agronomy who desire to prepare for *soil-conservation* service should take the following courses.

	Term hours		
	F	W	S
Junior Year			
Cover Crops and Soil-Erosion Prevention Plants (FC 320)	---	2	---
Climatology (SIs 319)	---	---	2
Geology (G 201, 202)	3	3	---
General Forestry (F 111)	4	---	---
Range Improvement and Maintenance (FC 319)	---	3	---
Soil Survey (SIs 432)	---	---	3
Principles of Plant Ecology (Bot 341)	---	4	---
Plane Surveying (CE 221)	5	---	---

¹Electives leading to production, agricultural teaching, research, extension, or commercial careers are chosen in conference with the head of the department.

²Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

	Senior Year		
	Term hours		
	F	W	S
Range and Pasture Botany (Bot 314).....	3	---	---
Agricultural Land Economics (FM 416).....	---	3	---
Agricultural Appraisal (FM 417).....	---	---	3
Silviculture: Seeding and Planting (F 343).....	---	---	4
Soil Physics Lectures (SIs 421).....	3	---	---
Soil Physics Laboratory (SIs 422).....	2	---	---
Soil Conservation (SIs 413).....	---	3	---
Soil Conservation Engineering (AE 417).....	3	---	---

HORTICULTURE: POMOLOG⁴

Junior Year			
Principles of Plant Pathology (Bot 351).....	4	---	---
History and Literature of Horticulture (Pom 312).....	---	3	---
Principles of Economic Entomology (Ent 211).....	---	3	---
Farm Accounting (FM 311).....	---	3	---
Principles of Agricultural Breeding (FC 315).....	3	---	---
Commercial Pomology (Pom 313).....	3	---	---
Fruit Production (Pom 415).....	---	---	4
Plant Pathological Technique (Bot 451).....	3	---	---
Practical Bee Culture (Ent 235).....	---	---	2
Extempore Speaking (Sp 111).....	---	3	---
Elementary Journalism (J 111).....	---	---	3
¹ Electives.....	3	3	6
	16	15	15

Senior Year			
Dehydration of Fruits and Vegetables (FP 331).....	3	---	---
Systematic Pomology (Pom 417).....	4	---	---
Handling and Distribution of Fruits (Pom 413).....	---	3	---
Pruning (Pom 431).....	---	3	---
Economic Entomology (Ent 411).....	3	---	---
Spraying (Pom 419).....	---	---	3
American National Government (PS 212).....	---	3	---
Seminar (Hrt 407).....	1	1	1
² Technical Writing (J 314).....	---	3	---
³ Electives.....	4	2	11
	15	15	15

HORTICULTURE: VEGETABLE CROPS⁴

Junior Year			
Principles of Vegetable Production (VC 321).....	3	---	---
Vegetable Growing Practices (VC 323).....	---	---	3
Principles of Plant Pathology (Bot 351).....	4	---	---
History and Literature of Horticulture (Pom 312).....	---	3	---
Principles of Economic Entomology (Ent 211).....	---	3	---
Farm Accounting (FM 311).....	---	3	---
Principles of Agricultural Breeding (FC 315).....	3	---	---
Practical Bee Culture (Ent 235).....	---	---	2
Extempore Speaking (Sp 111).....	---	3	---
Elementary Journalism (J 111).....	---	---	3
¹ Electives.....	6	3	7
	16	15	15

Senior Year			
Vegetable Varieties (VC 423).....	2	---	---
Vegetable Marketing (VC 424).....	3	---	---
Vegetable Forcing (VC 325).....	---	---	3
American National Government (PS 212).....	---	3	---
Seminar (Hrt 407).....	1	1	1
² Technical Writing (J 314).....	---	3	---
³ Electives.....	9	8	11
	15	15	15

¹Electives leading to production, agricultural teaching, research, extension, or commercial careers are chosen in conference with the head of the department.

²Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

³Elective courses will be chosen in conference with the major professor and division head. A minimum of 36 upper-division hours in agriculture are required for graduation.

⁴Students desiring to strengthen their work in the handling and distribution of fruits and vegetables should confer with the head of the department.

HORTICULTURE: FOOD PRODUCTS INDUSTRIES

	Freshman Year		
	F	W	S
English Composition (Eng 111, 112, 113).....	3	3	3
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
General Botany (Bot 201, 202, 203).....	3	3	3
General Physics (Ph 201, 202, 203).....	4	4	4
Agricultural Resources (AEC 111).....	3	---	---
Elements of Horticulture (Hrt 111).....	---	---	3
Military Science.....	1	1	1
¹ Physical Education.....	1	1	1
	18	15	18
Sophomore Year			
Principles of Economics (Ec 201, 202, 203).....	3	3	3
Elementary Journalism (J 111).....	---	---	3
Extempore Speaking (Sp 111).....	---	---	3
Landscape Architecture (LA 279).....	---	---	3
Organic and Agricultural Biochemistry (Ch 251, 252).....	5	5	---
Business Law (BA 256, 257).....	4	4	---
Principles of Food Preservation (FP 250).....	3	---	---
Principles of Canning Fruits (FP 251).....	---	3	---
Principles of Canning Vegetables (FP 252).....	---	---	3
Military Science.....	1	1	1
Physical Education.....	1	1	1
	17	17	17
Junior Year			
General Bacteriology (Bac 204, 205, 206).....	3	3	3
Principles of Plant Pathology (Bot 351).....	4	---	---
Principles of Plant Physiology (Bot 331).....	---	---	4
Dehydration of Fruits and Vegetables (FP 331).....	3	---	---
Pickles, Relishes, and Condiments (FP 341).....	3	---	---
Fruit Production (Pom 415).....	---	---	4
American National Government (PS 212).....	---	3	---
Elements of Organization and Production (BA 221).....	---	4	---
Electives.....	3	5	4
	16	15	15
Senior Year			
Accounting for Engineers and Foresters (BA 385).....	---	3	---
Fruit Juice and Vinegar Manufacture (FP 351).....	3	---	---
Commercial Jam and Jelly Manufacture (FP 352).....	---	3	---
Preserves, Glacé Fruits, and Candied Fruits (FP 361).....	---	---	3
Commercial Pomology (Pom 313).....	3	---	---
Seminar (Hrt 407).....	1	1	1
² Technical Writing (J 314).....	---	3	---
Electives.....	8	4	10
	15	14	14

HORTICULTURE: LANDSCAPE CONSTRUCTION AND MAINTENANCE³

	Freshman Year		
	F	W	S
English Composition (Eng 111, 112, 113).....	3	3	3
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
General Botany (Bot 201, 202, 203).....	3	3	3
Trigonometry (Mth 106).....	---	4	---
Landscape Architecture (LA 279).....	3	---	---
Elements of Horticulture (Hrt 111).....	---	---	3
Lower-Division Architectural Design (AA 297).....	2	2	2
Construction (AA 120).....	---	---	1
¹ Physical Education.....	1	1	1
Military Science.....	1	1	1
	16	17	17

¹General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education.

²Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

³The student is required to have one or more summers of practical experience in some one of the following or related fields: ornamental nursery; florist establishment; national, state, or municipal parks; roadway beautification; or large private grounds. Students desiring to qualify for a degree in landscape architecture may accomplish this by taking additional work in the School of Architecture and Allied Arts at the University of Oregon or in some other institution where this degree is granted.

	Term hours		
	F	W	S
Sophomore Year			
Principles of Economics (Ec 201, 202, 203).....	3	3	3
Plane Surveying (CE 226, 223).....	3	---	3
House Planning and Architectural Drawing (AA 178, 179, 180).....	3	3	3
Soils (Sls 211, 212) Soil Drainage and Irrigation (Sls 213).....	3	3	3
Principles of Economic Entomology (Ent 211).....	---	3	---
Lower-Division Landscape Design (LA 290).....	2	2	2
Physical Education.....	1	1	1
Military Science.....	1	1	1
	16	16	16

Junior Year			
Plant Materials (LA 326, 327, 328).....	3	3	3
Principles of Plant Pathology (Bot 351).....	4	---	---
Plant Propagation (Hrt 311).....	---	3	---
Principles of Plant Physiology (Bot 331).....	---	---	4
Layout of Small Properties (LA 382, 383, 384).....	2	2	2
General Floriculture (Hrt 316).....	3	---	---
Greenhouse Crops (Hrt 313).....	---	3	---
Nursery Management (Hrt 320).....	---	---	3
Extempore Speaking (Sp 111).....	---	3	---
Elementary Journalism (J 111).....	---	---	3
Electives in Agriculture.....	3	3	3
	15	17	18

Senior Year			
Maintenance and Construction (LA 359, 360, 361).....	2	2	2
Pruning (Pom 431).....	---	3	---
Spraying (Pom 419).....	---	---	3
Planting Plans (LA 392, 393, 394).....	2	2	2
History and Literature of Landscape Architecture (LA 356, 357, 358).....	2	2	2
Upper-Division Landscape Design (LA 390).....	2	2	2
American National Government (PS 212).....	3	---	---
Lawns and Turfs (FC 313).....	2	---	---
Technical Writing (J 314).....	---	3	---
Electives.....	3	---	3
	16	14	14

Curriculum in Agricultural Education

B.S. Degree

(See Common Freshman Year, page 196)

	Term hours		
	F	W	S
Sophomore Year			
Principles of Economics (Ec 201, 202, 203).....	3	3	3
Organic and Agricultural Biochemistry (Ch 251).....	5	---	---
Introduction to Dairy Husbandry (AI 122).....	3	---	---
General Bacteriology (Bac 204).....	---	3	---
Principles of Farm Management (FM 211).....	---	---	3
Farm Motors and Tractors (AE 311) or Automobile Mechanics (AE 312).....	---	3	---
Forage and Root Crop Production (FC 211).....	---	---	3
Soils (Sls 211, 212).....	3	3	---
Outlines of Psychology (Psy 211).....	---	---	6
Military Science.....	1	1	1
Physical Education.....	1	1	1
Elective.....	---	3	---
	16	17	17

¹Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

	Term hours		
	F	W	S
Junior Year			
Elementary Journalism (J 111).....	---	3	---
Extempore Speaking (Sp 111).....	---	---	3
Farm Construction (Farm Shop I) (AE 221).....	3	---	---
Animal Nutrition (AI 411).....	4	---	---
Enterprise Costs and Profits (FM 414).....	---	---	3
Secondary Education (Ed 311).....	---	3	---
Principles of Teaching (Ed 313).....	---	---	3
Educational Psychology (Ed 312).....	3	---	---
Electives.....	6	9	6
	16	15	15
Senior Year			
Methods in Agriculture (Ed 323).....	5	---	---
Rural Survey Methods (AE 533).....	---	---	2
Supervised Teaching (Ed 315).....	---	3	---
American National Government (PS 212).....	---	---	3
¹ Technical Writing (J 314).....	---	3	---
Electives.....	10	9	8
	15	15	15

Curriculum in Agricultural Engineering

B.S. Degree

	Term hours		
	F	W	S
Freshman Year			
English Composition (Eng 111, 112, 113).....	3	3	3
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
Engineering Problems (GE 101).....	2	---	---
Engineering Drawing (GE 111).....	---	2	---
Engineering Drawing (GE 112).....	---	---	2
Agricultural Engineering Survey (AE 101).....	3	---	---
Agricultural Resources (AEc 111).....	---	3	---
Farm Implements (AE 231).....	---	---	3
Military Science.....	1	1	1
² Physical Education.....	1	1	1
	17	17	17
Sophomore Year			
Principles of Economics (Ec 201, 202, 203).....	3	3	3
Engineering Physics (Ph 111, 112, 113).....	3	3	3
Soils (Sls 211, 212).....	3	3	---
Machine Shop Practice (IA 260).....	---	---	2
Farm Construction (Farm Shop I) (AE 221).....	3	---	---
Farm Equipment Repair (Farm Shop II) (AE 222).....	---	3	---
Farm Motors and Tractors (AE 311).....	---	---	3
Elements of Agronomy (FC 111).....	3	---	---
Introduction to Dairy Husbandry (AI 122).....	---	3	---
Principles of Farm Management (FM 211).....	---	---	3
Military Science.....	1	1	1
² Physical Education.....	1	1	1
	17	17	16
Junior Year			
Plane Surveying (CE 226).....	3	---	---
Extempore Speaking (Sp 111).....	---	3	---
Elementary Journalism (J 111).....	3	---	---
Mechanics (ME 212, 213).....	3	3	---
Steam, Air, and Gas Power (ME 346).....	---	---	3
Automobile Mechanics (AE 313).....	3	---	---
Pumps and Irrigation Equipment (AE 321).....	---	---	3
Rural Electrification (AE 331).....	---	3	---
Electives.....	4	6	9
	16	15	15

¹Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

²General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education.

	Senior Year		
	Term hours		
	F	W	S
American National Government (PS 212).....	3	3	---
Hydraulics (CE 341).....	3	---	---
Industrial Electricity (EE 351, 352).....	3	3	---
Farm Structures (AE 361).....	3	---	---
Reading and Conference (AE 305).....	3	3	3
*Technical Writing (J 314).....	---	3	---
Electives.....	3	3	9
	15	15	12

OPTION

Students majoring in agricultural engineering who desire to prepare for soil-conservation service should take the following courses.

	Sophomore Year		
	Term hours		
	F	W	S
General Botany (Bot 201, 202).....	3	3	---

Junior Year

Cover Crops and Soil-Erosion Prevention Plants (FC 320).....	---	2	---
Soil Drainage and Irrigation (Sls 213).....	---	---	3
Forage and Root-Crop Production (FC 211).....	---	---	3
Principles of Economic Entomology (Ent 211).....	3	---	---
Geology (G 201, 202).....	3	3	---
Range Improvement and Maintenance (FC 319).....	---	3	---
Soil Survey (Sls 432).....	---	---	3
Plane Surveying (CE 221, 222, 223).....	5	3	3

Senior Year

Climatology (Sls 319).....	---	---	2
Agricultural Land Economics (FM 416).....	---	3	---
Agricultural Appraisal (FM 417).....	---	---	3
Silviculture: Seeding and Planting (F 343).....	---	---	4
Soil Physics Lectures (Sls 421).....	3	---	---
Soil Physics Laboratory (Sls 422).....	2	---	---
Soil Conservation (Sls 413).....	---	3	---
Soil-Conservation Engineering (AE 471).....	3	---	---

Curriculum in Agricultural Technology

B.S. Degree

Freshman Year

	Term hours		
	F	W	S
English Composition (Eng 111, 112, 113).....	3	3	3
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
General Zoology (Z 201, 202, 203) or General Botany (Bot 201, 202, 203).....	3	3	3
Unified Mathematics (Mth 101, 102, 103) or Lower-division agriculture courses.....	4	4	4
Electives (Lower-division agriculture courses).....	2	2	2
*Physical Education.....	1	1	1
Military Science.....	1	1	1
	17	17	17

Sophomore Year

Principles of Economics (Ec 201, 202, 203).....	3	3	3
Genetics (Z 315).....	3	---	---
General Bacteriology (Bac 204).....	---	3	---
Lower-Division Science Elective (Sequence courses).....	3	3-5	3-8
Agriculture Electives from courses numbered 211 to 299.....	---	4-6	4-9
Physical Education.....	1	1	1
Military Science.....	1	1	1
Electives.....	5	---	---
	16	16	16

*Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

*General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education.

	Term hours		
	F	W	S
Junior and Senior Years			
Extempore Speaking (Sp 111).....	3	---	---
Elementary Journalism (J 111).....	3	3	---
American National Government (PS 212).....	3	---	---
*Technical Writing (J 314).....	---	3	---
*Electives	25	25	30
	31	31	30

Two-Year Curriculum in Agriculture

Certificate in Agriculture

	Term hours		
	F	W	S
First Year			
English Composition (Eng 111, 112, 113).....	3	3	3
*Science	3	3	3
Elements of Agronomy (FC 111).....	3	---	---
Elements of Horticulture (Hrt 111).....	---	---	3
Introduction to Animal Husbandry (AI 121).....	3	---	---
*Introduction to Poultry Husbandry (AI 123).....	---	3	---
Current Affairs (PS 232).....	---	2	---
Agricultural Engineering (AE 111).....	3	---	---
*Physical Education	1	1	1
Military Science	1	1	1
Electives	---	4	6
	17	17	17

	Term hours		
	F	W	S
Second Year			
Principles of Farm Management (FM 211).....	---	---	3
Soils (Sls 211, 212).....	3	3	---
Plant Propagation (Hrt 311).....	---	3	---
Forage and Root-Crop Production (FC 211).....	---	---	3
*Introduction to Dairy Husbandry (AI 122).....	3	---	---
Public Speaking	---	3	---
Agricultural Resources (AEc 111).....	3	---	---
Diseases of Livestock (VM 341).....	4	---	---
Farm Structures (AE 461) or House Planning and Architectural Drawing (AA 178).....	(3)	---	or 3
American National Government (PS 212).....	---	3	---
Military Science	1	1	1
Physical Education	1	1	1
Electives	2	3	6
	17	17	17

¹Students desiring exemption from J 314 may apply to the Dean of Agriculture, whereupon arrangements will be made for a special examination.

²Not less than 24 hours of upper-division courses in agriculture including 3 hours of Seminar.

³Courses in the basic sciences may be selected from the following: Biological Science Survey, Physical Science Survey, Chemistry, Botany, Zoology, Entomology.

⁴Students especially interested in plant industries or some other phase of agriculture that does not require all three courses in animal industries may make a substitution.

⁵General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education.

Division of Agricultural Economics

THE Division of Agricultural Economics deals with the business, financial, and managerial phases of agriculture and agricultural business. The division includes the Department of Farm Management, which deals largely with the individual farm, and the Department of Agricultural Economics, which deals with the broader economic phases of agriculture. No sharp line of distinction is drawn between farm management and agricultural economics. Every effort is made, moreover, to coordinate the work in agricultural economics and farm management with that of the Plant Industries and Animal Industries divisions.

Agricultural Economics

DESIGNED primarily to meet the needs of students interested in the business side of agriculture and its broader economic relationships, the Department of Agricultural Economics offers in addition sufficient work in agricultural science and technique to give the student a scientific concept of the industry.

The growth of agriculture into a vast commercial industry and the increasing maze of economic, financial, and marketing problems accompanying that development are opening up attractive opportunities to well-trained students in agricultural economics. The curriculum (pages 197-198) not only affords excellent preparation for those who intend to farm and assume positions of business, educational, and community leadership, but also gives the basic training needed for professional careers as teachers, research workers, and extension specialists. It lays a foundation for a business career in connection with farmers' buying and selling associations, real estate and farm mortgage companies, banks, brokerage, jobbing, wholesale and retail houses, and expert business service for the agricultural field. It gives valuable training for positions in county agricultural extension work, both professional and commercial; chamber of commerce work; or professional work as adviser to business houses or railway companies where aggressive qualities of leadership and an intimate knowledge of town and country relations are required.

In order that the student may have ample opportunity to acquire the broad and liberal training requisite for entry into many of these occupations, ample electives are provided for in the junior and senior years.

The practical character of the instruction in agricultural economics is enhanced by the extension and research activities conducted by this department. Through the Agricultural Experiment Station investigations dealing with (a) rural taxation, (b) marketing, and (c) economic trends and the market situation and outlook for Oregon's leading agricultural commodities are being conducted.

Through the Extension Service, market news and agricultural situation and outlook material are disseminated to farmers and others. Special attention is also given to the marketing, processing, and handling of agricultural commodities through both cooperative and private agencies. The department has leased wire connection with the leading markets of the country, through which daily and even hourly market reports are received.

All of the work in agricultural economics is very closely coordinated with the work in agricultural production in the various other departments of this institution.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

AEc 111. Agricultural Resources. Fall or winter term, 3 hours.

A study of the agricultural resources of the world, with special reference to the resources of the United States and of the State of Oregon. A broad survey of agriculture, including soil, climate, topography, institutions, and population. Three recitations.

AEc 211. Agricultural Economics. Spring term, 3 hours.

A study of the major supply, demand, and foreign trade problems of American agriculture and of their underlying economic principles. Especial attention is given to the economics of controlled production and other measures of agricultural adjustment. Prerequisite: At least two terms of Principles of Economics. Three recitations.

AEc 221. Agricultural Statistics. Winter term, 3 hours.

Methods of analyzing, simplifying, and presenting statistical material; sources of business and agricultural statistics; study of statistical devices used in the fields of business and agriculture.

UPPER-DIVISION COURSES

AEc 307. Seminar. Three terms, 1 hour each term.

AEc 312. Agrarian Movements. Spring term, 3 hours.

A review of the fundamentals of cooperation followed by a discussion of agrarian organizations such as the Grange, Farmers' Union, American Society of Equity, the Gleaners, Farm Bureau, Non-Partisan League, and cooperative organizations for production, distribution, consumption, and credit purposes. Prerequisite: AEc 211. Three recitations.

AEc 405. Reading and Conference. Terms and hours to be arranged.

Opportunity is given students to make special study of problems not covered by regularly scheduled courses. Work will be under the direction of some member of the staff of the department. The cooperation of staff members from production departments will be available where necessary.

AEc 407. Seminar. Three terms, 1 hour each term.

AEc 421. Land Economics. (G) Fall term, 3 hours.

Deals with the underlying principles pertaining to urban, agricultural, mineral, forest, and other types of land in their social setting. Attention is focused on land resources, their classification, valuation, and use, and related problems of finance and taxation. Prerequisite: Ec 203. Three recitations.

AEc 431. Farm Credits. (g) Winter term, 3 hours.

Fundamental principles of credit and finance as applied to agriculture; the credit requirements of agriculture; existing agencies for supplying credit and ways and means of utilizing them; strength and weakness of present credit system and proposals for reform. Prerequisite: Ec 203; junior or senior standing. Three recitations.

AEc 433. Land Taxation. (g) Winter term, 3 hours.

A critical study of the present system of land assessment and taxation; tax burden of real property compared with tax burden of personal property, tangible and intangible; study of methods of taxing mineral wealth, forests, and water-power; analysis of effects of changes in taxation system. Prerequisite: Ec 203 or equivalent. Three recitations.

AEc 441. Principles of Agricultural Marketing. (G) Fall term, 4 hours.

A critical study of the marketing of staples, semistaples, and perishable farm products, including the geographical location of producing areas, marketing routes from the producer to the consumer, types of middlemen, including cooperative marketing associations, marketing costs, standardization, factors influencing prices, and a general description of our whole marketing system as it exists today. Prerequisite: Ec 203. Four recitations.

AEc 442. Marketing Organizations. (g) Spring term, 3 hours.

Principles of organization, management, and operation of cooperative marketing associations; application to the various types of agricultural commodities. Emphasis on types of organization and methods of formation, financial and operating policies, membership relations, marketing machinery and functions, sales methods and policies, and public relations. Prerequisite: AEc 441. Three recitations.

AEc 451. Agricultural Prices. (G) Spring term, 3 hours.

The purpose is to analyze trends of farm and market prices; compare prices of agricultural commodities with nonagricultural products and consider prices in their relation to production and marketing programs. The state and national agricultural situation and outlook receive special attention. Prerequisite: Ec 203 or 211, AEc 441. Three recitations.

AEc 461. Economics, Laws, and History of the Range. (G) Fall term, 3 hours.

Economics of range land and livestock; Federal and state laws affecting the range industry; historical background of the range problem.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

AEc 501. Research. Three terms, hours to be arranged.**AEc 503. Thesis. Three terms, hours to be arranged.****AEc 505. Reading and Conference. Terms and hours to be arranged.**

Opportunity is given students to make special studies of problems not covered by regularly scheduled courses. Work will be under the

direction of some member of the staff of the department. The cooperation of staff members from production departments will be available when necessary.

AEc 507. **Seminar.** Three terms, 1 hour each term.

AEc 571. **Marketing Finance.** Spring term, 4 hours.

Methods of financing agricultural marketing and marketing organizations, including financial structure, methods of raising capital, current financial operations, sources of credit and credit policies, and management of earnings. Financial statements are analyzed and interpreted. Cooperative and noncooperative marketing enterprises in the fields of fruits, vegetables, dairy products, and poultry receive major emphasis. Open only to students who have had satisfactory preparation in money and banking, rural finance, and accounting.

Farm Management

FARM management deals with the organization, equipment, and operation of the farm as a business enterprise and with the cost of production. Its aim is to correlate and synchronize the operations in the various phases of production on the farm in such a way as to result in a smoothly running, efficient plant from which maximum returns may be obtained. The curriculum in farm management (page 198) is designed to give the student a broad, well-rounded training in all the phases of agriculture that will prepare him for successful production, with emphasis laid upon those studies which will best fit him for successful management of the farm. The work also prepares students for professional work as farm managers, county agriculturalists, extension specialists, Smith-Hughes teachers, farm appraisers, agricultural statisticians, bank and railroad agriculturists, United States Department of Agriculture civil service candidates, college instructors, and experiment station research men.

Equipment. The farm-management laboratory and seminar room is provided with drafting tables and instruments, surveying instruments, original data and record sheets, lantern slides and charts, and a periodical and bulletin reference library. Investigational work carried on in many different parts of the state affords the advanced student excellent opportunities for field work or thesis study.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSE

FM 211. **Principles of Farm Management.** Spring term, 3 hours.

Major factors affecting the labor income; types of farming; selection and purchase of the farm; capital investment and distribution; use of credit size; quality and diversity of business; farm leases and rental methods; man- and horse-labor efficiency; farm-equipment costs and duty; farm and farmstead layout; cropping systems and crop rotations; cost of production; use of farm records and accounts; getting started in the farming business. Short field trips. Two lectures; 1 two-hour laboratory period.

UPPER-DIVISION COURSES

FM 311. Farm Accounting. Fall or winter term, 3 hours.

Drill in setting up and analyzing accounts for agricultural enterprises and for farms of different types with emphasis on clarifying the student's understanding of debits and credits. Preparation of different forms of summary statements of the year's business, adapted to reporting income tax, enterprise costs and profits, etc. For agriculture students only. One lecture; 1 recitation; 1 two-hour laboratory period.

FM 312. Operation Efficiency. Winter term, 3 hours.

The minor factors in successful farm management are discussed, stress being laid on operation efficiency. Two lectures; 1 two-hour laboratory period.

FM 313. Farm Organization. Fall term, 3 hours.

Application of farm-management principles to the organization of the individual farm; methods of measuring the efficiency of any given farm; organizing a farm business; standards for farm planning; efficiency practices in production and operation; planning production programs, cropping systems, and fertility balances; labor programs; live-stock, machinery, and building equipment; methods of increasing productive business; methods of financing, etc. Field trips. Prerequisite: FM 211. Two lectures; 1 three-hour laboratory period.

FM 401. Research. Terms and hours to be arranged.

FM 405. Reading and Conference. Terms and hours to be arranged.

Opportunity is given students to make special studies of problems not covered by regularly scheduled courses. Work will be under the direction of some member of the staff of the department. The cooperation of staff members from production departments is frequently involved.

FM 407. Seminar. Three terms, 1 hour each term.

Senior and graduate students majoring in farm management meet together in seminar work, and juniors are required to attend open meetings as listeners. The class constitutes the students' technical association in farm management. Phases of problems of research character are presented by the senior and graduate students working under the supervision of the instructor. Discussion of investigational methods and results; inquiry into opportunity and requirements for professional and practical work in farm management; presentation of management methods by successful farmers in the state, etc. Each year a three-day field trip is taken to successful farms. Fortnightly meetings.

FM 412, 413. Applied Farm Management. (G) Any term, 2 or 3 hours.

Field work on individual problems such as preparation of detailed organization and management plans for specific farms; efficiency testing of groups of farms; field studies of costs and profits of specific farm enterprises; field study of specific farm practices and their efficiency; studies in equipment and building improvement; farm management factor studies, etc.; directed and reviewed through weekly round-table discussions. All laboratory and field work. Prerequisite: FM 211, 311 or equivalent.

FM 414. Enterprise Costs and Profits. (G) Spring term, 3 hours.

A survey and comparison from the economic or cost and profit viewpoint of the major farm enterprises, particularly those of the Northwest and Pacific Coast, to give the student a needed basis for the correct selection of enterprises in different regions. The importance of each enterprise; causes of failure; size, capital, labor and maintenance requirements; production possibilities and markets; costs, prices, and profits, analyses of new or questionable enterprises; field study of major enterprises. Prerequisite: FM 211, 311 or equivalent. Two lectures; 1 three-hour laboratory period.

FM 415. Enterprise Costs and Profits. (g) Fall or winter term, 2 hours.
Continuation of FM 414. One lecture; 1 three-hour laboratory period.**FM 416. Agricultural Land Economics. (G) Winter term, 3 hours.**

For senior and graduate students only. Applied economics of the subject, presenting an inventory of our agricultural land resources; bases and procedure in agricultural land classification, utilization, and disposal; costs and problems of land reclamation; land settlement plans, procedure, and results; problems in land tenure and conservation; agricultural land values and appraisal methods. Prerequisite: Ec 201, 202, 203; FM 211, 311; or equivalent. Three lectures.

FM 417. Agricultural Appraisal. (G) Spring term, 3 hours.

For senior and graduate students. Devoted to field work in appraisal of farms of different types; appraisal of agricultural land areas and projects such as logged-off lands, reclamation projects, etc.; appraisal of farm enterprises. Advanced commercial and Federal appraisal methods used and newer methods tested. Weekly field trips. Prerequisite: FM 211, 311, 414, 416 or equivalent.

FM 418. Agricultural Land Use Planning. (G) Spring term, 2 hours.

For senior and graduate students. Present and prospective conservation and land-planning programs will affect type of farming and farm organization. The purpose of this course is to outline the objectives and procedure followed in these programs and to appraise the probable effect of such programs on the organization and operation of Oregon farms. Prerequisite: Ec 201, 202, 203; FM 211, 311, or equivalent.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

FM 501. Research. Terms and hours to be arranged.**FM 503. Thesis. Terms and hours to be arranged.**

Thesis work may be selected from a wide variety of subjects, related, if desired, to the economic phases of certain agricultural commodities, or practices or types of farming in which the student is especially interested.

FM 507. Seminar. Three terms, 1 hour each term.

Senior and graduate seminar in farm management. See FM 407.

FM 518. **Agricultural Cost Methodology.** Any term, 3 hours.

For graduate students. Methods of obtaining and determining costs of agricultural products, including the survey method; assembling, tabulation, analysis, and interpretation of cost data; cost record forms for different types of farms and enterprises and for cost surveys. Prerequisite: FM 211, 311, 414. Three lectures.

Division of Animal Industries

IN THE Division of Animal Industries are included the departments of Animal Husbandry, Dairy Husbandry, Fish and Game Management, Poultry Husbandry, and Veterinary Medicine. Training for dairy manufacturing and for range and range-livestock management is also given through the curricula in this division.

The specialized producer of livestock products can no longer ignore relationship of competitive livestock industries to his own in the modern business scheme. One livestock product is easily substituted for another, and consumer demands are quick to reflect the change in prices of livestock commodities.

The instruction in animal industries is arranged not only to train students in their fields of special interest, but to make them sufficiently familiar with types of other livestock production to appreciate the importance of proper adjustment of production and marketing operations to competitive conditions. Liberal opportunity is provided for fundamental training in the several phases of agricultural economics—the technique of farm management, agricultural credits, rural finance, and agricultural trade, both international and domestic. Present economic conditions in agriculture demand such training. It is thus seen that the courses in animal industries not only train in economic and modern methods of production, but offer virile training to those with professional or business aims. Business involving the distribution of livestock products or the financing of livestock operations affords one of the greatest opportunities to the student of today. The intricate problems of marketing and distribution require more and more fundamental training in methods of production.

Courses in Animal Industries

BASIC and supplementary to the work of the several specialized departments in the division—Animal Husbandry, Dairy Husbandry, Fish and Game Management, Poultry Husbandry, and Veterinary Medicine—courses in animal industries are offered for both undergraduate and graduate students. The undergraduate courses are planned from the broad point of view of animal industries as a whole or are concerned with more than one field.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

AI 111. **Stock Judging I.** Winter term, 3 hours.

The various types of farm animals are studied by score cards and comparative methods, and the student is made familiar with the desir-

able and undesirable types of beef and dairy cattle, sheep, swine, horses, and poultry. Three two-hour laboratory periods.

AI 121. Introduction to Animal Husbandry. Any term, 3 hours.

A brief study of the national and state economic importance and geographical distribution of beef cattle, horses, swine, sheep, and goats. Practical details of the correct feeding, care, management, and marketing of these animals and their products. Two lectures; 1 two-hour lecture-demonstration period.

AI 122. Introduction to Dairy Husbandry. Any term, 3 hours.

A brief study of the national and state economic importance and geographical distribution of dairy cattle. Practical details of the current management practices of modern dairying. Special arrangements can be made to learn the operation of the Babcock test. Two lectures; 1 two-hour lecture-demonstration period.

AI 123. Introduction to Poultry Husbandry. Any term, 3 hours.

A brief study of the national and state economic importance and geographical distribution of poultry. Practical details of the correct management practices of farm poultry and of the marketing of poultry products. Two lectures; 1 two-hour laboratory period.

UPPER-DIVISION COURSES

AI 315. Animal Breeding. Winter term, 3 hours.

The principles of heredity as applied to the breeding of domestic animals and fowls. Three lectures.

AI 410. Nutrition of Wild Animals. Spring term, 4 hours.

The chemical and physiological principles of nutrition of game and fur-bearing animals; function of the various classes of nutrients when taken into the animal body; chemical composition of feeds, energy values, and adaptability for the feeding of game animals.

AI 411. Animal Nutrition. (g) Fall or spring term, 4 hours.

The chemical and physiological principles of animal nutrition; function of the various classes of nutrients when taken into the animal body; nutritive ratios; feeding standards; compounding ratios; feeds with special reference to chemical composition, energy values, and general adaptability to stock-feeding purposes. Prerequisite: Ch 251. Four recitations.

GRADUATE COURSES

Course AI 411 may be taken for graduate credit. Courses in animal husbandry, dairy husbandry, fish and game management, poultry husbandry, and veterinary medicine numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

AI 501. Research. Terms and hours to be arranged.

For qualified students interested in animal nutrition and related biochemical problems.

AI 503. Thesis. Terms and hours to be arranged.

AI 505. Reading and Conference. Terms and hours to be arranged.

AI 507. Seminar. Terms and hours to be arranged.

AI 511. **Animal Nutrition.** Winter term, 5 hours.

A critical review of the field of animal nutrition. Among the topics considered are nutritional research methods, energy concepts, protein metabolism, mineral and vitamin requirements, and dietary deficiency disorders. Prerequisite: Ch 251, AI 411, or their equivalent.

Animal Husbandry

COURSES in animal husbandry are planned to fit the student for the actual raising of livestock on the farm so that he may produce the highest grade of stock in the most economical and business-like manner. The student is thoroughly grounded in the underlying principles in order that he may successfully continue his study after leaving college, but the practical details are also thoroughly treated and a special effort is made to keep the student in close touch with the financial phases of the industry. Students who take this work as their specialty are expected not to devote their entire time to livestock; but, on the contrary, to familiarize themselves with veterinary science, crop production, soil fertility, range botany, and other phases of agriculture as well as general education subjects. Much work in economics and marketing is also expected.

Students majoring in animal husbandry (see curriculum, page 199) are given a very free range of electives so that they may fit their programs to their own particular needs. Special opportunity is afforded in this department in range and range-livestock management for students who wish to qualify as grazing specialists for Federal or other official positions, or who desire to engage in the operation of a range livestock business.

Students not majoring in animal husbandry but desiring to elect some work in the department will be given careful attention to see that they get the work fitted to their individual needs.

Equipment. The equipment of the Department of Animal Husbandry consists essentially of livestock, barns, and the State College stock farms. The department maintains good representatives of all the leading breeds. The department has adequate equipment for the conduct of laboratory, lecture, and recitation work. Attention is called to courses and equipment in veterinary medicine (pages 226-227).

DESCRIPTION OF COURSES

LOWER-DIVISION COURSE

AH 211. **Stock Judging II.** Spring term, 3 hours.

Course in judging all kinds of stock, particularly market types. Prerequisite: AI 111. Three two-hour laboratory periods.

UPPER-DIVISION COURSES

AH 305. **Reading and Conference.** Any term, hours to be arranged.

The student selects some topic for individual investigation by library methods or otherwise. The object is, first, to allow the student to study some particular subject in which he is especially interested;

and second, to give him training in working out for himself problems such as he will have to undertake after leaving college.

AH 312. Stock Judging III. Fall term, 4 hours.

Practical judging of all kinds of livestock, with trips to fairs and stock farms. Prerequisite: at least three credits in stock judging. Four two-hour laboratory periods.

AH 315, 316. Breeds of Livestock I, II. Fall and winter terms, 3 hours each term.

First term deals with the breeds of sheep and beef cattle, their development, breeding, type, and best uses. Second term deals with the breeds of horses and swine, their development, breeding, type, and uses. Prerequisite: AI 111. Two recitations; 1 two-hour laboratory period.

AH 319. Livestock Practice. Fall term, 1 hour.

Laboratory practice in such work as dipping, dehorning, hoof trimming, shearing, horse training, and other common operations of the stock farm. (Note: The department reserves the right to limit the number of students in this course.) One three-hour laboratory period.

AH 320. Livestock Practice. Spring term, 2 hours.

A continuation of AH 319. Two three-hour laboratory periods.

AH 326. Meats. Winter or spring term, 3 hours.

A study of meats of all classes of meat animals, covering butchering, location and cutting of standard and retail cuts, judging meat raw and cooked, economics of meat production, sanitation and inspection, abattoirs, packing houses, and retail markets. One lecture or recitation; 2 three-hour laboratory periods.

AH 401. Research. Term and hours to be arranged.

AH 405. Reading and Conference. Terms and hours to be arranged.

AH 407. Seminar. Terms and hours to be arranged.

AH 412. Livestock Feeding. (G) Winter term, 5 hours.

An advanced course in the feeding of horses, beef cattle, sheep, and swine. Special study is made of the practices of the best stockmen, and of investigations carried on by the various experiment stations. Students desiring to take only such parts of the course as relate to certain kinds of livestock will be permitted to do so by arrangement with the head of the department. Prerequisite: AI 411. Five recitations.

AH 418. Wool and Mohair. (G) Spring term, 3 hours.

A study of wool and mohair, covering commercial value, physical and chemical structure, preparation and marketing, judging, sorting, grading, scouring, and principles of manufacture. Prerequisite: AH 315. Two lectures; 1 two-hour laboratory period.

AH 419, 420. Management of Livestock on the Range. (G) Winter and spring terms, 3 hours each term.

The handling of livestock on the range, considering the proper control in numbers, and distribution of stock. Salting, watering, breed-

ing, branding, etc. Control of livestock losses caused by poisonous plants and predatory animals. Winter livestock husbandry in range territory. Prerequisite: AI 411.

AH 421. Pedigree Study. (g) Spring term, hours to be arranged.

A laboratory study of the blood lines of the various breeds of livestock. Each student is expected to select one or two breeds as the basis for special study rather than to attempt to cover all breeds.

AH 423. Reproduction Problems. (G) Winter term, 3 hours.

A study of the breeding efficiency of livestock, covering the effect of nutritional, genetic, and physiological factors on reproduction; the care and management of young and breeding animals. In the laboratory work the student has opportunity to observe and study animals during breeding, pregnancy, parturition, and suckling. Prerequisite: AI 315, 411. Two lectures; laboratory work to be arranged.

AH 424. Livestock Economics. (G) Spring term, 5 hours.

(Advanced course.) Management, dealing particularly with economic and financial phases of livestock production. Prerequisite: AH 412. Five recitations.

AH 430. Range Survey Methods. (G) Spring term, 3 hours.

A critical study of range forage appraisal methods in use by Federal and State administrative and research agencies. Supplemental lectures are given by field administrators and experiment station staff members, outlining requirements expected of employees by their organizations. Two one-hour lectures and one three-hour Saturday laboratory section. One-week field trip required. Prerequisite: AE 111; AI 411, AH 419, 420; Bot 203, 204.

GRADUATE COURSES

See ANIMAL INDUSTRIES, pages 216-217.

Dairy Husbandry

AT THE present time there are approximately 26,000,000 dairy cows in the United States. It is estimated that one sixth of the food supply of the nation is derived from milk and its products. As the population of the country becomes more congested an increasing proportion of the animal food of the country will come from this source. Dairying is one of the most important agricultural industries of Oregon and the Pacific Northwest.

The student who plans to specialize in dairying may elect either dairy production or dairy manufacturing. The curriculum in dairy production (page 199) is designated primarily to fit the student for dairy farming, although he may enter upon extension, experiment station, or teaching work. The dairy manufacturing curriculum (page 200) is designed to fit the student for technical and managerial work in the manufacturing field or for experiment station, teaching, inspection, and marketing work.

Equipment. The department has a herd of more than 100 head of pure-bred dairy cattle representing three major dairy breeds. These animals are available for both instructional and experimental purposes and each year are used in teaching judging to more than three hundred students. The herd

is being developed in such a way as to be of unusual value in illustrating the important points in breeding and handling dairy cattle. The herd is free from both tuberculosis and infectious abortion. It is one of the first herds in the country from which infectious abortion has been eliminated. The methods of eradication found successful here are emphasized in teaching work.

The department has a well-equipped manufacturing laboratory. The manufacture of butter, ice cream, and cheese, and the handling of market milk, are carried on continuously on a commercial scale. The student thus has opportunity to see this work done under practical conditions, and he receives his systematic instruction under the same conditions. The equipment includes a modern cold-storage plant with a zero-degree butter-storage room, and a 150-gallon 10°-below-zero ice-cream hardening room, together with necessary brine tanks.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

DH 305. Reading and Conference. Terms and hours to be arranged.

Students who have demonstrated ability to do independent investigation may pursue various lines of study under supervision of members of the staff. Prerequisite: consent of department head.

DH 311. Market Milk. Spring term, 3 hours.

To train for the production of market milk and for work in city milk plants and as milk inspectors. Distribution problem of the small town and city; methods of buying, standardizing, and distributing milk from the point of view of the plant owner or manager. Prerequisite: AI 122. Two lectures; 1 two-hour laboratory period.

DH 312, 313, 314. Dairy Products Manufacturing. Three terms, 3 or 4 hours each term.

Principles and practices of commercial manufacture of butter, cheese, casein, ice cream, and concentrated milk products. (a) Students in dairy production, agricultural economics, chemistry, and other fields than dairy-products manufacturing and dairy technology may take this sequence in condensed form for 3 hours credit each term (Offered alternate years, offered 1938-39). Two lectures; 1 two-hour lecture-demonstration period. (b) For students in dairy-products manufacturing and dairy technology the sequence carries 4 hours credit each term. Two lectures; 1 five-hour laboratory period. Prerequisite: AI 122.

DH 315. Dairy Products Standards. Winter term, 1 hour.

A critical study of butter, cheese, milk, and ice cream with score cards; discussion of defects and reasons therefor. Prerequisite: AI 122. One two-hour lecture and laboratory period.

DH 321. Dairy Breed Types. Spring term, 3 hours.

The correlation of the form of dairy cattle with milk production; gross breed characteristics; comparative judging, terminology of the show ring, and fitting for show. Prerequisite: AI 111. Three two-hour laboratory periods.

- DH 322. **Dairy Herd Management.** Winter term, 3 hours.
History and characteristics of the breeds of dairy cattle and their adaptability to various conditions; the selection of a breed; development of a herd; keeping of records; raising calves and heifers; the principles of feeding dairy cattle. Prerequisite: AI 411. Three lectures.
- DH 401. **Research.** Terms and hours to be arranged.
Senior students desiring to pursue advanced work may take up problems which they are qualified to study.
- DH 405. **Reading and Conference.** Terms and hours to be arranged.
Students who have demonstrated ability to do independent investigation may pursue various lines of study under supervision of members of the staff. Prerequisite: consent of department head.
- DH 407. **Seminar.** Three terms, 1 hour teach term.
The object is to train students to do independent work and to develop the spirit of research. Each student prepares papers and discussions on recent scientific work. One recitation.
- DH 411, 412. **Dairy Technology.** (g) Two terms, 3 hours each term.
Technical problems in dairy plant operation. Application of fundamental sciences in solving these problems. Analysis of dairy products. Standardization. Prerequisite: AI 122, Ch 231. One lecture; 2 two-hour laboratory periods.
- DH 413. **Dairy Technology.** (G) One term, 3 hours.
Continuation of DH 411, 412. Prerequisite: DH 411, 412. One lecture; 2 two-hour laboratory periods.
- DH 421. **Breeding Dairy Cattle.** (G) Winter term, 3 hours.
The application of the principles of genetics to the breeding of dairy cattle; selecting breeding animals; planning the breeding policy of a herd; study of pedigrees. Prerequisite: AI 315. Three lectures.
- DH 422. **Dairy Cattle Feeding.** (G) Spring term, 3 hours.
A further study of feeding for milk production; more detailed study of various feeding standards and recent feeding investigations; special problems. Prerequisite: AI 411. Three lectures.

GRADUATE COURSES

See ANIMAL INDUSTRIES, pages 216-217.

Fish and Game Management

THE four-year curriculum in fish and game management, including those subjects having direct and practical application in wildlife conservation, together with basic and general studies, is designed to train students for any of the following and other fields of wildlife conservation: State and Federal service; land-using industries; management of fish and game for estates and for game and fish clubs; private fur and game farming. Many of the courses are valuable to students in allied fields who wish the practical aspects of wildlife conservation, especially in its correlation with the live-stock industry, and with public land-use problems.

Strategically located for the study of wildlife, Oregon State College has within easy access state fish hatcheries, game farms and refuges, and fur farms. Most forms of Oregon's varied wildlife are within a few hours travel from Corvallis. Research work by the United States Bureau of Biological Survey and the Oregon State Game Commission conducted at the State College in cooperation with the Agricultural Experiment Station is of basic value to the instruction offered in this field.

Practical field work in fish and game management or attendance at one or more of the summer camps maintained in strategic locations—such as the Wallowa Mountains, Crater Lake National Park, the United States Malheur Lake Bird Refuge, the Range Livestock Experiment Station near Burns, and the Oregon coastal section—is required for graduation. Camp locations are varied each summer so as to offer opportunity for study in the various branches of wildlife conservation.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

FG 251. Wildlife Conservation. Fall term, 3 hours.

An introductory course dealing with wildlife as a valuable economic and social resource, and the need of its conservation through scientific administration and manipulation. Three lectures or recitations. (In collaboration with the United States Bureau of Biological Survey.)

FG 261. Wildlife Technique. Spring term, 3 hours.

The collecting and preserving of wildlife specimens for scientific investigations. Practice is given in the making of museum mounts of birds, mammals, and fish, and in rodent and predatory-animal control. Two lectures or recitations; 1 three-hour period in laboratory or field work.

FG 271, 272. Fur Farming. Fall and spring terms, 3 hours each term.

A study of the important fur-bearing mammals raised on fur farms. Special attention is given to the practices of breeding, feeding, and sanitation, construction, marketing, judging of pelts and animals, and business principles important in the fur-farming enterprises.

UPPER-DIVISION COURSES

FG 305. Reading and Conference. Terms and hours to be arranged.

Students may register under this number for a general course in wildlife field work conducted in a summer camp, or field work under supervision of some state or federal service. The course may be taken for a series of summers as a different area is studied each year. (In collaboration with the United States Bureau of Biological Survey.)

FG 310, 311, 312. Forest Wildlife Management. Three terms, 3 hours each term.

The theories and practices of game and fish management in forest areas. Special attention is given to the measurement and diagnosis of productivity, the control of factors inimical to wildlife species, and environmental improvements for game and fish species. Three lectures or demonstrations.

FG 341. **Fish and Game Law Enforcement.** Winter term, 2 hours.

A survey of National and State game laws, including a critical study of law enforcement and scientific methods of evidence collection, preservation, and presentation. One lecture; 1 two-hour laboratory period. (In collaboration with the United States Bureau of Biological Survey.)

FG 351, 352, 353. **Fish and Game Management.** Three terms, 3 hours each term.

The theories of game and fish management, game and fish administration in forest areas, wildlife refuges, state and national parks, submarginal areas, farm lands, etc.; special attention to the measurement of game and fish populations, methods of measurement and diagnosis of productivity, types of game refuges, control of hunting and fishing, parasite and predator control, control of water and food conditions, control of cover, and other techniques involving fish and game. Two lectures or recitations; 1 three-hour laboratory period or field work. Prerequisite: Z 203.

FG 360. **Applied Fish and Game Ecology.** Fall term, 3 hours.

A study of the techniques used in investigating ecological factors affecting birds, mammals, and fish. Special attention is given to the making of chemical, physical, and statistical measurements of ecological factors important in wildlife management. Two lectures; 1 three-hour laboratory period.

FG 401. **Research.** Terms and hours to be arranged.

FG 405. **Reading and Conference.** Terms and hours to be arranged.

FG 407. **Seminar.** Terms and hours to be arranged.

FG 451, 452. **Management of Game Birds.** (G) Winter and spring terms, 3 hours each term.

Studies of game birds with special attention to their propagation on game farms and under natural conditions, and their management in forest areas, wildlife refuges, submarginal lands, and agricultural areas. Prerequisite: Z 321, FG 352. Two lectures or recitations; 1 four-hour laboratory period or field work.

FG 454, 455. **Management of Game Fish.** (G) Fall and winter terms, 3 hours each term.

Studies of game fish with special attention to fish-hatchery methods, natural propagation, and methods of fish liberation. Much of the laboratory and field work is conducted at the Alsea Fish Hatchery. Prerequisite: Z 323, FG 353. Two lectures or recitations; 1 three-hour laboratory period or field work.

FG 457, 458. **Management of Big Game.** (G) Winter and fall terms, 3 hours each term.

Studies dealing with the various species of game mammals; their habits, distribution, management under natural conditions, their economic values, and laws for protection. Prerequisite: Z 322, FG 352. Two lectures or recitations; 1 three-hour laboratory period or field work. (In collaboration with the United States Bureau of Biological Survey.)

FG 460. **Management of Fur Bearers.** (G) Spring term, 3 hours.

Studies of fur-bearing animals with special attention to their management in forest areas, submarginal lands, and agricultural lands. Prerequisite: Z 322, FG 352. Two lectures or recitations; 1 three-hour laboratory or field period.

GRADUATE COURSES

See ANIMAL INDUSTRIES, pages 216-217.

Poultry Husbandry

POULTRY keeping as a specialized business has developed rapidly throughout the Northwest and especially in Western Oregon. Climatic conditions throughout the state are particularly adapted to successful breeding and raising of poultry.

With the development of the poultry industry in Oregon and throughout the country has come a demand for young men trained in the various lines of the industry. Besides the opportunities afforded in the actual work of poultry farming there is an increasing demand for properly qualified men for positions as government and experiment station workers, as field men and poultry feed specialists with the larger feed companies, and for positions with packing houses and cooperative marketing associations.

In the major curriculum (page 200) poultry courses and elective subjects are so arranged that the student may receive training that will fit him for any of the lines of work mentioned.

Equipment. The three-story Poultry Building, 53 by 140 feet, contains well-equipped laboratories for incubation, judging, killing, and egg candling, in addition to modern refrigeration facilities for the study of marketing problems. Different makes of incubators, including three mammoth machines, are available for student instruction as are also sets of charts, lantern slides, motion pictures and photographs which are used to illustrate the rarer breeds of fowls, types of poultry houses and equipment. Large flocks of White Leghorns and representatives of other common breeds are kept on a plant adjacent to the Poultry Building. This plant contains modern laying houses, an eight-room stationary brooder house, a ten-room breeder house, a granary equipped with feed-mixing machinery, and much other equipment suitable for use on practical poultry farms, all of which is available for instruction and experimentation.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

PH 305. **Reading and Conference.** Terms and hours to be arranged.

PH 307. **Seminar.** Three terms, 1 hour each term.

PH 321. **Incubation and Brooding.** Spring term, 4 hours.

A study of the principles and practices involved in natural and artificial incubation and brooding; study of the egg and its develop-

ment; laboratory work in actual running of incubators and brooders; opportunity given when possible for students to work out some definite problem. Prerequisite: AI 123. Two recitations; 2 two-hour laboratory periods.

PH 331. Poultry Housing. Fall term, 3 hours.

A study of poultry-house types and housing problems; field trips to neighboring poultry farms. Prerequisite: AI 123. Two lectures; 1 three-hour laboratory period.

PH 341. Poultry Judging. Winter term, 2 hours.

Practical judging of all kinds of poultry. Judging teams for inter-collegiate judging competitions are chosen largely from the members of this class. Prerequisite: AI 123. Two two-hour laboratory periods.

PH 351. Turkey Management. Fall term, 3 hours.

Practical details in the breeding, feeding, rearing, and marketing of turkeys. Prerequisite: AI 123. Two recitations; 1 two-hour laboratory period.

PH 403. Thesis. Terms and hours to be arranged.

For senior students. Prerequisite: consent of department head.

PH 405. Reading and Conference. Terms and hours to be arranged.

For students who have demonstrated their ability to carry on independent investigation or study under supervision.

PH 407. Seminar. Three terms, 1 hour each term.

PH 411. Poultry Feeding. (g) Fall term, 4 hours.

A study of feeds suitable for poultry; principles and practice of feeding breeding stock, feeding for egg production, and fattening for market; feeding young and growing chicks; feeding appliances; the compounding of rations. Prerequisite: AI 123, 411. Two recitations; 2 two-hour laboratory periods.

PH 421. Marketing Poultry Products. (g) Winter term, 4 hours.

Preparation of poultry and eggs for market; methods of storage and preservation; methods of marketing; laboratory work in killing, picking, grading, and shipping poultry; candling, grading, packing, and storing eggs. Prerequisite: AI 123. Two recitations; 2 two-hour laboratory periods.

PH 431. Poultry Plant Management. (g) Spring term, 4 hours.

Selection of the location, layout, and arrangement of buildings; study of records. Each student works out complete plans for the layout and management of a commercial poultry enterprise. Prerequisite: PH 321, 331, 411, 421. Two recitations; 2 two-hour laboratory periods.

PH 441. Poultry Breeding. (G) Spring term, 4 hours.

History of poultry breeds; study of breeding with special emphasis on the modes of inheritance of egg production; egg size, hatchability and other economically important characteristics. Prerequisite: AI 123, 315. Three lectures; 1 two-hour laboratory period.

GRADUATE COURSES

See ANIMAL INDUSTRIES, pages 216-217.

Veterinary Medicine

THE object of the courses in veterinary medicine is to help fit the student for the successful handling of livestock. Anatomy and physiology of domestic animals familiarize the student with the normal structures and functions of the animal body, thus laying a foundation for courses in judging, breeding, feeds and feeding, nutrition, and diseases of animals.

The work in diseases is taken up from the standpoint of the livestock owner. The students learn to recognize diseases, to care for sick animals, and to prevent disease through proper methods of sanitation and management. The importance of quarantine, the different methods of control and eradication of disease, and the role of the stock owners in maintaining this work are considered.

Equipment. This department has its offices, physiological laboratory, and lecture room in the Poultry Building. The Veterinary Clinic building is equipped for dissection, autopsies, and clinics.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

VM 211. Anatomy of Domestic Animals. Fall term, 3 hours.

A laboratory course in the anatomy of domesticated animals. Special attention is given to the digestive systems of the horse and the cow; to the foot, the teeth, and the muscles of locomotion of the horse. The work includes complete dissection of the digestive, urinary, genital and respiratory systems, and partial dissection of the circulatory, muscular, and nervous systems. Prerequisite: Z 130 or equivalent. Three two-hour laboratory periods.

VM 221, 222. Physiology of Domestic Animals. Winter and spring terms, 3 hours each term.

Study of the functions of the body; the physiological processes of all domestic animals with emphasis on the horse and the cow. Prerequisite: VM 211. Two lectures; 2 two-hour laboratory periods.

UPPER-DIVISION COURSES

VM 311. Anatomy of the Fowl. Winter term, 3 hours.

A study of the structure of the body of the fowl. Two lectures; 2 two-hour laboratory periods.

VM 341. Diseases of Livestock. Fall term, 4 hours.

A one-term course for students specializing in the plant group. The more common diseases, with methods of prevention and control, are considered. Two lectures; 2 recitations.

VM 351. Diseases of Poultry and Game Birds. Spring term, 3 hours.

The parasitic, infectious, and noninfectious diseases of poultry; emphasis upon methods of prevention and control of the parasitic and infectious diseases; observations of autopsies, methods of diagnosis, and treatment of fowls. Three recitations; 1 two-hour laboratory period.

VM 361. Parasitic Diseases of Domestic and Game Animals. Winter term, 3 hours.

The intensive study of the common parasitic diseases of domestic animals. Two lectures; 2 two-hour laboratory periods.

VM 441, 442, 443. Diseases of Livestock. (g) Three terms, 3 hours each term.

The parasitic, infectious, and noninfectious diseases of domesticated animals. Prerequisite: VM 221, 321, or equivalent. Two recitations; 1 two-hour laboratory period.

GRADUATE COURSES

See ANIMAL INDUSTRIES, pages 215-217.

Division of Plant Industries

THE Division of Plant Industries deals with the nation's major agricultural resources, the soils and their crops. The research, resident instruction, and extension work in plant industries is basic to practically all phases of general and specialized agriculture. It covers the nation's water and soil resources, their mapping, use, management, and preservation; and the plant resources which include the major basic food, forage, and clothing commodities and the food luxuries of the world's diet. Educational work conducted in this division is broad, covering ecological relationship, production, management, grading, preservation, manufacture, storage, transportation, and marketing of the food, forage, textile, and seed crops. Cereals, fruits, nuts, vegetables, ornamental plants, and the plant and soil phases of pasture, range, soil conservation, and wildlife work are given attention. Liberal opportunity is provided in the curricula of this division for students to elect courses of their own choice with the guidance of the faculty. Special curricula are developed to suit the needs of those more mature students who have a definite objective in view. Students are encouraged to undertake individual work in connection with training for special state, Federal, or private positions.

Farm Crops

PROBLEMS of production, improvement, marketing, manufacture, and uses of each of the field crops produced for food, forage, textile, and special purposes are dealt with by this department. The purpose of the major curriculum (page 202) is primarily to teach students scientific, practical, and economical methods of crop production, marketing, and improvement that may be put into actual use on the farm. In addition the courses are so arranged that men may fit themselves for business positions in connection with the marketing of seeds and other farm crops; for civil service positions in agronomy, forage crops, soil conservation, range management, grain standardization, plant breeding, and crop marketing; and for experiment station, extension, and teaching work. The object is to develop men with broad training for leadership along agricultural and general lines and to provide scientific training such that graduates may succeed in the professional and technical agricultural fields. Considerable flexibility in electives together with the study of original problems is encouraged in order to meet special needs of individual students.

Farm crops graduates occupy technical, commercial, and teaching positions involving considerable responsibility and are successful in farm operation. They are in Federal experimental and regulatory positions and

state experimental positions, several are county agents, others are in the seed and grain business, and some are in graduate study and teaching positions. The field is a large one and deals principally with well-known and staple crops that are constantly in use and in demand. Farm crops work is closely related to five important fields: (1) the daily food supply of our human population, (2) the feed requirements of all classes of farm animals, (3) the growth of plants for textiles, (4) seed and special crops, such as drug plants, and (5) plant problems of soil conservation and our range and wildlife resources. Crops courses make practical application of scientific principles from such fields as soils, physics, chemistry, bacteriology, plant pathology, and plant physiology.

Equipment. The department has excellent recitation rooms, greenhouses, and well-equipped laboratories. The Experiment Station plots and farm fields afford superior opportunities for field study and make possible extensive collection of valuable material for class work. Federal cooperative investigations in seed testing, forage crop, fiber flax, cereals, and hops form a distinct instructional asset. A large collection of the best books, periodicals, etc., dealing with the subject, is available. Oregon State Agricultural College is excellently equipped for grain and hay grading and seed-inspection work; the crop-inspection and grading work is a marked advance over anything heretofore offered.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

FC 111. Elements of Agronomy. Any term, 3 hours.

A first course, dealing with fundamental principles of tillage and production, seed selection, identification, rotation, and economics of crop production, with special reference to the cereals and related crops. In the winter term the work is adapted to the needs of students in fish and game management. Prerequisite to all farm crops courses except FC 211, 311, 317, and 324. One lecture; 1 recitation; 1 two-hour laboratory period.

FC 211. Forage and Root Crop Production. Fall or spring terms, 3 hours.

Fundamental principles of economic production, rotation, storage, costs, marketing, uses, and improvement of the important forage and pasture crops and their seeds, and the root crops. Two lectures; 1 two-hour laboratory period.

UPPER-DIVISION COURSES

FC 301. Research. Terms and hours to be arranged.

FC 303. Thesis. Terms and hours to be arranged.

FC 305. Reading and Conference. Terms and hours to be arranged.

Lectures or laboratory work, or both, for groups of students desiring additional work along special lines of crop production not treated fully in other courses, or for students desiring to carry on advanced reading and conference work beyond that outlined in the regular courses.

FC 307. Seminar. Three terms, 1 hour each term.

Analyses of technical publications on farm crops and allied subjects. Especial attention is given to crop problems in production,

breeding, standardization, economics, ecology, and related fields. One period.

- FC 311. **Potato Growing.** Winter term, 2 hours.
Potato production; improvement; storage; cost; marketing; distribution; uses; experimental work; varietal studies; identification, judging, and scoring. One recitation; 1 two-hour laboratory period.
- FC 313. **Lawns and Turfs.** Fall term, 2 hours.
Varieties, characteristics, and adaptability of turf plants and seeds; seed-bed preparation, seeding, fertilization, management, weed and pest control for lawns, golf courses, grass nurseries, playing and landing fields, parks, and other purposes. One recitation; 1 two-hour laboratory period.
- FC 315. **Principles of Agricultural Breeding.** Fall term, 3 hours.
An introduction to the practical application of modern conceptions of breeding. Two lectures; 1 two-hour laboratory period.
- FC 317. **Weed Eradication.** Spring term, 2 hours.
Lectures and reference work on weed types and their habits of growth; weed legislation; practical methods of prevention, control, and eradication; special attention to noxious, persistent, perennial, and poisonous weeds of ranch and range. One lecture; 1 two-hour laboratory period.
- FC 318. **Wildlife Food Crops.** Fall term, 3 hours.
Native and introduced food, forage, and cover plants for wildlife and game refuges, breeding areas, fur and game farms, etc.; seed and plant supplies and markets; production and management methods for maintaining the food supply. One lecture; 1 two-hour laboratory period.
- FC 319. **Range Improvement and Maintenance.** Winter term, 3 hours.
Reseeding, improvement, care and maintenance of range, cut-over, overflow, marginal, and other lands used for grazing purposes. Prerequisite: FC 211 or equivalent. Two lectures; 1 two-hour laboratory period.
- FC 320. **Cover Crop and Soil-Erosion Prevention Plants.** Winter term, 2 hours.
Production, development, and maintenance of plants suited to soil, dike, and bank protection and to cover-cropping purposes; sand dune control; cover crops for soil protection and building up organic content of tillable areas. One lecture; 1 two-hour laboratory period.
- FC 322. **Cereal Production Lectures.** Fall term, 3 hours.
Production and uses of cereals and allied grains; distribution; adaptability; ecological relationships; seed treatment; production methods; markets; manufacture and movement in commerce. Prerequisite: FC 111, Bot 202 or equivalent. Three lectures or recitations.
- FC 323. **Cereal Morphology.** Fall term, 2 hours.
Laboratory and field studies of morphological and taxonomic characters on the common forms of cereals; methods of identification; and studies on seed structure in relation to the cereal manufacturing processes. Two two-hour laboratory periods.

FC 324. Forage and Related Crops. Spring term, 3 hours.

Special studies in the production, handling, marketing, and uses of forage and related plants; pasture development and management in humid areas and with irrigation; economy in hay making, storage, and transportation under special conditions; comparative use and cost of different forage crops. Prerequisite: FC 211 or equivalent. Two lectures; 1 two-hour laboratory period.

FC 327. Production of Hops, Drug and Related Plants. Winter term, 3 hours.

The principles of production, harvest, storage, distribution, marketing and costs of hops, drug and related plants. Prerequisite: Bot 203 or equivalent. Two lectures; 1 two-hour laboratory period.

FC 401. Research. Terms and hours to be arranged.**FC 403. Thesis.** Terms and hours to be arranged.**FC 405. Reading and Conference.** Terms and hours to be arranged.
Similar to FC 305. For seniors.**FC 407. Seminar.** Three terms, 1 hour each term.
Similar to FC 307. For seniors.**FC 411. Crop Inspection.** (G) Winter term, 4 hours.

The inspection, grading, and valuation of cereals, hay, forage, potatoes, beans, seeds, stock feeds, and miscellaneous agricultural commodities according to Federal, state, and other adopted standards; theory and practice of grade fixation and application. A course for persons buying or selling agricultural commodities, grain supervisors, samplers, inspectors, warehousemen, millers, and others. Prerequisite: FC 111, 211, 322, 323; Ch 251, or equivalents. Two lectures; 2 two-hour laboratory periods.

FC 414. Seed Production. (G) Fall term, 3 hours.

Principles and special methods of production, distribution, and use of seed crops of grasses, alfalfa, clover, and other forage legumes; field beans, horse-beans, soy-beans, peas, and other food legumes; and other special seed crops. Seed inspection, seed certification, and seed legislation. Prerequisite: FC 111, 211, 322, 323; or equivalents. Two lectures; 1 two-hour laboratory period.

FC 415. Crop Breeding. (G) Spring term, 5 hours.

Practical application of genetics to field experimental technique, improvement of field and horticultural crops; methods of breeding for yield, disease resistance and special qualities; especially for students expecting to make a business of seed and plant production and improvement or wishing to enter Federal or state research work in plants. Prerequisite: FC 111, 211; Bot 202, 331; FC 315; or equivalents. Three lectures, 2 two-hour laboratory periods.

FC 417. Plant Genetics. (G) Winter term, 3 hours.

The theory and technique of plant inheritance studies; factor interaction, linkage, quantitative inheritance, interspecial crosses, sterility and other aspects of plant genetics. This course is designed primarily for students interested in a more detailed background for plant improvement. Prerequisite: FC 111, 211; Bot 202, 331; FC 315, or equivalents. Two lectures; 1 two-hour laboratory period.

FC 421. **Crop Efficiency.** (G) Spring term, 3 hours.

The production, storage, and marketing of farm crops; comparison of methods leading to cheaper and more efficient production; relation of preparatory methods of returns; cropping systems and crop rotations; crop specialization; crop storage and conditioning; warehousing problems; grade and standard fixation; marketing of farm crops; export and import regulations; crop statistics, their value and use; disposal of crop by-products. Prerequisite: FC 322, 323, 414; Ch 221; or equivalents. Three lectures.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

FC 501. **Research.** Terms and hours to be arranged.

FC 503. **Thesis.** Terms and hours to be arranged.

FC 505. **Reading and Conference.** Terms and hours to be arranged.

FC 507. **Seminar.** Three terms, 1 hour each term.

Horticulture

INSTRUCTIONAL work in this department covers the broad fields of horticultural production and food-products industries. Horticultural production is concerned with the principles and practices that make for successful growing and marketing of horticultural crops. The field of food-products industries is that of the commercial preservation of horticultural and other products. In all the work the student is first thoroughly grounded in the fundamentals and is then allowed to specialize as he desires.

Horticultural Production includes general horticulture, pomology, vegetable crops, and floriculture. The courses consist of lectures, reference reading, field exercises, and laboratory work. Much stress is placed upon the practical phases of all the work. Horticultural truths are illustrated by practice, whenever possible. Students are given field and laboratory exercises in all such operations as planting, seeding, budding, grafting, cultivating, thinning, pruning, harvesting, and spraying. Special options are offered in pomology and in vegetable crops. (See page 203.) Students desiring to specialize in the commercial handling of horticultural products should confer with the head of the department regarding a suitable curriculum.

Food Products Industries. The curriculum in food products industries (page 204) is designed to fit the student to enter fields of commercial canning, dehydration, maraschino, preserves, jam, jelly, pickles and condiments, juice manufacture, commercial food manufacture, and in addition, to prepare him for research work along all lines of home and commercial canning and commercial food manufacture. The laboratory work is conducted on a commercial scale, and the student is trained to operate and repair machinery used in all manufacturing work.

Instruction in canning includes blanching, siruping, exhausting, sealing, sterilizing, labeling, and storage. In dehydration, instruction covers

the drying of prunes, pears, apples, and other fruits, and vegetables. Students have an opportunity to operate all dehydration equipment, where conditions are kept under constant control. Special opportunity is afforded also those wishing work on problems of by-products manufacture.

Special courses covering the preservation and utilization of fish and fish waste are offered. These courses are especially valuable for students majoring in fish and game management as well as those in other fields.

Landscape Construction and Maintenance. The work in landscape maintenance lays the foundation for professional careers in laying out, planting, and superintending country and city homes, parks, and playgrounds, in nursery management, and in floriculture. The four-year curriculum in landscape construction and maintenance is printed on pages 204-205.

Equipment. The Horticultural wing of Agriculture Hall, the Horticultural Products Building, modern greenhouses, orchards, and gardens, the large campus containing good plant material, and a very good library are at the service of the department. The laboratories are well equipped for giving instruction in spraying, plant propagation, fruit packing, vegetable grading and crating, and systematic pomology. There are large lecture rooms, drafting rooms, and a photography room.

The Horticultural Products Building is equipped for the manufacture of fruit juices, carbonated beverages, and vinegar. The equipment includes a hydraulic press, centrifuge multiple drum, silver-lined filter, carbonating equipment, and settling vats, dehydrating equipment, a steam-heated experimental dehydrator of one-ton capacity, automatically controlled by compressed air. Preparation machines, such as power peelers, slicers, and washers are located in this building.

NOTE: The courses in horticulture include the following groups, under each of which the respective courses are listed in numerical order: General Horticulture (including graduate and research courses), Food Products Industries, Pomology, Vegetable Crops.

COURSES IN GENERAL HORTICULTURE

LOWER-DIVISION COURSE

Hrt 111. Elements of Horticulture. Fall or spring term, 3 hours.

This course is designed as an introduction to the subject. Fruit growing from the farm and commercial standpoints; home vegetable growing and important truck crops; the fundamental phases of food preservation, including drying, and cider and vinegar manufacture, are included. Two lectures; 1 three-hour laboratory period.

UPPER-DIVISION COURSES

Hrt 311. Plant Propagation. Winter term, 3 hours.

Different methods of propagating plants by seeds, cuttings, bulbs, tubers, budding and grafting. Students grow their own plants and keep records on them in greenhouse, nursery, and orchard. One lecture; 2 two-hour practicums.

Hrt 312. Greenhouse Construction and Management. Fall term, 3 hours.

Fundamental principles of greenhouse design and operation, including materials, equipment, heating, ventilation, watering, soils, soil

sterilization, insecticides, and fumigation, as applied to greenhouse flower and vegetable crops. One lecture; 2 two-hour laboratory periods.

Hrt 313. Greenhouse Crops. Winter term, 3 hours.

Actual work in the greenhouse. Propagation; culture; soils; ventilation; watering; heating; as wide a range of experience as possible in growing of plants used in the florist trade. Prerequisite: Hrt 311. Nine periods laboratory work.

Hrt 314. Greenhouse Crop Practices. Spring term, 3 hours.

Production of floricultural bedding plants as well as young vegetable plants under glass, for spring and summer transplanting. One lecture; 2 two-hour laboratory periods.

Hrt 316. General Floriculture. Fall term, 3 hours.

Production of flowers with special reference to annuals, biennials, herbaceous perennials, and bedding plants. Varieties, soils, fertilizers, planting, pest control, and cultural practices. Two lectures; 1 two-hour laboratory period.

Hrt 320. Nursery Management. Spring term, 3 hours.

The nursery industry; organization, management, equipment, plants, planting, storage, protection, shipping, diseases and insects, and quarantine regulations. Trips are made to nurseries. Prerequisite: Hrt 311. Two lectures; 1 laboratory period.

Hrt 401. Research. Terms and hours to be arranged.

Hrt 403. Thesis. Terms and hours to be arranged.

Hrt 405. Reading and Conference. Terms and hours to be arranged.

Special studies in pomology, vegetable crops, and food products industries. Students who have demonstrated their ability to do independent investigational work may pursue approved problems under the supervision of staff members.

Hrt 407. Seminar. Any term, 1 hour.

Hrt 411. Methods of Research. (G) Winter term, 3 hours.

Conducted as a research round table. Drill in making of briefs and outlines of research problems, methods of procedure in conducting investigative work, processes of reasoning, weighing of evidence, and the preparation of bulletins and reports. Close study is made of research work presented in the literature. Seniors and graduate students. Three lectures.

GRADUATE COURSES

Courses in general horticulture, food-products industries, pomology, and vegetable crops numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

FC 501. Research. Terms and hours to be arranged.

Investigational work for graduate students in pomology, vegetable crops, food products industries, plant breeding and plant physiology as related to horticulture. Horticulture staff.

- Hrt 503. Thesis. Terms and hours to be arranged.
- Hrt 505. Reading and Conference. Terms and hours to be arranged.
- Hrt 507. Seminar. Three terms, 1 hour each term.

COURSES IN FOOD PRODUCTS INDUSTRIES

LOWER-DIVISION COURSES

- FP 250. Principles of Food Preservation. Fall term, 3 hours.
Fundamental principles involved in freezing, drying, concentrating, salting, smoking, fermenting, carbonating, and the use of heat, electricity, and chemical preservatives for the preservation of all types of foods. Two lectures; 1 two-hour laboratory period.
- FP 251. Principles of Canning Fruits. Winter term, 3 hours.
Designed to teach by lectures, recitations, and laboratory exercises the fundamental principles of canning fruits. Varieties; buying; handling before canning; grading; methods of preparation; blanching; siruping; water and steam exhausting; sealing; cooking; cooling; storage; causes of spoilage; judging canned foods; types of containers; marketing practices; working knowledge of methods used in commercial, farm, and home canning. Prerequisite: FP 250. Two lectures; 1 three-hour laboratory period.
- FP 252. Principles of Canning Vegetables. Spring term, 3 hours.
Continuation of FP 251, with application to vegetable canning and vegetable products. Retort installation, operation, and control; handling methods; heat penetration; time of cooking and thermal death points; vegetables canned by different methods and results compared. Commercial plants are visited for study. Prerequisite: FP 250, 251. Two lectures; 1 three-hour laboratory period.
- FP 254, 255. Canning of Fish and Fish Products. Winter and spring terms, 3 hours each term.
The fundamental principles of canning, heat penetration, thermal death points; the effect of acidity, vacuum, can fill, grading, seaming, cooking, storage, corrosion; canning of fish, clams, oysters, shrimp, etc. Prerequisite: FP 250, Bac 204. Two lectures; 1 two-hour laboratory period.

UPPER-DIVISION COURSES

- FP 311. The Canning Plant and Its Equipment. Spring term, 3 hours.
The purpose of this course is to study the economic phases of the canning plant, its location, general plan of construction, equipment, and operation. Students are given training in designing plants and estimating costs. Laboratory work covers the construction, installation, operation, and adjustment of canning machinery. Field trips to canneries to study their construction. Two lectures; 1 three-hour laboratory period.
- FP 321. Food Products. Spring term, 2 hours.
Commercial methods followed in the manufacture of such food-stuffs as fruit and vegetable by-products, spices, condiments, flavoring extracts, sirups, leavening agents, animal foods; the use of sugars,

vegetable cooking oils, flours, and cereals. Prerequisite: Ch 201, 202, 203. Two lectures.

FP 331. Dehydration of Fruits and Vegetables. Fall term, 3 hours.

This course is especially designed for students majoring in horticulture and farm crops. Actual drying of fruits and vegetables is done. The study covers all of the common types of driers and principles of dehydration. Methods of testing for moisture and adulteration are stressed. Prerequisite: Hrt 111. Two lectures; 1 three-hour laboratory period.

FP 341. Pickles, Relishes, and Condiments. Fall term, 3 hours.

Theory, principles, and practice in vinegar and salt pickling. Making and packing of sour, sweet, and dill cucumber pickles; pickling of other products such as onions, melon rinds, carrots, beets, crab apples, tomatoes; tomato products, salad dressings, relishes, and sauerkraut studied and manufactured. Causes of spoilage and testing methods are emphasized. Prerequisite: Ch 251. Two lectures; 1 three-hour laboratory period.

FP 351. Fruit Juice and Vinegar Manufacture. Fall term, 3 hours.

Practical and scientific work in the handling of fruit juices; problems of filtration, sterilization, and bottling. Prerequisite: Bac 204, 205, 206; Ch 251; FP 252. Two lectures; 1 three-hour laboratory period.

FP 352. Commercial Jam and Jelly Manufacture. Winter term, 3 hours.

Principles of making jams and jellies from fresh and frozen fruits, correlated with laboratory practice and quantity manufacture; testing for yields, moisture content, pectin requirement, acidity, sugar, etc., stressed. Prerequisite: Ch 251; Bac 204, 205, 206; FP 252. Two lectures; 1 three-hour laboratory period.

FP 361. Preserves, Glacèd Fruits, and Candied Fruits. Spring term, 3 hours.

Manufacture of preserves, marmalades, conserves, maraschino cherries, glacèd fruits, and candied fruits. Prerequisite: Ch 251; Bac 204, 205, 206; FP 252, 352. Two lectures; 1 three-hour laboratory period.

FP 411. Food Products Manufacture. (G) Fall term, 3 hours.

Physical, chemical and bacteriological principles involved in the preparation, preservation, and examination of fruit, vegetable, and food products. Prerequisite: Bac 413, Ch 351. One lecture; 2 two-hour laboratory periods.

FP 412. Frozen Foods. (G) Spring term, 3 hours.

Studies of the physical, chemical, bacteriological, and enzymatic changes occurring in products before, during, and after freezing; processing methods, storage, transportation, and distribution of frozen foods. Prerequisite: Ch 251; Bac 204, 205, 206; FP 250, 411, or equivalents. Two lectures, 1 two-hour laboratory period.

COURSES IN POMOLOGY

UPPER-DIVISION COURSES

Pom 312. History and Literature of Horticulture. Winter term, 3 hours.

Brief study of the history of horticulture; systematic survey of

the literature of horticulture, acquainting the student with the various sources of horticultural knowledge. One lecture; 2 recitations.

Pom 313. Commercial Pomology. Fall term, 3 hours.

Study of the problems of harvesting and handling fruits including physiology of ripening; maturity tests; methods of picking, cleaning and packing; standardization, inspection, certification; and loading for domestic and export markets. Two lectures; 1 two-hour laboratory period. Prerequisite: Hrt 111; Ec 201, 202, 203.

Pom 321. Fruits and Nuts of the World. Winter term, 3 hours.

Fruits and nuts of economic importance not commonly grown in Oregon including almond, avocado, banana, Brazil nut, cashew, citrus fruits, date, fig, olive, papaya, pecan, persimmon, pineapple, and pomegranate. Their botanical relationships, culture, history, present trade status, and possibilities of development in the United States and its possessions. Prerequisite: Hrt 111. Two lectures; 1 recitation.

Pom 341. Small Fruits and Grapes. Winter term, 3 hours.

Problems connected with the soils and slopes, pruning, training, harvesting, packing, and marketing of such small fruits as the strawberry, currant, gooseberry, raspberry, blackberry, loganberry, and cranberry; together with American and European grapes. Two lectures; 1 recitation.

Pom 413. Handling and Distribution of Fruits. Winter term, 3 hours.

Continuation of Pom 313. Includes the study of problems of transportation, distribution, marketing methods, storage and storage plant operation. Prerequisite: Pom 313. Two lectures; 1 recitation.

Pom 415. Fruit Production. (G) Spring term, 4 hours.

Principles and practices of fruit and nut growing as related to climate, soil and water requirements, varieties, root stocks, planting systems, pollination, thinning, frost, pest control, and other practical problems. Prerequisite: Hrt 111. Three lectures; 1 three-hour laboratory period.

Pom 417. Systematic Pomology. (G) Fall term, 4 hours.

Descriptions, nomenclature and classifications of fruits and nuts. The student will study a sufficient number of varieties to become acquainted with the more important groups, species, and varieties. One lecture; 1 recitation; 2 two-hour laboratory periods.

Pom 419. Spraying. (g) Spring term, 3 hours.

Principles underlying spraying practices, insect and disease control, sprays and their mixing, operation of spray pumps, gas engines, and electric motors; utilization of portable and stationary outfits, operation of small sprayers and dusters, spray nozzles, guns and rods, accessories; practice in orchard spraying. Prerequisite: Hrt 111. One recitation; 2 two-hour laboratory periods.

Pom 431. Pruning. (g) Winter term, 3 hours.

Thorough training in the fundamental principles underlying pruning, including bud studies, tree building, maintaining vigor of the tree, rejuvenation and the like. Prerequisite: Hrt 111. Two lectures; 1 three-hour laboratory period.

COURSES IN VEGETABLE CROPS

UPPER-DIVISION COURSES

- VC 321. **Principles of Vegetable Production.** Fall or winter term, 3 hours.
The principles and practices involved in growing vegetables, including such subjects as soils, fertilization, varieties, seeds, plant growing, distribution of crops, succession cropping, irrigation, pest control, planting and cultivating, etc. Prerequisite: Hrt 111. One lecture; 1 recitation; 1 two-hour laboratory period.
- VC 322. **Vegetable Crops for Manufacturing.** Winter term, 3 hours.
Production and handling of vegetables for canning and freezing including crops of special importance in the Northwest such as asparagus, beans, beets, carrots, sweet corn, peas, pumpkin, and tomatoes. Designed especially for students majoring in vegetable crops and food products. Two lectures; 1 two-hour laboratory period.
- VC 323. **Vegetable Growing Practices.** Spring term, 3 hours.
Field and greenhouse work with lectures to acquaint the student thoroughly with proper growing and management methods in the production of vegetables for market. Prerequisite: Hrt 111. One lecture; 1 recitation; 1 two-hour laboratory period.
- VC 325. **Vegetable Forcing.** Spring term, 3 hours.
Commercial practices in growing vegetable crops and plants under glass, including tomatoes and cucumbers and various plants. Studies of commercial greenhouse operations. Open to juniors and seniors. Prerequisite: Hrt 111. Two lectures or recitations.
- VC 423. **Vegetable Varieties.** (G) Fall term, 2 hours.
Descriptions, nomenclature, and classifications of vegetables; a sufficient number of varieties of each vegetable studied so that the student may become acquainted with the more important groups of horticultural varieties; exercises in displaying and judging vegetables; assigned readings. Prerequisite: Hrt 111. Two two-hour laboratory periods.
- VC 424. **Vegetable Marketing.** (g) Fall term, 3 hours.
Principles of commercial practices of field harvesting, grading, and packing of vegetables; methods of marketing; car loading, mixed cars, transportation, and distribution of truck crops, such as onions, celery, peas, cabbage, cauliflower, melons, tomatoes. Lectures, farm and market visits, field work in loading and observation of car loads; assigned readings. Prerequisite: Hrt 111. One lecture; 1 recitation; 1 two-hour laboratory period.

Soils

COURSES in soils include soil physics, soil drainage, irrigation farming, dry farming, soil fertility, soil surveying, soil biology, soil-erosion control, and soil management and utilization. The purpose of the major curriculum in soils (page 202) is to give the student thorough training in fundamentals of agriculture, making him competent to manage a farm or preparing him for positions in state or Federal service.

The wealth of Oregon rests in her soil and water resources, and their intelligent development, management, and preservation. With the further extension of reclamation, there will be a greater demand for men who have a knowledge of how most successfully and economically to use water which the engineer's canals and reservoirs provide. These men must know the best time, amount, and method of irrigation, and the effects of irrigation upon soils and crops. They should also know the relations between soils, soil waters, and drainage, and understand how to locate and construct drains and how to treat or fertilize the soil so as to obtain the highest possible efficiency for each unit of tilling or fertilizer employed.

Equipment. The soils laboratories are equipped with apparatus for complete study of physical and chemical properties of soils and problems of soil management. Ample desk room, supplied with running water, gas, compressed air, and electricity, is available. Electric centrifuges and shakers, electric bridge for alkali testing, electric air baths, analytic and torsion balances, microscopes, blast lamps, aspirators, percolators, capillary tubes, mulch cylinders, soil sieves, scales, solution balance, compression filters, soil sampling tubes, moisture equivalent centrifuge, furnace, hoods, soil solution displacement apparatus, hydrogen electrode, conductivity equipment, etc., form a part of the equipment for the work in soils. Soil surveying and mapping outfits, soil survey charts of the United States, and a collection of samples of the chief soil types of Oregon and the United States are available. The soil preparation room is equipped with soil-grinding and sifting machinery, and space for drying, preparation, and storage of large quantities of the different soil types used in the laboratories. For field work in drainage and irrigation, surveying instruments, tiles, and ditching tools, weirs, flumes, hook gauges, water-stage register, electric pumping plant, etc., are available. Weather-recording instruments of different kinds supply equipment for the course in Climatology. Laboratories and greenhouses afford opportunities for studies of the movement and retention of irrigation water in soil, the effects of irrigation upon soils and crops, the effect of tile drainage upon soils of different types, their rate of drainage, etc. On the State College farm the students build weirs, measure water, lay out distribution systems, make cement pipes for laterals, and test pumping machinery. On the drainage plots, the rate of discharge is measured and the effects of drains and soil conditions on water-table are studied. The exhibits are displayed in cases and racks and include soil sample collections, subsoil, hardpans, soil analysis, soil colors, soil drainage and irrigation. A well-stocked reference library is available. The Experiment Station farms at Corvallis and in other parts of the state, together with the cooperative trials in different counties, afford opportunity for field study of soil problems.

Research. The Department of Soils is well equipped for offering research work. The experiment fields, greenhouses, laboratories, and library, and the plans and methods used in soil, irrigation, and drainage investigations, afford valuable opportunities to graduate students.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

SlS 211, 212. Soils. Fall or spring term (SlS 211), winter term (SlS 212), 3 hours each term.

Origin, formation, and classification of soils; study of the physical properties of soil moisture, heat, and air; effects of tillage, drainage,

and irrigation; plant foods and soil fertility; fertilizers; crop rotations; manures; acid and alkali soils. Prerequisite: Ch 101, 102, 103. Two lectures; 1 three-hour laboratory period.

Sls 213. **Soil Drainage and Irrigation.** Spring term, 3 hours.

Soil mapping, reclamation, and use; use of chain, level, and soil auger as applied to design; installation of tile drains or irrigation systems; their effect upon soils and crops; cost and benefits. Two lectures; 1 three-hour laboratory period.

Sls 214. **Forest Soils.** Spring term, 3 hours.

Origin, development, characteristics, and classification of forest soils; relation to vegetation, moisture reaction and fertility; forest nursery soil management, use and conservation. Two lectures, 1 three-hour laboratory period.

Sls 215. **Soils Improvement.** Fall term, 2 hours.

Soil fertility gains and losses, maintenance and improvement; effect of manures, fertilizers, and crop rotations on soil productiveness. Required of students in landscape architecture. Two lectures.

UPPER-DIVISION COURSES

Sls 311. **Irrigation Farming.** Fall term, 2 or 3 hours.

Methods of obtaining, distributing, and conserving irrigation waters; handling of different crops under irrigation; costs and profits; duty of water in various districts of Oregon; water rights, field and laboratory studies of irrigation qualities of different soils; laying out of irrigation systems. Two or four lectures or recitations; 1 three-hour laboratory period.

Sls 319. **Climatology.** Spring term, 2 hours.

Practical meteorology; observing and recording local weather and forecasting; a study of the climate of Oregon and the effect of climate upon agriculture. One recitation; 1 two-hour laboratory period.

Sls 401. **Research.** (g) Three terms, 3 hours each term.

Soil, Drainage, or Irrigation work. The advanced student may study the various soil types of Oregon through mechanical analysis, and other physical tests; may undertake field work in soil surveying and mapping; or, through wire-basket pot-culture and field-plot tests, may determine the effects of various systems of cropping or fertilizing, or of soil bacteria, upon soil fertility. Prerequisite; Sls 421, 424.

Sls 407. **Seminar.** Three terms, 1 hour each term.

Sls 411. **Western Land and Water Laws.** (g) Winter term, 3 hours.

A brief history of the development of water laws. Homestead laws, water rights, and irrigation codes in the different states, particularly in the Northwest and Oregon; appropriation, adjudication, and administration of water; reclamation and other Federal and state land acts affecting reclamation development; organization and administration of irrigation districts and projects; water users' associations, etc.; discussion of public questions relating to reclamation. Three recitations.

Sls 413. **Soil Conservation.** Winter term, 3 hours.

Climate, topography, and soil in relation to erosion; its causes, types, and importance; soil mapping; methods of control. For those who may enter the soil conservation service. Two recitations; 1 three-hour laboratory period.

Sls 414. **Irrigation Investigations.** (G) Fall term, 3 hours.

Irrigation literature and methods of irrigation investigation; field and laboratory studies of irrigation experiments; calculation of depth of water applied and of the most economical production thereby obtained; costs and profits connected with irrigation; analysis of data and preparation of a thesis. Field examinations are made, where possible, of some of the largest projects in the state. One lecture; 2 three-hour laboratory periods.

Sls 418. **Land Drainage.** (G) Spring term, 3 hours.

Field study of roads, oil, and sanitary drainage; actual surveying, laying out, drafting of plans, estimation of cost, and installation of drainage systems; preparation of a complete report on the organization of a drainage district. Prerequisite: Sls 211. One recitation; 2 three-hour laboratory periods (week-end).

Sls 421. **Soil Physics Lectures.** (g) Fall term, 3 hours.

Origin, formation, physical composition, and classification of soils; soil moisture, surface tension, osmosis, capillarity, diffusion, aeration, temperature, and the resulting alteration in crop-producing power. Prerequisite: Sls 212, 213. Three lectures.

Sls 422. **Soil Physics Laboratory.** (g) Fall term, 2 hours.

Supplemental to Sls 421. Laboratory determination and comparison of physical properties of various soil types; physical effects of mulches, rotations, and cropping; soil sampling and judging; mechanical analysis of soils. Two three-hour laboratory periods.

Sls 424. **Soil Fertility Lectures.** (g) Winter term, 3 hours.

Advanced work in composition and values of fertilizers and barnyard and green manures; maintenance and improvement of fertility; effect of the various crops and different systems of farming upon the fertility of the soil; crop rotations and fertility in different sections of the state and the United States. Prerequisite: Sls 421. Two lectures, 1 recitation.

Sls 425. **Soil Fertility Laboratory.** (g) Winter term, 2 hours.

Laboratory work accompanying Sls 424. Two three-hour laboratory periods.

Sls 428. **Soil Management.** (G) Spring term, 5 hours.

Occurrence, composition, characteristics, productivity, plant-food requirements, comparative values, and management of different soil types. Prerequisite: Sls 424. Two recitations; 3 three-hour laboratory periods.

Sls 431. **Soils of Oregon.** (G) Winter term, 2 hours.

Study of the distinguishing characteristics of the various soil types of Oregon. Two lectures.

Sls 432. Soil Survey. (G) Spring term, 3 hours.

For the advanced student who desires preparation for service at state experiment stations or in the Government Bureau of Soils. Study of the classification of soils and soil areas of the United States, of Oregon, and of the Northwest; much work in making regular and completed soil surveys of assigned areas, including field trips of inspection, with a report thereon. Prerequisite: Sls 421, or 424, 431. One recitation; 2 three-hour laboratory periods. Offered alternate years. Offered 1938-39.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

Sls 501. Research. Terms and hours to be arranged.**Sls 503. Thesis. Terms and hours to be arranged.**

Courses for graduate students either as major or minor. Students may select problems in soil physics, analysis, surveying, fertility, irrigation, drainage, soil management, dry-farming, or related subjects. The work of the three terms is limited to a total of 12 term hours.

Sls 505. Reading and Conference. Terms and hours to be arranged.**Sls 507. Seminar. Three terms, 1 hour each term.**

A thorough, critical study of advanced research in soils and reclamation, and their relation to plant nutrition. Prerequisite: graduate standing in soils or related courses. One two-hour recitation period.

Sls 511. Pedology. Spring term, 3 hours.

Advanced soil classification and management. Critical study of soil-forming processes; evolution of soil profiles; principles of soil classification and utilization. Problems of land classification; distribution of soils of the United States in relation to vegetation and crops, geology, physiology, and climate. Limited to advanced and graduate students. Two recitations; 1 three-hour laboratory period.

Sls 512. Soil Colloids. Winter term, 2 hours.

Study of the physical chemistry of soils with special reference to the nature and function of soil colloids, soil acidity, absorption, and base exchange. Limited to advanced and graduate students. Two recitations.

Sls 513. Plant Nutrition. Winter term, 2 hours.

Advanced study of soil, water, and plant relationships and external factors that are controllable by agricultural practices. The character of the soil solution in relation to the nutrient requirements of plants. Limited to advanced and graduate students. Two recitations.

Sls 514. Soil Organic Matter. Fall term, 2 hours.

Study of soil organic matter and humification processes, chemical and physical properties of humus, effect on soil reaction, biological processes and nutrient-supplying power of the soil; relation of humus to soil conservation and to plant growth and adaptation. Two recitations.

Agricultural Education, Agricultural Engineering, Extension Methods

NOT included in any of the three divisions, the departments of Agricultural Education, Agricultural Engineering, and Extension Methods are nevertheless administered in close relation to the three divisions. Preparation for professional service as agricultural educator, agricultural engineer, or agricultural extension worker involves fundamental training in agricultural economics, animal industries, and plant industries.

Agricultural Education

THIS department is responsible for the training of teachers and supervisors of agriculture in elementary and secondary schools, and the training for leadership in rural life and education. Special attention is given to the training of directors, supervisors, and teachers of agriculture as provided for by the Federal laws for vocational education commonly known as the Smith-Hughes Act and the George-Dean Act. Certain field studies and extension activities are included within the scope of this department's work.

The Department of Agricultural Education is a joint department with in both the School of Agriculture and the School of Education.

Preparation for Teaching Agriculture. Teachers of agriculture need to have a fundamental knowledge and a high level of doing ability in most of the departmental fields of the School of Agriculture. In order to increase the number of electives in agriculture that can be taken during a four-year period, courses in psychology and education may be taken in the summer session prior to the junior or senior year.

Graduates of the School of Agriculture may prepare themselves very satisfactorily for teaching agriculture by returning for a fifth year of work, which is gradually being made a requirement in Oregon and other states. During the fifth year they can elect certain courses in agriculture that are fundamental for teaching and also complete the required courses in education.

Requirements in Agriculture include:

- (1) Graduation from a college of agriculture of standard rank.
- (2) The course requirements in agriculture and education (for Smith-Hughes teaching) can be met in either of two ways: first, by majoring in the Agricultural Education curriculum, which includes requirements in both agriculture and education; or, second, by pursuing one of the three other curricula in agriculture in the sophomore year and one of the major curricula in General Agriculture, Agricultural Economics, Animal Industries, or Plant Industries during the junior and senior years. The latter plan will be approved, provided sufficient electives are available for meeting the course requirements in agriculture as outlined in the Agricultural Education curriculum on pages 205-206, as well as the requirements in education.

(3) Depending on the student's previous training and experience and his choice of courses, 70 to 75 term hours of special work in agriculture are desirable. The sequence and distribution of courses are given in the Agricultural Education curriculum. Regardless of the department in which the student majors he should have a minimum of subject-matter courses in the respective departments as follows:

- (a) 9 hours in Agricultural Engineering
- (b) 7 hours in Animal Husbandry
- (c) 6 hours in Dairy Husbandry
- (d) 6 hours in Horticulture
- (e) 6 hours in Farm Crops
- (f) 9 hours in Farm Management and Agricultural Economics
- (g) 6 hours in Soils
- (h) 3 hours in Poultry Husbandry
- (i) 3 hours in Veterinary Medicine

As early as possible in his college course the prospective teacher should advise with the head of the Department of Agricultural Education regarding the courses he should select in each of the fields of agriculture mentioned above and the various qualifications essential in teaching vocational agriculture. Students who have had Smith-Hughes agriculture in high school may have greater freedom in choice of electives.

Requirements in Education: The undergraduate courses in education and psychology required for teaching agriculture are described under the respective departments. The recommended sequence and distribution of these courses are as follows:

	Junior Year		
	—Term hours—		
	F	W	S
¹ Educational Psychology (Ed 312).....	3	---	---
Secondary Education (Ed 311).....	---	3	---
Principles of Teaching (Ed 313).....	---	---	3
Oregon School Law and Oregon System of Education (Ed 316).....	2	or 2	or 2
Senior Year			
Methods in Agriculture (Ed 323).....	5	---	---
² Supervised Teaching (Ed 415).....	---	3	3
Methods in Teaching Evening and Part-Time Classes in Agriculture (Ed 328).....	---	2	---
Rural Survey Methods (AEd 533).....	---	---	2
History of Oregon (Hst 377).....	---	---	3

Special Curricula in Agricultural Education will be outlined for students preparing to teach agriculture in city schools or a combination of subjects including agriculture as requested in the smaller rural high schools.

General Electives. Certain courses are open to all students in agriculture and others who are interested in training for leadership in rural life. Special attention is called to Ed 341, Rural Education.

Graduate Study in Agricultural Education. Since the demands on teachers of agriculture the country over are becoming more exacting each year, graduate work in the fields of agriculture and education is desirable, and in certain states, including Oregon, is required for the regular high-

¹Ed 312 must be preceded by Psy 211.
²Ed 415 may be taken any two terms.

school teaching certificate. Graduate work is usually necessary for those who desire to enter the fields of supervision or teacher training. Programs of work leading to the master's degree and the regular high-school teaching certificate are outlined by this department for students and teachers with approved standing.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

Ed 321. Teaching General Agriculture and Related Science. Spring term, 3 hours.

For prospective teachers of science who may wish to be in a position to offer a separate course in high-school agriculture or to strengthen their science teaching by the utilization of the materials in agriculture well adapted to apply the principles and laws of science commonly operative in the student's natural environment; aims, materials, methods. Three recitations. Prerequisite: Ed 311, 312, 313.

Ed 323. Methods in Agriculture. Fall term, 5 hours.

Problems and methods of organizing and teaching vocational (Smith-Hughes) agriculture in high schools, in accordance with the provisions of state and Federal legislation. Prerequisite or parallel: Ed 313. Five recitations.

Ed 328. Methods in Teaching Evening and Part-Time Classes. Winter term, 2 hours.

Students in this course participate in recruiting, organizing, and teaching evening and part-time classes for both young and adult farmers in the vicinity of Corvallis. Problems arising therefrom form the basis of the course. Prerequisite: Ed 323.

Ed 341. Rural Education. Winter term, 3 hours.

Open to all students, prospective high-school teachers and others alike, who desire to acquire some foundation for a philosophy of rural life and training for leadership in rural education. New methods of utilizing the student's rural, social, and economic environment as a means of vitalizing different phases of the high-school instruction, achieving social objectives of education, and increasing farm, home, and town-country efficiencies. Various forms of continuation and rural extension education for out-of-school youths and adults. Students actively participate in planning and executing studies and programs in rural education for high-school pupils, out-of-school youths, and adults. Prerequisite: junior standing. Three recitations.

AEd 401. Research. Terms and hours to be arranged.

AEd 403. Thesis. Terms and hours to be arranged.

AEd 405. Reading and Conference. Terms and hours to be arranged.

AEd 407. Seminar. Two terms, hours to be arranged.

GRADUATE COURSES

AEd 501. Research. Terms and hours to be arranged.
Problems in agricultural education.

AEd 503. Thesis. Terms and hours to be arranged.

AEd 505. **Reading and Conference.** Terms and hours to be arranged.

AEd 507. **Seminar.** Terms and hours to be arranged.

AEd 516. **Extension Course in Teacher Training.** Any term, hours to be arranged.

Teachers of vocational agriculture in service who cannot be relieved of their professional duties to pursue courses that are offered in the summer session may make use of the course to continue their professional improvement. Personal conferences, follow-up instruction, and supervision, supplemented by correspondence and reports. Prerequisite: Ed 311, 312, 313; 328.

AEd 533. **Rural Survey Methods.** Spring term, 2 hours.

The technique of making agricultural and rural education surveys, together with methods of analyzing, interpreting, and using the material and results as a basis for evaluating and formulating programs in agricultural education. Field studies required. Open to graduates with teaching experience and seniors by special permission. Prerequisite: Ed 311, 312, 313; 328.

Agricultural Engineering

THIS department offers two types of instruction: (1) a major curriculum in agricultural engineering (pages 206-207) and (2) service courses for students majoring in other departments. The technical major is planned to give training in the application of engineering to agriculture. Phases of the work include farm equipment, farm power, farm structures, and the relation of electricity to agriculture. A special curriculum is offered in engineering phases of soil conservation. The sciences fundamental to engineering and agriculture, including mathematics, physics, chemistry, and economics, serve as a basis for practical work in agriculture and agricultural engineering. Opportunity is given to elect nontechnical work of cultural value.

Graduates are fitted for design and sales opportunities with farm equipment concerns, for positions with public utility companies, in Smith-Hughes teaching, as county agents, in consulting agricultural engineering, in research, or as effective farm operators.

The increasing importance of modern equipment in reducing cost of production, together with the desirability of improving rural living conditions, demands, in any branch of agriculture, a more complete and effective grasp of agricultural engineering. Students majoring in other departments who recognize the need for a knowledge of farm shop, farm implements, farm gas engines, tractors and automobile mechanics, building materials, and home conveniences may elect the nontechnical courses.

Equipment. The most up-to-date equipment is lent the institution by the leading implement dealers of the Northwest, so that the student has constantly before him and is working with and studying the very best equipment of all types.

The gas engine laboratory contains several makes and types of stationary gas engines, tractor motors, and accessories, such as carburetors, magnetos, and air cleaners. A Prony brake for determining the horsepower

output of stationary engines and two complete sectionized automobile chassis are included in this laboratory.

The department also has two dynamometers for determining the draft of field machines and the drawbar horsepower of tractors, a gas and steam indicator, and other measuring devices necessary to enable the student to become familiar with the power requirements and methods of measurement for all types of farm machines. Tractors of the latest design, including Diesels, are available for instructional purposes in the laboratory and in the field. The automobile and tractor repair shop is well equipped with modern tools and testing and welding equipment, for complete instruction in repair work of all kinds.

Courses in farm construction and equipment repair are taught in laboratories equipped for the purpose. Farm water systems, centrifugal and turbine pumps for irrigation pumping, spray equipment, and farm electric plants are also available for instruction purposes.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

AE 101. Agricultural Engineering Survey. Fall term, 3 hours.

A survey of the field of agricultural engineering; the application of principles of mathematics and physics to the solution of agricultural problems. For students majoring in agricultural engineering. One lecture; 2 two-hour laboratory periods.

AE 111. Agricultural Engineering. Any term, 3 hours.

Principles of mechanics, hydraulics, and electricity as applied to farm problems; mathematics essential to agriculture. In the spring term the work is offered especially for students in fish and game management. One lecture; 2 two-hour laboratory periods.

AE 221. Farm Construction (Farm Shop I). Fall term, 3 hours.

Farm drawing, reading blueprints, and estimating materials; farm building costs, construction of gates, fences, feeders, and various farm buildings, types of farm buildings and their construction, building specifications, tool sharpening, farm shop equipment, painting and glazing. One recitation; 2 three-hour laboratory periods.

AE 222. Farm Equipment Repair (Farm Shop II). Winter term, 3 hours.

Repairing farm machinery and farm equipment, care of farm tools, farm repair shop and equipment. Soldering, babbitting, bearings, hot and cold metal work, oxyacetylene welding, taps and dies and pipe work. One recitation; 2 three-hour laboratory periods.

AE 231. Farm Implements. Spring term, 3 hours.

Study of the latest horse- and tractor-drawn farm implements, plows and their adjustments and hitches, cultivating machinery, seeding and planting machines, hay- and grain-cutting machines, and manure spreaders; fences and roads; adjustment of machines. One recitation; 2 two-hour laboratory periods.

UPPER-DIVISION COURSES

AE 305. Reading and Conference. Terms and hours to be arranged.

Study of some current agricultural engineering problem.

AE 311. Farm Motors and Tractors. Any term, 3 hours.

The principle, construction, operation, and adjustment of farm motors and accessories, carburetors, magnetos, ignition, governing, cooling, and lubricating systems; fuels and oils; testing, timing, and trouble hunting of farm gas motors, such as are used in the tractor, truck, automobile, and stationary outfits. Two recitations; 1 three-hour laboratory period.

AE 312. Automobile Mechanics. Any term, 3 hours.

A detailed survey of the automobile and its parts; their functions, adjustment and simple repairs; advantages and disadvantages of different features in automobile construction; latest developments in the automotive field. This course is designed for the student who wishes to understand the principles of automobile operation together with simple repairs and adjustments which the operator of an automobile may have occasion to make. Two recitations; 1 three-hour laboratory period.

AE 313. Automobile Mechanics. Any term, 3 hours.

Practical work in overhauling and repairing automobiles, tractors, and trucks, involving disassembling and assembling of parts, testing for and locating troubles, making replacements and repairs. Lectures, demonstrations, class discussions, and laboratory work. Prerequisite: AE 311 or 312. One recitation; 2 three-hour laboratory periods.

AE 314. Automobile Mechanics. Spring term, 3 hours.

(Advanced course.) A continuation of AE 313 for students who wish to acquire additional skill and information relative to automobile repairing and overhauling, especially those intending to teach automobile mechanics. Prerequisite: AE 313. Two recitations; 1 three-hour laboratory period.

AE 321. Pumps and Irrigation Equipment. Spring term, 3 hours.

The study, operation, and testing of different types of pumps, irrigation equipment, and farm water supply systems, farm spray pumps and equipment. Prerequisite: AE 111. Two recitations; 1 three-hour laboratory period.

AE 331. Rural Electrification. Winter term, 3 hours.

Uses of electricity on the farm. Farm electric plants. Rural line extension policies. Farm wiring, study of farm electric motors and equipment such as water heaters, cooling, sterilizing, and refrigerating equipment. Prerequisite: AE 111. Two lectures; 1 three-hour laboratory period.

AE 341. Use of Explosives. Winter term, 2 hours.

The use of explosives in removing stumps and boulders; stump burning and char-pitting; the use of explosives in ditch and rock blasting. Taught jointly by the departments of Agricultural Engineering, Civil Engineering, and Logging Engineering. One recitation; 30 hours of laboratory and field work arranged during the term.

AE 351. Orchard Machinery. Spring term, 3 hours.

Construction, operation, and adjustment of orchard machinery, such as gas engine, pump, tillage and seeding implements; orchard

plowing and cultivation; demonstration of tractors for orchard work. Intended for students in horticulture. Two recitations; 1 three-hour laboratory period.

AE 401. **Research.** Terms and hours to be arranged.

AE 405. **Reading and Conference.** Terms and hours to be arranged.

AE 407. **Seminar.** Terms and hours to be arranged.

Prerequisite: fourteen term hours in agricultural engineering or equivalent.

AE 461, 462, 463. **Farm Structures.** Three terms, 3 hours each term.

The first term's work is a general course including the fundamental principles involved in the organization, layout, and construction of farm buildings, with sufficient drafting to enable the student to interpret drawings and blue prints. In the second and third terms the work covers the planning of farm buildings, including a study of building materials, types of construction, lighting, ventilating, heating, and equipment. Attention is also given to estimating costs, writing specifications, and analyzing the structural elements in farm-building design. One recitation; 1 or 2 three-hour laboratory periods.

AE 471. **Soil Conservation Engineering.** Fall term, 3 hours.

Agricultural engineering phases of soil erosion control, including methods of constructing dams and terraces, terracing machinery, mapping, measurement of run-off, and similar problems. For students specializing in soil conservation. One lecture; 1 recitation; 1 three-hour laboratory period.

GRADUATE COURSES

AE 501 **Research.** Terms and hours to be arranged.

AE 503. **Thesis.** Terms and hours to be arranged.

AE 505. **Reading and Conference.** Terms and hours to be arranged.

AE 507. **Seminar.** Terms and hours to be arranged.

Extension Methods

INSTRUCTION in this department is intended to supplement that of the subject matter departments in the training of students for positions as county agents, home demonstration agents, Four-H club agents, extension specialists, and for similar types of work in which extension methods are commonly used.

The extension worker must be well trained not only in the subject matter of his field but also in the methods by which extension work is successfully carried on. He must be able to give or know how to obtain authoritative advice for his community or county on any problems that may arise related to his field of service. He must know and practice the technique of platform speaking and demonstration, how to conduct discussions, and how to support the extension program by effective publicity. Excellent opportunities for combining a major in agriculture or home eco-

nomics with training in journalism, speech and dramatics, economics, sociology, and other departments, supplemented by work in extension methods, should materially assist in meeting the need for better training on the part of extension workers.

This department is a joint department within both the School of Agriculture and the School of Home Economics.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

EM 405. **Reading and Conference.** Any term, hours to be arranged.

EM 411, 412. **Extension Methods.** (G) Two terms, 3 hours each term.

Intensive study of the history and present organization of extension work; training in the most successful methods employed by extension specialists, county agricultural agents, home demonstration agents, Four-H club leaders, and agricultural workers in commercial fields. For senior or graduate students only. Three lectures.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

School of Education

Faculty

JAMES RALPH JEWELL, Ph.D., LL.D., Dean of the School of Education; Director of High School Teacher Training.

CARL WALTER SALSER, Ed.M., Assistant Dean of the School of Education.

CLYTIE MAY WORKINGER, Placement Secretary.

RUTH LANO, Secretary of the School of Education.

Education

CARL WALTER SALSER, Ed.M., Professor of Education; Head of Department.

FREDERICK MAURICE HUNTER, Ed.D., LL.D., Professor of Education.

CLAIR VAN NORMAN LANGTON, Dr.P.H., Professor of Physical Education.

OTHNIEL ROBERT CHAMBERS, Ph.D., Professor of Psychology.

HERBERT REYNOLDS LASLETT, Ph.D., Professor of Educational Psychology; Director of Supervised Teaching.

ERNEST WILLIAM WARRINGTON, M.A., Professor of Religious Education.

FRANK WINTHROP PARR, Ph.D., Professor of Secondary Education.

RILEY JENKINS CLINTON, Ed.D., Professor of Education.

EVA M SEEN, Ed.D., Professor of Physical Education for Women.

GLENN ALMER BAKKUM, Ph.D., Professor of Sociology.

GRANT ALEXANDER SWAN, B.S., Assistant Professor of Physical Education.

Agricultural Education

HEBER HOWARD GIBSON, A.M., Professor of Agricultural Education; Head of Department.

RUSSEL MONROE ADAMS, M.S., Critic Teacher in Agricultural Education.

Commercial Education

BERTHA WHILLOCK STUTZ, M.S., Associate Professor of Secretarial Science.

IDA GRANBERG, M.S., Critic Teacher in Commercial Education.

Home Economics Education

FLORENCE BLAZIER, Ph.D., Professor of Home Economics Education; Head of Department.

BERTHA KOHLHAGEN, B.S., State Supervisor and Teacher Trainer in Vocational Home Economics.

RUTH MORRIS FOREST, M.S., Assistant State Supervisor in Vocational Home Economics.

MERLE BONNEY DAVIS, B.S., Critic Teacher in Home Economics Education.

LOIS KNAPP CHRISTIAN, B.S., Critic Teacher in Home Economics Education.

ANN MCCLEW, B.S., Critic Teacher in Home Economics Education.

Industrial Education

GEORGE BRYAN COX, B.S., Professor of Industrial Education; Head of Department.

ORVILLE DANIEL ADAMS, M.S., Associate Professor of Vocational Education.

FRANK LLOYD FRANCE, M.S., Instructor in Industrial Education.

General Statement

ALL professional preparation for teaching within the State System of Higher Education, except preparation for strictly elementary-school teaching, is organized under the School of Education. The school is concerned especially with the preparation of teachers for the high schools of Oregon, and with the promotion of high standards of secondary education.

The School of Education operates on both the University and the State College campuses. Preparation for high-school teaching in the various fields is divided between the two institutions in accordance with the 1932 allocation of curricula. The Director of High-School Teacher Training, with offices at Eugene, has administrative control over all high-school-teacher education within the State System.

At the State College are given major curricula preparing for teaching of biological and physical sciences, mathematics, agriculture, home economics, industrial arts, secretarial science, and approved combinations of subjects, and for educational and vocational guidance.

At the University are given general education courses, professional work in educational administration, and major curricula preparing for teaching of literature, languages, arts, music, physical education, the social sciences, business administration, and approved combinations of subjects. The University also offers training to prepare teachers for work with atypical children.

In planning its curricula the School of Education has recognized three qualifications for a good teacher: (1) mastery of subject matter; (2) an understanding of child and adolescent psychology, and of professional problems and techniques; (3) a broad and liberal education.

School of Education Offices. The offices of the School of Education are in Shepard Hall, second floor. Practice teaching is carried on in both the senior high school and the junior high school of Corvallis.

Who Enrolls in the School of Education? As a general rule, it is desirable that students who plan to teach enroll in the School of Education in the freshman year or as soon as they have decided that teaching is their primary or major vocational choice. Students enrolled in other schools who wish also to qualify for a teacher's certificate for high-school teaching are required to confer with advisers in the School of Education so that they may meet state requirements in subject-matter fields as well as in required educational or professional subjects. Preparation for subjects which the student proposes to teach in high school is equally important with courses in education.

Associate Faculty. Teacher training is an enterprise in which many different departments have a share. In order to have all these departments represented in program and policy making for the preparation of teachers,

the President of the State College, at the request of the School of Education, appoints each year certain faculty members from other schools on the campus to serve also as associate and advisory members of the School of Education faculty. Those who have been thus appointed for 1938-39 are: WINFRED MCKENZIE ATWOOD, Ph.D., Professor of Plant Physiology; MELISSA MARGARET MARTIN, A.M., Associate Professor of Modern Languages; HARRY CASE SEYMOUR, State Leader of 4-H Club Work; WILLIAM DONALD WILKINSON, Ph.D., Assistant Professor of Geology.

Student Programs. It is assumed in the School of Education that no two students will take or need exactly the same courses. Students and advisers will note that only 90 hours represent required work in the School of Education and that 102 hours are elective. Special attention is given each student in planning his work and in making necessary adjustments in it from time to time.

Guidance Clinic. Members of the education faculty, supplemented by several members from other schools on the campus, constitute a guidance clinic and give much of their time to individual work with students. Weekly meetings of the clinic are held throughout the academic year. The services of the clinic are open and easily available to students in any school on the campus.

Major Requirements. Candidates for a bachelor's degree with a major in education must submit 36 term hours of work in education courses, of which not less than 27 must be upper-division hours. Elementary Psychology (Psy 201-3 or Psy 211, or equivalent) is prerequisite to all upper-division educational courses, but may not be counted toward fulfilling the 36-hour requirement. Education requirements for a state teacher's certificate are listed below. Majors in education must submit also, for a teacher's certificate, certain subject-matter norms (see **NORMS FOR PROSPECTIVE TEACHERS** below).

A scholarship average within the upper 50 per cent of the State College grade range is prerequisite to registration for upper-division teacher training courses. In admitting students into these courses, the faculty of the School of Education gives additional consideration to psychological rating and teaching personality, and in doubtful cases to marked improvement in scholarship during the junior year.

Baccalaureate Degrees. Students majoring in education may become candidates for the following baccalaureate degrees: Bachelor of Arts, Bachelor of Science, and Bachelor of Science in Education. For the B.A. or the B.S. degree the student must fulfill all State College requirements for these degrees, besides major requirements.* For the B.S. in Ed. degree the student must fulfill general State College requirements for graduation, and the requirements for a major in education, stated above.

Special requirements: In the case of elementary year sequences in the sciences, foreign languages, stenography or typing, the entire year sequence must be completed (e.g., Ch 101, 102, 103) before credit is allowed. If an elementary foreign language is undertaken in this institution, two years of it must be completed if it is to be counted toward graduation in the School of Education. A student with a minor in a modern language may, upon application to the Dean's office, be excused from taking a year in literature.

*For the B.A. degree a minor in one of the modern languages must be completed.

Five-Year Program. Under Oregon law the required preparation for high-school teaching in this state will include in the future five years of college work. This requirement becomes fully effective January 1, 1943, but students qualifying for certification before that time must meet part of the fifth-year requirement (see State Teacher's Certificate, pages 254-255). The fifth-year work must include courses in education and in subject-matter fields. In the case of students who qualify for a certificate between January 1, 1939, and January 1, 1941, the required 15 term hours of fifth-year work must include 6 term hours in education and 9 term hours in one or two subject-matter fields.

By proper planning of his five-year program, a student may qualify for a master's degree at the end of the fifth year. While the master's degree is not required for a certificate, holders of a master's degree may often receive preference as candidates for teaching positions.

Assistance is given students in planning their five years of study in order that the work to as large an extent as possible may constitute a single, unified program.

Graduate Work. Graduate work in education, leading to the Master of Arts, Master of Science, Master of Education, and Doctor of Education degrees, is offered at the State College through the Graduate Division. The requirements for the M.Ed. and D.Ed. degrees differ from the requirements for the M.A., M.S., and Ph.D. degrees as follows: (1) teaching experience is required; (2) less time is spent on the technique of research; (3) the curriculum is carefully planned and integrated to prepare men and women for immediate service in administrative and advanced teaching positions, there is no foreign-language requirement for these degrees. The regulations governing graduate study are stated under GRADUATE DIVISION.

Supervised Teaching. The School of Education provides an opportunity for supervised high-school and junior high-school teaching in all the major fields allocated to the State College. Supervised teaching cannot be done at the State College in fields in which the State College does not offer major work, except that students minoring in physical education may do their supervised teaching in physical education when approved by the Director of Supervised Teaching. Student teachers observe the application of teaching methods by expert instructors, study model lesson plans, work out their own lesson plans under the guidance of the supervisors, and teach high-school classes under close supervision. Credit for supervised teaching is granted only on the approval of the Director of Supervision.

Teacher Placement Service. A Placement Service is maintained by the School of Education for the placement of graduates of the State College who are prepared and qualified to teach in the secondary schools. The Placement Service compiles and makes available to school officials full information concerning the preparation and experience of graduates who desire teaching positions. The Placement Service also furnishes students information concerning the certification requirements and school laws of other states, and will recommend graduates for certification in other states, on the endorsement of the Dean of the School of Education and the State College Registrar. To pay part of the expense of maintaining the Placement Service, a fee of \$3.00 is charged for registration; and a fee of 25 cents is charged for sending credentials to school officials when sent at the request of the student or graduate.

State Teacher's Certificate

UNDER the Oregon school law, the state superintendent of public instruction will (until January 1, 1941) grant a one-year teacher's certificate without examination to graduates of the State College who have completed: (1) a total of 15 term hours of work after graduation, not less than 6 of which must be in education courses; (2) a total of not less than 27 term hours in upper-division education courses.* The work in education must include:

Ed 311. Secondary Education. Any term, 3 hours.

Ed 312. Educational Psychology. Any term, 3 hours.

Ed 313. Principles of Teaching. Any term, 3 hours.

Ed 316. Oregon School Law and Oregon System of Education. Any term, 2 hours.

Hst 377. History of Oregon. Winter or spring term, 3 hours.

Ed 415. Supervised Teaching. Any term, 1-10 hours, 12 hours maximum credit.

Ed 311, 312, 313, 415 must be taken in residence—they cannot be taken by correspondence. Teaching experience will not be accepted in lieu of Supervised Teaching. Ed 311, 312, 313 are prerequisite to all other professional work in education. These courses and Ed 316 may not be taken before the junior year. Ed 415 may not be taken before the senior year.

Application for certification must be made to the state superintendent of public instruction. An official record of the applicant's preparation, required before the certificate is issued, will be submitted to the state superintendent by the State College Registrar, upon request.

Students wishing to qualify for certification at the end of the senior year and for placement after graduation, are required to confer with the officials of the School of Education not later than the end of the winter term of the sophomore year.†

The Oregon state school law provides further:

Any teacher employed in a four-year high school of this state, except as otherwise provided by law, shall meet the following requirements: From January 1, 1939, to January 1, 1941, he shall be a graduate of a standard college or university and have an additional 15 term hours of courses approved by the state board of education;‡ from January 1, 1941, to January 1, 1943, he shall be a graduate of a standard college or university and have an additional 30 term hours of courses approved by the state board of education; and after January 1, 1943, he shall be a graduate of a standard college or university and have an additional 45 term hours of courses approved by the state board of education.

The holder of a one-year state certificate issued in accordance with the provisions of this section shall, after six months' successful teaching

*By state law Elementary Psychology (Psy 201-3 or Psy 211 or equivalent) is prerequisite to all upper-division courses, but may not be counted toward fulfilling the 27-hour requirement.

†Attention is called especially to the fact that a minimum scholarship average within the upper 50 per cent of the State College grade range is expected before registration for upper-division teacher training courses. See MAJOR REQUIREMENTS above.

‡Not less than 6 of the hours after graduation must be in education courses carrying graduate credit.

experience in this state and upon the recommendation of the city school superintendent or county school superintendent under whose supervision the applicant last taught, receive a five-year state certificate authorizing him to teach only in the high schools or junior high schools of this state.

A five-year certificate may be renewed when the holder thereof has taught successfully for a period of 24 months during the life of such certificate, or has completed 15 term hours in courses approved by the state board of education in a standard college or university. When a teacher who is regularly employed by a school board has been granted a leave of absence by such board, the school months included in such leave of absence shall be counted the same as months of teaching in determining eligibility for a renewal of a five-year certificate.

The holder of a one-year state certificate, or a five-year state certificate, or a state life certificate, is authorized to act as city superintendent of the schools of any city.

The following fees are payable to the state superintendent of public instruction at the time the application for certification is made:

One-year certificate	\$2.00
Five-year certificate	3.00

Norms for Prospective Teachers

NO GRADUATE of the State College will be recommended for a teaching position who has not completed, in addition to the professional requirements in education and psychology, the academic preparation outlined under either (1) or (2) below:

(1) Students whose State College major is in subjects commonly taught in the high schools of the state must complete a major and a minor norm. Subjects commonly taught in the high schools are: art, biological science (including general science and geology), commerce, English, French, German, Spanish, Latin, history, home economics, industrial arts, mathematics, music, physical education, physical science (physics and chemistry).

(2) When approved by the adviser and the Dean's office, a student may substitute three minor norms of 24 or more hours each for the major-and-minor norm requirement.

A major norm must include 30 or more term hours. A first minor must include 24 to 30 term hours. A second minor must include 12 to 24 term hours.

It is recommended that students intending to teach complete three subject-matter norms (a major norm and two minor norms), and qualify for the supervision of an extracurricular activity, to insure better opportunities for placement.

At least one of the student's norms must be in a field in which major work is allocated to the State College. Exceptions may be made for students transferring from another institution with norms already completed.

Certain subject-matter courses which do not satisfy norm requirements are of great help to teachers (for example, work in oral English, extempore speaking, journalism, economics, sociology, political science, and biology). Students should consult with their advisers in the School of Education concerning the courses offered by the several schools and departments which are of particular value to intending teachers, and should find a place for such courses in their upper-division programs. Students preparing to teach in junior or senior high schools are advised and urged to take J 111, Elementary Journalism, and J 313, Public Information Methods. All high-school teachers will find these courses valuable in connection with high-school newspaper work and in connection with school news in the newspapers of the local community.

Major and Minor Norms

Listed below are major and minor norms in the several fields in which subject-matter preparation for high-school teaching is offered at the State College. Major and minor norms meet the subject-certification requirements for each field as provided by the State Department of Education of Oregon.

Agriculture¹

MAJOR NORM

	Term hours
Physical Science	12
Biological Science	12
Electives in Agriculture	12
	36

MINOR NORM

Physical Science	9
Biological Science	9
Electives in Agriculture	6
	24

Biological Sciences

MAJOR NORM

General Zoology	9
General Botany	9
² Elementary Entomology	6
² General Bacteriology	6
Electives in the field of biology.....	6
	36

MINOR NORM

General Zoology	9
General Botany	9
² Elementary Entomology	3
² General Bacteriology	3
	24

General Science³

MAJOR NORM

Physical Science—lower-division work, including one year sequence	16
Biological Science—lower-division work, including one year sequence	15
Biological or Physical Science—upper-division work.....	6
	37

¹These agriculture norms are for prospective teachers of general agriculture and general science (not Smith-Hughes) and are designed to serve the following purposes:

1. To make it possible for high schools of moderate size to obtain teachers prepared to offer a combination of courses in the fields of agriculture and natural science.
 2. To familiarize prospective teachers of the natural sciences with concrete situations, materials, and problems in agriculture and rural life valuable in vitalizing the instruction.
 3. To prepare teachers who can offer a separate course in agriculture for farm boys mainly for its vocational and vocational guidance values.
- ²Other electives in the field of biology may be substituted when these courses are not offered.

³Students interested in teaching a year of general agriculture as well as general science may substitute 6 hours of agriculture in the general science minor norm.

MINOR NORM	Term hours
Physical Science—lower-division work, including one year sequence	16
Biological Science—lower-division work, including one year sequence	15
	31

Note: Survey courses in science are counted in General Science norms only with the written approval of the student's adviser.

Home Economics

MAJOR NORM	
All of the minor norm (see below).....	31
Electives from at least two of the following groups to complete a total of 40 hours—	
A. Foods	
Food Purchasing (FN 411), 3 hours.....	}
Experimental Cookery (FN 435), 3 hours.....	
Quantity Cookery and Catering (IEc 311), 3 hours.....	
Cafeteria Management (IEc 320), 3 hours.....	
B. Clothing	
House Furnishing (CT 231), 3 hours.....	}
Applied Design (CT 335), 3 hours.....	
Costume Design (CT 311), 3 hours.....	
Clothing (CT 312), 3 hours.....	
House Furnishing (CT 331), 3 hours.....	
House Furnishing (CT 431), 3 hours.....	9
C. Household Administration	
Note: All courses in Household Administration are open to students who have completed the minor norm. However, the following courses are particularly recommended in the order named.	
Home Management House (HAD 350), 5 hours.....	}
Family Relationships (HAD 422), 2 hours.....	
Child Development (HAD 413), 3 hours.....	
Total.....	40

MINOR NORM		Term hours
Foods		
Dietetics (FN 225).....		3
Foods (FN 220, 221, 222) for those electing chemistry or Foods (FN 211, 212, 213) for those not electing chemistry.....		9
Clothing		
Textiles (CT 250), Clothing (Selection) (CT 211), Clothing (Construction) (CT 212), for those electing art; or Clothing Selection (CT 217), Clothing Selection and Construction (CT 218, 219), for those not electing art.....		9
Household Administration		
Child Development (HAD 411, 412).....		6
Household Management (HAD 340).....		4
Total.....		31

Industrial Arts

MAJOR NORM
 (Basic Major—Woodworking emphasis. Students desiring a different combination, or help on individual problems, should confer with the head of the Department of Industrial Arts.)

	Term hours
Methods in Woodworking (IA 112, 113).....	6
Wood Turning (IA 220).....	2
Fiber Furniture Weaving (IA 326).....	2
Millwork—Machine Woodwork (IA 311).....	3
Furniture Construction (IA 313).....	2
Engineering Drawing (GE 111).....	2
Engineering Drawing (GE 112, 113).....	4
Lower-Division Drawing (AA 291).....	3
Machine and Tool Maintenance (IA 225).....	2
Wood and Metal Finishing (IA 316).....	2
Trade Analysis (IEd 472).....	3
The General Shop and Its Problems (IEd 473).....	2
Written and Visual Teaching Aids (IEd 474).....	3
Shop Planning and Organization (IA 411).....	3
	39

Note: Students who wish to teach industrial arts in California will need to complete 60 term hours. Such students should confer with the head of the Department of Industrial Arts.

MINOR NORM	
Methods in Woodworking (IA 112, 113).....	6
Wood Turning (IA 220).....	2
Fiber Furniture Weaving (IA 326).....	2
Engineering Drawing (GE 111).....	2
Engineering Drawing (GE 112, 113).....	4
Industrial Arts Organization (Ed 330).....	2
The General Shop and Its Problems (IEd 473).....	2
Technical electives to be chosen with approval of department head in terms of recognized objectives.....	6
	26

Mathematics

MAJOR NORM	
Unified Mathematics (Mth 101, 102, 103 or equivalent).....	12
¹ Differential and Integral Calculus or equivalent.....	12
Two terms of upper-division mathematics.....	6
	30
MINOR NORM	
Unified Mathematics (Mth 101, 102, 103 or equivalent).....	12
² Differential and Integral Calculus or equivalent.....	12
	24

Physical Sciences

MAJOR NORM	
General Chemistry	15
General Physics	12
General Geology or advanced courses in chemistry or physics.....	9-12
	36-39
MINOR NORM	
General Chemistry	15
General Physics	12
	27

Secretarial Science³

MAJOR NORM	
Stenography (SS 111, 112, 113).....	9
Typing (SS 121, 122, 123).....	6
Constructive Accounting (BA 111, 112, 113).....	12
Applied Stenography (SS 211, 212, 213).....	9
Office Procedure (SS 311).....	5
Business Law (BA 256).....	4
	45
MINOR NORM	
Stenography (SS 111, 112, 113).....	9
Typing (SS 121, 122, 123).....	6
Applied Stenography (SS 211, 212, 213).....	9
	24

¹For three terms of Calculus students may substitute two terms of Calculus and one term of either Modern Geometry, Higher Algebra, or Theory of Equations and Determinants.

²Students having had one year or more of typing or shorthand will receive advanced standing according to ability shown in placement test provided by the Department of Secretarial Science.

Minor Norms

Listed below are minor norms available at the State College. These may fulfill requirements of a minor norm taken in conjunction with a major norm or the three-minor-norm requirement. Supervised teaching is not offered at the State College in the field of any of these minor norms, except physical education.

Art

MINOR NORM	Term hours
Survey of Creative Arts (Art Appreciation) (AA 114, 115, 116).....	9
Lower-Division Drawing (AA 291).....	3
Lower-Division Decorative Design (AA 295).....	3
Color and Composition (AA 162).....	3
Elective courses in Commercial Design, Crafts, House Planning, Block Printing, Drawing	6
	24

Business Administration

MINOR NORM	Term hours
Constructive Accounting (BA 111, 112, 113).....	12
Typing (SS 121, 122, 123).....	6
Business Law (BA 256).....	4
Office Organization and Management (SS 313).....	5
	27

English and Speech¹

MINOR NORM	Term hours
Literature Survey (Eng 101, 102, 103) <i>or</i> Introduction to Literature (Eng 104, 105, 106).....	9
Two terms of Shakespeare.....	6
English Composition for Teachers (Eng 324).....	3
American Literature (Eng 161).....	3
Electives	6
	27

French

MINOR NORM	Term hours
Twenty-seven hours above RL 1, 2, 3 (first year), including:	
Second-Year French (RL 4, 5, 6).....	12
French Literature (RL 311, 312, 313).....	9
Electives approved by department.....	6
	27

German

MINOR NORM	Term hours
Twenty-seven hours above Ger 1, 2, 3, (first year) including:	
Second-Year German (Ger 4, 5, 6).....	12
German Literature	9
Electives approved by Department.....	6
	27

¹Certain courses in Extempore Speaking, Interpretation, Speech Composition, Community Drama, and Stagecraft may be substituted for courses listed for norm (with the exception of Shakespeare) by students especially interested in Speech or Oral English. Students may include 9 credits of Journalism courses in the English Minor Norm instead of Speech if they so desire. Such substitutions must bear the approval of the student's adviser and the Dean's office.

History, Civics, and Economics

¹MINOR NORM

	Term hours
History of Western Civilization (Hst 201, 202, 203).....	9
The World Since 1914 (Hst 209).....	3
History of American Civilization (Hst 224, 225).....	6
Modern Governments (PS 201, 202).....	8
	26

Music

²MINOR NORM*Band*

Music Fundamentals (Mus 127, 128, 129).....	3
Harmony I, II, III (Mus 111, 112, 113).....	9
Band Organization (Mus 331, 332, 333).....	6
Band Organization (Mus 334, 335, 336).....	6
	24

Orchestra

Music Fundamentals (Mus 127, 128, 129).....	3
Harmony I, II, III (Mus 111, 112, 113).....	9
Orchestral Conducting (Elementary) (Mus 321, 322, 323).....	6
Advanced Conducting and Orchestration (Mus 324, 325, 326).....	6
	24

Glee Club and Chorus

Music Fundamentals (Mus 127, 128, 129).....	3
Harmony I, II, III (Mus 111, 112, 113).....	9
³ Individual Instruction (Voice) (Mus 190—2 terms).....	2
Glee Club Conducting (Mus 433).....	1
College Chorus (Mus 290—6 terms).....	6
Sightsinging and Ear Training (Mus 147, 148, 149).....	3
	24

For students who expect to lead glee clubs and choruses in high schools, previous piano training is essential and unless the student has had this preparation, additional work in piano may be needed. If the student is competent in accompanying, this can be adjusted.

Physical Education

MINOR NORM (MEN)

Introduction to Physical Education (PE 121, 122, 123).....	6
Technique of Gymnastics (PE 174).....	2
Technique of Football, Track, and Field (PE 175).....	2
Technique of Minor Sports (PE 176).....	2
Technique of Baseball and Basketball (PE 274).....	2
Technique of Boxing and Wrestling (PE 275).....	2
Technique of Swimming (PE 276).....	2
Coaching of Football (PE 347).....	} Three courses selected from this group.
Coaching of Basketball (PE 346).....	
Coaching of Baseball (PE 348).....	
Coaching of Track and Field (PE 349).....	
Minimum hours for recommendation to coach one or more sports in connection with other teaching work.....	24

Students interested in teaching Physical Education or Biological Science, or both, may include a minor group in health education. All teachers of physical education in Oregon are required to have at least 12 hours in health education. Courses in health education include: PE 221; PE 358; Ed 351, 352; Ed 421, 422, 423; Bac 205, 206, 207; Bac 441; Bac 445; FN 225; HAD 225.

¹One year of economics or sociology may be taken in place of other work listed in this norm.

²Any one of the three groups of courses—Band, Orchestra, Glee Club and Chorus—satisfies the requirements for a minor norm in music.

³May be taken as Group Instruction (Mus 191).

MINOR NORM (WOMEN)	Term hours
Introduction to Physical Education (PE 121, 122, 123).....	6
Physical Education Technique (Women) (PE 343, 344, 345).....	9
Electives approved by the department, chosen from the following:	
Organization and Administration (PE 423), 3 hours.....	
Supervised Teaching (Ed 315), 3 hours.....	
Tests and Measurements in Physical Education (PE 422), 3 hours.....	9
School and Community Club Work (Ed 425), 3 hours.....	
Principles of Physical Education (PE 421), 3 hours.....	24

Spanish

MINOR NORM

Twenty-seven hours above RL 11, 12, 13 (first year) including:	
Second-Year Spanish (RL 14, 15, 16).....	12
Spanish Literature (third year) (RL 341, 342, 343).....	9
Electives approved by Department.....	6
	27

Professional Curricula in Education

THE following courses of study show the work in the School of Education that should be followed by students who are intending to become high-school teachers or whose special interest lies in the fields of secondary education or guidance and counseling. Related work in other schools is shown only when it is necessary in building the proper curriculum.

For students registering in the School of Education the following suggestions are made:

High-School graduates who plan to teach should enroll in the School of Education as freshmen. In this way requirements will be most easily and certainly met, an adviser will be available at all times, proper groups or norms will be chosen, and the most valuable supporting courses will be selected and worked into the student's program. This means the best possible basis for recommendation and placement at graduation.

Junior-College graduates from accredited institutions enter the School of Education as juniors and may complete the work in two years for the B.A. or B.S. degrees. Students having had one year in junior college enter as sophomores in the School of Education.

Lower-Division students who complete the first two years of college work at the State College or the University, or at other accredited institutions, enter the School of Education as juniors. These students ordinarily will have one or two of their subject-matter groups under way and will experience little difficulty in selecting a major and a minor.

Normal-School graduates who have completed two years of work will enter the School of Education as third-year students. Such students receive full credit for all work taken in the normal school except that not more than 9 hours of credit are allowed for practice teaching from normal school. Graduates of two-year normal schools also are likely to be deficient one or two terms in English and occasionally one or more terms in science. As soon as these courses have been made up the student receives the Junior Certificate and full junior standing.

STUDENTS' FOUR-YEAR BASIC PROGRAM

Students will note that only 90 hours are required in the School of Education, while 102 hours are elective.

	Term hours		
	F	W	S
Freshman Year			
Methods of Study (Ed 101).....	3	---	---
Mental Hygiene (Ed 102).....	---	3	---
Education as a Profession (Ed 211) or Choosing a Vocation (Ed 104).....	---	---	2
English Composition (Eng 111, 112, 113).....	3	3	3
Laboratory Science.....	3-5	3-5	3-5
Extempore Speaking (Sp 111).....	---	---	3
Military Science (men).....	1	1	1
*Physical Education.....	1	1	1
Sophomore Year			
Outlines of Psychology (Psy 211).....	6 or 6	or 6	or 6
English Literature.....	3	3	3
Physical Education.....	1	1	1
Military Science (men).....	1	1	1
Junior Year			
Secondary Education (Ed 311).....	3	---	---
Educational Psychology (Ed 312).....	---	3	---
Principles of Teaching (Ed 313).....	---	---	3
Outlines of Economics (Ec 211 or 212).....	4-3	---	---
General Sociology (Soc 212 or 211).....	---	3-4	---
American National Government (PS 212).....	---	---	3
Oregon School Law and Oregon System of Education (Ed 316).....	2	or 2	or 2
Senior Year			
Methods and Materials.....	2-3	---	---
History of Education (Ed 454).....	3	---	---
History of Oregon (Hst 377).....	---	---	3
Supervised Teaching (Ed 415).....	3-6	3-6	3-6
Measurement in Secondary Education (Ed 416).....	---	---	3

Basic Requirements:

- I. 6 hours of general psychology.
3 hours of Oregon history.

II. 36 hours of education, approximately 27 of which must be upper-division work.

III. 30 or more hours in a major teaching field accompanied by 20 or more in a minor field. A second minor is advised wherever possible.

For elective courses in education see the following pages. Students in nearly all cases are advised not to take more than the normal load, which is 16 hours per term. All students earning their expenses will do well to take less than 16 hours.

SUGGESTED COURSES FOR PROSPECTIVE HIGH-SCHOOL TEACHERS

For convenience and clearness the required and suggested courses in education and psychology here are listed alone and by years:

A. SENIOR HIGH-SCHOOL TEACHING

	Term hours		
	F	W	S
Freshman Year			
Methods of Study (Ed 101) (any term).....	3	or 3	or 3
Mental Hygiene (Ed 102).....	---	3	---
Education as a Profession (Ed 211) (Spring term).....	---	---	2
Sophomore Year			
Outlines of Psychology (Psy 211) (Any term).....	6	or 6	or 6
Junior Year²			
Secondary Education (Ed 311).....	3	---	---
Educational Psychology (Ed 312).....	---	3	---
*Principles of Teaching (Ed 313).....	---	---	3
Measurement in Secondary Education (Ed 416).....	---	---	3

¹General Hygiene (PE 150), 2 term hours, is taken in place of physical education one term of the freshman year. Women take Social Ethics (PE 131) one term.

²Juniors who have not had Psy 211, 6 term hours, must take it before entering Secondary Education or other upper-division Education courses.

³May be taken in senior year, but must precede Supervised Teaching.

	Senior Year		
	Term hours		
	F	W	S
Special Methods	3	or 3	---
¹ Supervised Teaching in Junior High School.....	6	2	---
One or more terms from Ed 417, 420, 454, 461, 485, 497, 498, and 524.....	---	---	3

B. JUNIOR HIGH-SCHOOL TEACHING

Freshman, Sophomore, and Junior Years
Same as for Senior High-School Teaching.

	Senior Year		
	Term hours		
	F	W	S
Special Methods	3	or 3	---
¹ Supervised Teaching in Junior High School.....	6	2	---
Adolescence: Growth and Development of the Individual (Ed 420).....	---	3	---
Civic Education (Ed 489).....	---	---	3
Character Education (Ed 490).....	3	---	---
Recommended electives: Ed 454, 461, 485, 498, 524.	---	---	---

SUGGESTED COURSES FOR NORMAL-SCHOOL GRADUATES

The following courses in Education are either required or suggested for normal-school graduates (see Students' Four-Year Basic Program and Suggested Courses for Prospective High-School Teachers above):

	Junior Year		
	Term hours		
	F	W	S
Secondary Education (Ed 311), Educational Psychology (Ed 312), Principles of Teaching (Ed 313).....	3	3	3
Measurement in Secondary Education (Ed 416).....	---	3	---

	Senior Year		
	Term hours		
	F	W	S
Special Methods	2-3	2-3	2-3
Adolescence: Growth and Development of the Individual (Ed 420).....	---	3	---
History of Education (Ed 454).....	3	---	---
Supervised Teaching (Ed 415).....	2-6	2-6	2-6

The remaining hours in education are elective. Recommended electives are Curriculum Construction (Ed 524) and Organization and Supervision for High-School Teachers (Ed 498).

Norms: One major and one minor norm are required. A major and two minor norms should be met, if possible.

CURRICULUM FOR EDUCATIONAL AND VOCATIONAL GUIDANCE

The following general sequence of courses is suggested for those students looking forward to work as counselors, deans of girls, deans of boys, teachers of occupations courses, and to other phases of guidance work in connection with the public schools and other social agencies and organizations. Students interested in Guidance and Counseling should also make adequate subject-matter preparation in at least two other fields.

	Freshman and Sophomore Years		
	Term hours		
	F	W	S
Methods of Study (Ed 101).....	3	---	---
Mental Hygiene (Ed 102).....	---	3	---
Education as a Profession (Ed 211) or Choosing a Vocation (Ed 104).....	---	---	2
English Composition (Eng 111, 112, 113).....	3	3	3
Physical or Biological Science.....	3-4	3-4	3-4
Elementary Psychology (Psy 201, 202, 203).....	3	3	3
Elementary Psychology Laboratory (Psy 204, 205, 206).....	1	1	1
Principles of Economics (Ec 201, 202, 203).....	3	3	3
History cycle.....	3	3	3
Extempore Speaking (Sp 111, 112, 113).....	3	3	3

	Junior Year		
	Term hours		
	F	W	S
Secondary Education (Ed 311).....	3	---	---
Educational Psychology (Ed 312).....	---	3	---
Principles of Teaching (Ed 313).....	---	---	3
Elements of Sociology (Soc 201, 202, 203).....	3	3	3
Adolescence: Growth and Development of the Individual (Ed 420).....	---	3	---
Educational Sociology (Soc 314).....	---	---	3
Measurement in Secondary Education (Ed 416).....	---	---	3
Literature (English or American).....	3	3	3
Special Methods	2-3	2-3	---

¹Supervised Teaching (Ed 415) may also be taken 2 hours winter term, 6 hours spring term.

Senior Year	Term hours		
	F	W	S
Guidance and Personnel Practices (Ed 485).....	3	---	---
Counseling (Ed 487).....	---	3	---
Current Occupational Trends (Ed 486).....	---	---	3
Supervised Teaching (Ed 415).....	---	---	---
Statistical Methods in Education (Ed 417).....	3	---	or 3
Civic Education (Ed 489).....	3	---	or 3
Individual investigation	---	---	---

Education

INSTRUCTION given in education covers the principles and the technique of teaching at the secondary and college levels, educational psychology, special methods in teaching the various major subjects in which the State College gives teacher training, the history and philosophy of education, and vocational guidance.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Ed 101. **Methods of Study.** Any term, 3 hours.

Specific methods of study as applied to various subject-matter fields, together with the general principles of note-taking, study schedule, fixing study habits, and evaluations of the various broad fields of human learning. Three recitations. Professor Parr.

Ed 102. **Mental Hygiene.** Any term, 3 hours.

The conditions of healthy mental development and normal reactions to life and the college environment; the habits, attitudes, and proper functioning of a normal mind. Professor Chambers.

Ed 104. **Choosing a Vocation.** Any term, 2 hours.

Elective mainly for freshmen and sophomores undecided as to the work for which they should prepare. Undertakes systematically to assist students in studying the vocational openings and also their own personal abilities and characteristics, using tests, occupational reports, interviews, visits, clinical recommendations and all other helps in securing full information. Final vocational decision, of course, is left wholly to the individual student. Professor Salser.

Ed 211. **Education as a Profession.** Spring term, 2 hours.

Teaching as a life work; the essential qualities of a good teacher; the teacher and the community; opportunities in departmental teaching, administration and supervision, research, adult education, vocational education; rewards, advantages, and disadvantages. Two recitations.

UPPER-DIVISION COURSES

Ed 311. **Secondary Education.** Any term, 3 hours.

An extensive study of the problems of the high school from the standpoint of the teacher, involving a consideration of its aims, functions, and characteristics. Prerequisite: Psy 201, 202, 203. Three recitations. Professor Parr.

Ed 312. **Educational Psychology.** Any term, 3 hours.

A study of the laws of learning and their application to the class-

room; motivation in learning, transfer of training, memory, forgetting, and the psychology of secondary school subjects. Prerequisite: Psy 201, 202, 203. Three recitations. Professor Laslett.

Ed 313. Principles of Teaching. Any term, 3 hours.

Application of the laws of psychology to teaching; the significance of individual differences; the types of learning; aims and functions of secondary education; socialization; supervised study; measuring results. Prerequisite: Ed 312. Three recitations. Professor Clinton.

Soc 314. Educational Sociology. Spring term, 3 hours.

A study of the field of sociology from the educational point of view; social institutions in their origin and development; social activities in their relation to institutions and the individual; social control or the molding of social institutions and the directing of social activities; different methods of social investigation and their comparative results. Students in the School of Education may include this course in the required 36 hours of education. Prerequisite: an introductory course in sociology. Professor Bakkum.

Ed 316. Oregon School Law and Oregon System of Education. Any term, 2 hours.

An analysis of the Oregon school system and the laws on which the system is based. Attention will be given to the problems of Oregon schools, plans proposed for their solution, the course of study and trends in educational development in the state. Prerequisite: Junior standing. Professor Clinton.

Ed 321. Teaching General Agriculture and Related Science. Spring term, 3 hours.

For prospective teachers of science who may wish to be in a position to offer a separate course in agriculture or to strengthen their science teaching by the utilization of the materials in agriculture well adapted to apply the principles and laws of science commonly operative in the student's natural environment; aims, materials, methods. Three recitations. Prerequisite: Ed 311, 312, 313. Professor Gibson.

Ed 323. Methods in Agriculture. Fall term, 5 hours.

Problems and methods of organizing and teaching vocational agriculture in high schools, in accordance with the provisions of state and Federal legislation. Prerequisite or parallel: Ed 313. Five recitations. Professor Gibson.

Ed 324. Methods and Materials in Biological Science. Fall term, 3 hours.

Investigation of kinds and sources of materials for botany and biology; equipment to be used; local materials to be had in various sections of Oregon; effective methods of organizing and presenting this material to the high-school pupils. Prerequisite: Ed 311, 312, 313.

Ed 325. Methods and Materials in Physical Science. Winter term, 3 hours.

Study and comparison of classroom procedures and laboratory technique in physics and chemistry; careful attention to supplies and equipment and their effective and economical use. Prerequisite: Ed 311, 312, 313.

Ed 326. Methods and Materials in Mathematics. Fall term, 3 hours.

Selection and study of the essential elements of high-school algebra, geometry, and trigonometry with consideration of the objectives

and standards of mathematics teaching in the high school. Prerequisite: Ed 311, 312, 313.

- Ed 328. **Methods in Teaching Evening and Part-Time Classes in Agriculture.** Winter term, 2 hours.
Students in this course participate in recruiting, organizing, and teaching evening and part-time classes for both young and adult farmers in the vicinity of Corvallis. Problems arising therefrom form the basis of the course. Prerequisite: Ed 328. Professor Gibson.
- Ed 329. **Methods in Commercial Subjects.** Winter term, 3 hours.
Principles of education as used in the development of skills and precisions involved in the learning of such activities as are found in stenography, typing, and accounting. Lectures covering aims, materials, standards, methods of presentation, organization of courses, and arrangement of curricula. Prerequisite: BA 111, 112, 113; SS 311, 312; Ed 311, 312, 313. Three lectures. Associate Professor Stutz.
- Ed 330. **Industrial Arts Organization.** Winter term, 2 hours.
Selection and organization of subject matter for shop work and drawing courses in secondary schools; evaluation of jobs, projects, and class problems of several types and the formulation of general plans for teaching industrial-arts subjects. Prerequisite: Ed 313 and junior standing. Two recitations. Mr. France.
- Ed 332. **Methods of Teaching Related Art.** Fall term, 3 hours.
Selection and organization of subject matter in art in its application to vocational courses authorized under the Smith-Hughes act; special methods in teaching related art. Prerequisite or parallel: Ed 313. Three recitations. Professor Blazier
- Ed 333. **Methods and Materials in Industrial Arts.** Spring term, 3 hours.
A study of methods for effective presentation of subject matter in the industrial arts courses of the secondary schools; preparation of course outlines and lesson plans; classroom management and the organization of personnel. Prerequisite: Ed 311, 312, 313, Ed 330. Three recitations. Mr. France.
- Ed 341. **Rural Education.** Winter term, 3 hours.
Open to all students, prospective high-school teachers and others alike, who desire to acquire some foundation for a philosophy of rural life and training for leadership in rural education. New methods of utilizing the student's rural, social, and economic environment as a means of vitalizing different phases of the high-school instruction, achieving social objectives of education, and increasing farm, home, and town-country efficiencies. Various forms of continuation and rural extension education for out-of-school youths and adults. Students actively participate in planning and executing studies and programs in rural education for high-school pupils, out-of-school youths, and adults. Prerequisite: junior standing. Three recitations. Professor Gibson.
- Ed 351. **Health Education.** Fall term, 3 hours.
The fundamental philosophy and principles of health education with emphasis on organization and administration of health education. Provision is also made for students interested in adult health education. Associate Professor Morris.

- Ed 352. **Health Education.** Winter term, 3 hours.
Continuation of Ed 351. Emphasis will be placed on the subject matter of health instruction and its use in secondary schools and in adult health education. Prerequisite Ed 351. Associate Professor Morris.
- Ed 401. **Research.** Terms and hours to be arranged.
- Ed 403. **Thesis.** Terms and hours to be arranged.
- Ed 405. **Reading and Conference.** Terms and hours to be arranged.
- Ed 407. **Seminar.** Any term, 1 or 2 hours.
Prerequisite: Ed 311, 312, 313. Professor Salser and staff.
- Soc 411, 412. **Social Problems.** (g) Winter and spring terms, 2 or 3 hours each term.
See description under Department of Sociology. The contents of the work are varied from time to time to meet the needs of particular groups of students. Students in the School of Education whose work in either of the terms in this sequence covers social education may count 3 hours of credit toward the required 36 hours of education if approved by the Dean. Prerequisite: basic work in general sociology. Two or 3 recitations. Professor Bakkum.
- Ed 415. **Supervised Teaching.** Any term, 12 hours maximum.
Experience in classroom procedures along the lines of the student's academic preparation and interests. Prerequisite: Ed 311, 312, 313. Professor Laslett.
- Ed 416. **Measurement in Secondary Education.** (G) Any term, 3 hours.
A study of the construction and desirable uses of various standard tests and scales for measuring achievement in secondary school subjects. Such elements of statistical method are given as are necessary for intelligent use of the tests. Prerequisite: Ed 311, 312, 313, or equivalent. Three recitations. Professor Clinton.
- Ed 417. **Statistical Methods in Education.** (G) Winter or spring term, 3 hours.
The fundamental elements only of statistical methods designed to furnish the basis for a scientific procedure in educational measurements; methods of treating collective facts, average facts, and correlated facts, as applied to giving and scoring tests, finding costs, etc. Prerequisite: Ed 416. Three recitations. Professor Clinton.
- Ed 420. **Adolescence: Growth and Development of the Individual.** (G) Winter term, 3 hours.
The processes through which the normal human being reaches maturity, acquires effective use of his bodily equipment and learning capacity, and makes satisfactory personal and social adjustments; the important physical, mental, and moral changes necessary to adolescence; educational implications of recent studies in this field. Prerequisite: Psy 201, 202, 203. Professor Salser.
- Ed 421, 422, 423. **School Health Problems.** (g) Three terms, 2 hours each term.
The various factors in the maintenance of the health of school children are studied. Fall term: prevention and control of communica-

ble diseases in relation to the school child. Winter term: school sanitation; proper construction and care of school equipment. Spring term: the factors affecting the health of the school child; the health of the teacher; the hygiene of carrying out various phases of instruction. Professor Langton.

- Ed 425. **School and Community Club Work.** Winter term, 3 hours.
A cooperative effort to prepare teachers and others for effective club work and community leadership. Specialists in 4-H Club work and others assist through giving lectures in their respective fields. Three recitations. Professor Seen.
- Ed 454. **History of Education.** (G) Fall term, 3 hours.
A general review of the growth and development of education and its relation to the civilization of the times, with particular reference to the educational philosophies of Plato, Aristotle, Renaissance educators, Comenius, Locke, Rousseau, Pestalozzi, Froebel, Herbart, Herbert Spencer, and Dewey. Prerequisite: Ed 311, 312, 313. Three recitations. Professor Warrington.
- Ed 461. **Psychology of Childhood.** (G) Fall or spring term, 3 hours.
A study of the mental development of the child. Native responses; play, self-assertion, instinctive social attitudes; speech, emotions; simple mental processes; complex mental processes; mental organization. Prerequisite: Ed 311, 312, 313. Three recitations. Professor Laslett.
- Ed 484. **The Junior High School.** (G) Fall term, 3 hours.
A careful study of the relationship between the junior high school and the guidance movement; the purposes and opportunities of the junior-high-school years, including the activities and organizations. Certain outstanding junior high schools are studied. Prerequisite: Ed 420. Professor Salser.
- Ed 485. **Guidance and Personnel Practices.** (G) Fall or winter term, 3 hours.
An introduction to the field of guidance and counseling. Some attention is given to the development of the guidance movement. The means and methods of assisting students with their personal and vocational problems and the policies necessary on the part of the school receive major consideration. Professor Salser.
- Ed 486. **Current Occupational Trends.** (G) Winter term, 3 hours.
A study of the recent and rapidly increasing materials available in the occupational and vocational world along with interpretations of present trends. Attention is given to sources of such material and to their relative value and usefulness for high-school and college students. Professor Salser.
- Ed 487. **Counseling.** (G) Spring term, 3 hours.
Aims to give prospective counselors, administrators, teachers, and parents an acquaintance with mental, achievement, trade, and other tests, together with some practice in the administration of such tests. Problems of classification; methods used in educational and vocational counseling. Professor Salser.

- Ed 488. **Vocational Education.** (G) Winter term, 3 hours.
The place and need of vocational education in a democracy, with special attention to the evolution of the philosophy of vocational education as a phase of the general education program. Prerequisite: Ed 311, 312, 313, or equivalent. Three recitations. Associate Professor Adams.
- Ed 489. **Civic Education.** (G) Fall or spring term, 3 hours.
A study of the school as an instrument of society for transmitting its social inheritance; analysis of school organization, administration, school subjects, methods of instruction, extra-school activities, and methods of discipline with reference to their contribution to training for citizenship. Prerequisite: Ed 311, 312, 313, or equivalent. Three recitations. Professor Salser.
- Ed 490. **Character Education** (G) Fall or winter term, 3 hours.
The place of character in the social purposes of education; distinction between training and instruction; the dynamic function of the feelings; the conditioning of interests; the function of ideals; the formation of habits; the integration of habits and attitudes. Analysis of typical procedure. Prerequisite: Ed 311, 312, 313, or equivalent. Three recitations. Professor Warrington.
- Ed 491. **Group Thinking.** (G) Spring term, 3 hours.
This course proposes to study the nature and method of democratic participation in the group thought-life to the end that these new issues and situations may be resolved on more adequate levels of thinking. It aims to build the habit of reflective group thinking, to develop greater facility in forming reasoned judgment on public affairs, to consider how the diversified groups may confer in cooperative efforts to discover new roads to new and better goals, and to study the technique of leadership in such a group-thinking process. Prerequisite: Ed 490. Three recitations. Professor Warrington.
- Ed 492. **Character Education Problems.** (G) One term, 3 hours.
The bearing of social change on conduct; democratic participation in the group thought-life as a means of resolving new issues; how to build the habit of group thinking; how to develop facility in forming reasoned judgment; the study of the technique of leadership in the group-thinking process; examination of successful plans now in use; application to program building and the selection of activities. Offered at present in summer session only. Prerequisite: Ed 490. Three recitations. Professor Warrington.
- Ed 497. **Adult Education.** (G) Spring term, 3 hours.
The development, methods, and results of adult education; the part played by public schools, extension instruction, vocational measures and methods, industrial and commercial organizations, workers' colleges, churches, clubs, radio, and other forms of adult learning. For teachers and other community leaders and workers. Three recitations. Professor Warrington.
- Ed 498. **Organization and Supervision for High-School Teachers.** (G) Winter term, 3 hours.
Given from the standpoint of the high-school teacher. The teacher must understand administrative organization as well as the methods

and purposes of supervision. Administrative organizations and supervisory plans are treated as they involve the classroom teacher. Prerequisite: Ed 311, 312, 313. Professor Clinton.

GRADUATE COURSES

Courses numbered 400-499 and designated (P) or (G) may be taken for graduate credit.

- Ed 501. **Research.** Terms and hours to be arranged.
 In addition to the regular courses listed, members of the staff supervise research and investigation by qualified graduate students. Registration by permission of the staff member or members in whose field the investigation lies. Prerequisite: graduate standing in Education. See also AEd 501, CEd 501, HEd 501, IEd 501.
 Problems in Educational Psychology—Professor Laslett.
 Problems in Guidance—Professor Salser.
 Problems in History of Education—Professors Salser and Blazier.
 Problems in Measurements—Professor Clinton.
 Problems in Secondary Education—Professor Parr.
 Problems in Social or Moral Education—Professor Warrington.
- Ed 503. **Thesis.** Terms and hours to be arranged.
- Ed 505. **Reading and Conference.** Terms and hours to be arranged.
- Ed 507. **Seminar.** Terms and hours to be arranged.
- Ed 511. **Introduction to Thesis Writing.** Fall term, 2 hours.
 Provided and recommended for students in the School of Education who are candidates for an advanced degree; open also to graduate students in other schools. Deals with finding materials, thesis organization, types of research suited to problems, bibliography, etc. Does not take the place of individual direction and supervision of theses by various major professors in whose fields students choose to write their theses. Prerequisite: graduate standing. Professor Clinton.
- Ed 521. **History of American Education.** Spring term, 3 hours.
 Lectures, reports, and discussions treating the intellectual development of America with special reference to education. Knowledge of American history a requisite. Open to seniors and graduates who have met the practice-teaching requirement. Prerequisite: Ed 311, 312, 313, or equivalent. Three recitations. Professor Salser.
- Ed 522. **Foreign School Systems.** Winter term, 3 hours.
 A comparative study of education in France, Germany, Great Britain, and Denmark. Experiments such as those in Russia and Italy are also included. Attention is devoted mainly to the developments since the World War and to the extent and effectiveness of vocational education in the countries included in the term's work. Prerequisite: Ed 454 or 521. Professor Laslett.
- Ed 524. **Curriculum Construction.** Winter term, 3 hours.
 The problems of building junior and senior high-school curricula. Curriculum theories and policies since 1900; principles for selecting and organizing subject matter; courses of study in various fields; principles of curriculum organization; type of programs; important studies in this field. Prerequisite: Ed 311, 312, 313, or equivalent. Three recitations. Professor Parr.

Ed 526. **Construction and Use of Objective Examinations.** Spring term, 3 hours.

Consideration will be given to the principles and statistics involved in the selection of test items and the validity and reliability of such items. Consideration will be given also to the various types of examinations, their validity, reliability, directions for administering, directions for scoring, keys, and methods of grouping results. Prerequisite: Ed 416. Professors Clinton and Laslett.

Ed 527. **Tests and Their Social Uses.** Spring term, 3 hours.

The application of mental-test results to cultural, moral, social, and educational problems; the basic principles leading to improvement. Special consideration is given to the problems of adjustment of students in their scholastic and personal activities.

Ed 528. **Philosophy of Education.** Winter term, 3 hours.

A study of the broad fundamental principles and problems of education, with some attempt at their solution. The meaning of philosophy; the philosophy of education; principal rules, formulae; the value of a correct philosophy of education for the teacher and school administrator. Prerequisite: Ed 311, 312, 313. Three recitations. Professor Warrington.

Ed 535. **Psychological Aspects of Vocations.** Any term, 3 hours.

Some basic psychological principles applied to (1) choice or avoidance of occupations, (2) aiding others to choose or avoid occupations, (3) adjusting or aiding others in adjusting to occupational conditions and demands, and (4) alteration of occupational conditions and demands to meet human needs. Prerequisite: Psy 211, Ed 312.

Ed 555. **College and University Teaching.** Spring term, 3 hours.

Includes a consideration of mental tests in their application to college situations, the objective examination, other movements in the field of college teaching. The lectures and problems studied are outlined by the members of the faculty best equipped to present them. Prerequisite: graduate standing in education. Two recitations. Professor Parr.

Ed 561. **Advanced Educational Psychology.** Any term, 3 hours.

A discussion of the experimental material which seems most useful and relevant to educational psychology. Open to graduate students with preliminary training in education and psychology. Prerequisite: graduate standing in education. Three recitations. Professor Laslett.

Agricultural Education

THIS department is responsible for the training of teachers and supervisors of agriculture in elementary and secondary schools, and the training for leadership in rural life and education. Special attention is given to the training of directors, supervisors, and teachers of agriculture as provided for by the Federal laws for vocational education commonly known as the Smith-Hughes Act and the George-Deen Act. Certain field studies and extension activities are included within the scope of this department's work.

The Department of Agricultural Education is a joint department within both the School of Agriculture and the School of Education.

Preparation for Teaching Agriculture. Teachers of agriculture need to have a fundamental knowledge and a high level of doing ability in most of the departmental fields of the School of Agriculture. In order to increase the number of electives in agriculture that can be taken during a four-year period, courses in psychology and education may be taken in the summer session prior to the junior or senior year.

Graduates of the School of Agriculture may prepare themselves very satisfactorily for teaching agriculture by returning for a fifth year of work, which is gradually being made a requirement in Oregon and other states. During the fifth year, they can elect certain courses in agriculture that are fundamental for teaching and also complete the required courses in education.

Requirements in Agriculture include:

- (1) Graduation from a college of agriculture of standard rank.
- (2) The course requirements in agriculture and education (for Smith-Hughes teaching) can be met in either of two ways: first, by majoring in the Agricultural Education curriculum, which includes requirements in both agriculture and education; second, by pursuing one of the three other curricula in agriculture in the sophomore year and one of the major curricula in General Agriculture, Agricultural Economics, Animal Industries, or Plant Industries, during the junior and senior years. The latter plan will be approved provided sufficient electives are available for meeting the course requirements in agriculture as outlined in the Agricultural Education curriculum (School of Agriculture, pages 205-206) as well as the requirements in education.
- (3) Depending on the student's previous training and experience and his choice of courses, 70 to 75 term hours of special work in agriculture are desirable. The suggested sequence and distribution of courses are given in the Agricultural Education curriculum. Regardless of the department in which the student majors he should have a minimum of subject-matter courses in the respective departments as follows:
 - (a) 9 hours in Agricultural Engineering
 - (b) 7 hours in Animal Husbandry
 - (c) 6 hours in Dairy Husbandry
 - (d) 6 hours in Horticulture
 - (e) 6 hours in Farm Crops
 - (f) 9 hours in Farm Management and Agricultural Economics
 - (g) 6 hours in Soils
 - (h) 3 hours in Poultry Husbandry
 - (i) 3 hours in Veterinary Medicine

As early as possible in his college course the prospective teacher should advise with the head of the Department of Agricultural Education regarding the courses he should select in each of the fields of agriculture mentioned above and the various qualifications essential in teaching vocational agriculture. Students who have had Smith-Hughes agriculture in high school may have greater freedom in choice of electives.

Requirements in Education: The under-graduate courses in education and psychology required for teaching agriculture are described under the respective departments. The recommended sequence and distribution of these courses are as follows:

	Term hours		
	F	W	S
Junior Year¹			
² Educational Psychology (Ed 312).....	3		
Secondary Education (Ed 311).....		3	
Principles of Teaching (Ed 313).....			3
Oregon School Law and Oregon System of Education (Ed 316).....	2	or 2	or 2
Senior Year¹			
Methods in Agriculture (Ed 323).....	5		
³ Supervised Teaching (Ed 415).....		3	3
Methods in Teaching Evening and Part-Time Classes in Agriculture (Ed 328).....		2	
Rural Survey Methods (AEd 533).....			2
History of Oregon (Hst 377).....			3

Special Curricula in Agricultural Education will be outlined for students preparing to teach agriculture in city schools or a combination of subjects including agriculture, as requested in the smaller rural high schools.

General Electives. Certain courses are open to all students in agriculture and others who are interested in training for leadership in rural life. Special attention is called to Ed 341, Rural Education.

Graduate Study in Agricultural Education. Since the demands on teachers of agriculture the country over are becoming more exacting each year, graduate work in the fields of agriculture and education is desirable, and in certain states, including Oregon, is required for the regular high-school teaching certificate. Graduate work is usually necessary for those who desire to enter the field of supervision or teacher training. Programs of work leading to the master's degree are outlined by this department for students and teachers with approved standing.

DESCRIPTION OF COURSES⁴

UPPER-DIVISION COURSES

- AEd 401. **Research.** Terms and hours to be arranged.
- AEd 403. **Thesis.** Terms and hours to be arranged.
- AEd 405. **Reading and Conference.** Terms and hours to be arranged.
- AEd 407. **Seminar.** Two terms, hours to be arranged.

GRADUATE COURSES

- AEd 501. **Research.** Terms and hours to be arranged.
Problems in agricultural education. Professor Gibson.
- AEd 503. **Thesis.** Terms and hours to be arranged.
- AEd 505. **Reading and Conference.** Terms and hours to be arranged.
- AEd 507. **Seminar.** Terms and hours to be arranged.

¹The sequence of courses may be changed somewhat upon approval.

²Ed 312 must be preceded by Psy 211.

³Ed 415 may be taken any two terms.

⁴See also courses listed under Department of Education, especially Ed 321, 323, 328, 341.

AEd 516. Extension Course in Teacher Training. Any term, hours to be arranged.

Teachers of vocational agriculture in service who cannot be relieved of their professional duties to pursue courses that are offered in the summer session may make use of this course to continue their professional improvement. Personal conferences, follow-up instruction, and supervision, supplemented by correspondence and reports. Prerequisite: Ed 311, 312, 313, 323. Professor Gibson.

AEd 533. Rural Survey Methods. Spring term, 2 hours.

The technique of making agricultural and rural education surveys, together with methods of analyzing, interpreting, and using the material and results as a basis for evaluating and formulating programs in agricultural education. Field studies required. Open to graduates with teaching experience and seniors by special permission. Prerequisite: Ed 311, 312, 313, 323. Professor Gibson.

Commercial Education

IN conjunction with the Department of Secretarial Science the School of Education is able to meet the demand for well-prepared teachers of commercial branches in secondary schools. In the selection of their collegiate courses in both secretarial science and education, students should advise with the School of Education. The twenty-three term hours in education required for a certificate to teach in accredited high schools must be earned during the junior and senior years.

DESCRIPTION OF COURSES*

CEd 401. Research. Terms and hours to be arranged.

CEd 403. Thesis. Terms and hours to be arranged.

CEd 405. Reading and Conference. Terms and hours to be arranged.

CEd 407. Seminar. Terms and hours to be arranged.

GRADUATE COURSES

CEd 501. Research. Terms and hours to be arranged.

Problems in commercial education. Associate Professor Stutz.

CEd 503. Thesis. Terms and hours to be arranged.

CEd 505. Reading and Conference. Terms and hours to be arranged.

CEd 507. Seminar. Terms and hours to be arranged.

*See also courses in the Department of Education, especially Ed 329.

Home Economics Education

PROFESSIONAL training for prospective teachers of home economics is afforded by the Department of Home Economics Education, which is a joint department within both the School of Home Economics and the School of Education. Any student in the School of Home Economics having a scholarship record below average should confer with the Dean of the School of Home Economics before registering for teacher-training work.

DESCRIPTION OF COURSES*

UPPER-DIVISION COURSES

HEd 401. **Research.** Terms and hours to be arranged.

HEd 403. **Thesis.** Terms and hours to be arranged.

HEd 405. **Reading and Conference.** Terms and hours to be arranged.

HEd 407. **Seminar.** Terms and hours to be arranged.

HEd 411. **The Curriculum in Home Economics.** (G) Any term, 3 hours.

A study of the basic principles of curriculum construction applied to the organization of home-economics courses in secondary schools. Three recitations. Professor Blazier.

HEd 412. **Organization and Administration of Homemaking Education.** (G) Any term, 3 hours.

A study of typical organizations of homemaking departments on both the vocational and nonvocational basis with particular emphasis on equipment and management. Prerequisite: HEd 411.

HEd 413. **The Supervision of Home Projects.** (G) Spring term, 2 hours.

A study of the use of home projects in home economics instruction with field work in supervision of home projects. Prerequisite: HEd 411. One recitation; 1 two-hour laboratory period. Professor Blazier.

HEd 415. **Adult Education in Home Economics.** (G) Winter term, hours to be arranged.

Study of problems in the adult education program authorized under the Smith-Hughes Act. Field work in promoting, organizing, observing, and teaching adult classes. Prerequisite: HEd 412. Professor Blazier.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

HEd 501. **Research.** Terms and hours to be arranged.

Problems in home economics education. Professor Blazier.

*See also courses in the Department of Education, especially Ed 332.

HEd 503. Thesis. Terms and hours to be arranged.

HEd 505. Reading and Conference. Terms and hours to be arranged.

HEd 507. Seminar. Terms and hours to be arranged.

Industrial Education

JOINTLY with the Department of Industrial Arts, the Department of Industrial Education trains teachers and supervisors in industrial arts education and in trade and industrial (Smith-Hughes vocational) education. While the department is organized as a part of the School of Education, and offers no technical courses or curricula of its own, it makes use of such courses in other schools and departments as serve its needs. Special attention is called to the joint administration of curricula for teacher training in industrial arts education and in vocational trade and industrial education. The Department of Industrial Arts (School of Engineering) is responsible for the general curricula and technical training, while the Department of Industrial Education (School of Education) is responsible for the professional teacher-training courses and applied pedagogy.

Three Programs Available. Three intensities of training are open to those interested in Industrial Arts Education:

- (1) *The four-year professional-technical curriculum*, leading to the degree of Bachelor of Science in Industrial Arts. See pages 288-289 for a statement of requirements.
- (2) A *major norm*, completed in conjunction with major or minor norms in other fields, and leading to the degree of Bachelor of Science in Education. See pages 256-257 for basic requirements.
- (3) A *minor norm*, similar to a major but embracing a very much more limited program. Not recommended as a preparation for teaching.

The four-year professional-technical program, leading to the degree of Bachelor of Science in Industrial Arts, meets certification requirements of any state in the Union except those requiring graduate study as a prerequisite to certification. In such cases it furnishes an excellent foundation for the required graduate study, which may be completed at Oregon State College or elsewhere.

The major norm in Industrial Arts affords an opportunity for approximately half the training in technical industrial-arts subject matter that is available to the student in the four-year professional-technical program. It provides a program well suited to the needs of teachers in the smaller schools of the state. It is also adapted to the needs and interests of those who transfer to Oregon State College from normal schools, teachers colleges, and universities with two years of nontechnical training.

The minor norm is intended as a background for superintendents, principals, and others, who desire a speaking acquaintance with industrial-arts techniques and objectives, but who do not plan to teach the work except in a very limited program. Recommendation as an industrial arts teacher will not be given on the basis of a minor norm, except in very unusual cases.

Graduate Study in Industrial Education. Many school systems, and some state departments of education, now require all teachers to present graduate study or a master's degree as a principal prerequisite to a teaching credential for the secondary schools. Since the demands upon teachers the country over are becoming increasingly more exacting each year, graduate work in industrial education brings its proportional rewards and is usually necessary for those who desire to enter the fields of supervision, administration, or teacher-education. Programs of study leading to the degree of Master of Science or Master of Education are outlined by this department for industrial-arts or industrial-education students and teachers with approved graduate standing.

Special Certificate for Two-Year Vocational Teacher Training. Provision is also made for the issuance of special certificates upon the completion of a special two-year curriculum by those who are graduates of an accredited high school or who are past 21 years of age. These special certificates fall under two classifications, as follows:

- (1) To journeymen of the various trades who can meet the foregoing requirements and who desire to prepare themselves as trade teachers in accordance with the provisions of the Smith-Hughes Vocational Education Act.
- (2) To others, whether tradesmen or not, who can meet the foregoing requirements and who desire preparation for the teaching of related or general continuation subjects or both.

Extramural Courses. Through cooperation with the State Board for Vocational Education and through the establishment of extension centers, provision is made whereby certain courses of this department are offered as extramural courses. Classes are taught in Portland on occasion, and other extension centers may be established as need warrants. This is especially true of those courses for the training of journeymen as vocational-industrial teachers, for the training of teachers in general continuation subjects, and for graduate or undergraduate courses adaptable to the professional advancement of the teacher in service. For further information concerning extramural courses consult the head of the Department of Industrial Education.

DESCRIPTION OF COURSES*

UPPER-DIVISION COURSES

IEd 401. **Research.** Terms and hours to be arranged.

IEd 403. **Thesis.** Terms and hours to be arranged.

IEd 405. **Reading and Conference.** Terms and hours to be arranged.

IEd 407. **Seminar.** Terms and hours to be arranged.

IEd 470. **History of Manual and Industrial Education.** (G) Fall term, 3 hours.

Historical developments in manual and industrial education, from the philosophies of early leaders—Socrates, Plato, Rousseau, Pestaloz-

*See also courses in the Department of Education, especially Ed 330, 333, and courses in technical subject matter in the Department of Industrial Arts, pages 312-317.

zi, and Froebel to John Dewey—in terms of present-day objectives of industrial arts and vocational-industrial education. Prerequisite: Ed 313, 333.

IEd 471. Teaching Supplementary Subjects. (G) One term, 3 hours.

Selection of content in mathematics, drawing, and science, for presentation as supplementary subjects in the Smith-Hughes vocational program. Methods of organizing and presenting this subject matter in trade and industrial classes. Prerequisite: suitable preparation in mathematics, drawing, and science, and consent of instructor. Three recitations. Extramural or summer session.

IEd 472. Trade Analysis. (G) Fall term, 3 hours.

Intended for all teachers of shop subjects, vocational or nonvocational. The careful analysis of a trade into its unit operations and the formation of plans for teaching. Prerequisite: Ed 333 either prerequisite or parallel. Three recitations. Assistant Professor Meyer.

IEd 473. The General Shop and Its Problems. (G) Fall term, 2 hours.

A study of the "general shop" type of organization; the reasons for its existence; its advantages and limitations; its probable future; content and organization of subject matter and methods of presentation and class control for general shop teaching. Prerequisite: Ed 311, 312, 313, 330. Two recitations. Professor Cox.

IEd 474. Written and Visual Teaching Aids. (G) Winter term, 3 hours.

A study of types of instruction sheets and visual aids as a means to more efficient teaching in large and diversified classes. Evaluation of available materials, and practice in the construction of diagrams, charts, models, and instruction sheets. Prerequisite: IEd 473 or equivalent. Three recitations. Professor Cox.

IEd 475. Project Analysis and the Contract Plan. (G) Summer, 2 hours.

Selection and analysis of projects suitable for various types of shop teaching; study of the contract plan, with practice in the technique of preparing contracts and with suggestions for their use in industrial arts classes. Prerequisite: IEd 473 or equivalent. Two recitations. Professor Cox.

IEd 478. Cooperative Part-Time Education. (G) One term, 3 hours.

A study of Federal and state laws affecting part-time schools; types of pupils; desirable characteristics of teachers; work of the coordinator; individual practice and follow-up; cooperation with outside organizations. Prerequisite: Ed 488 or equivalent. Three recitations. Extramural or summer session.

IEd 479. Evening and Continuation Schools. (G) One term, 2 hours.

A study similar in nature to that of IEd 478, but with reference to the problems of evening and continuation schools and classes. Prerequisite: Ed 488 or consent of instructor. Two recitations. Extramural or summer session.

IEd 480. The Conference Method. (G) One term, 3 hours.

Designed to develop ability in conference leading. Includes the presentation of the technique of conference leading, reinforced with actual practice in conducting conferences or assigned topics. Prerequisite:

site: Ed 333 or consent of instructor. Two two-hour conference periods. Extramural or summer session. Associate Professor Adams.

IEd 481. Administration of Vocational Education. (G) One term, 3 hours.

A study of the problems of organization and administration of vocational education. Intended primarily for graduate students with extended teaching experience who are looking forward to service in the field of administration. Prerequisite: Ed 488 or equivalent. Three recitations. Extramural or summer session.

IEd 482. Supervision of Industrial Education. (G) One term, 2 hours.

Specific problems of supervision in the field of industrial education, with reference to both the trade and industrial and the industrial-arts education groups. Intended primarily for graduate students with extended teaching experience as a background for the discussion of these problems. Prerequisite: Ed 488, IEd 481. Two recitations. Extramural or summer session.

IEd 484. Industrial Education and Changing Conditions. (G) One term, 3 hours.

Current developments in industry, and trends in State and Federal programs for industrial education, with special reference to the administration of vocational-industrial education under the George-Deen Act. Prerequisite: Ed 488 or equivalent. Extramural or summer session. Associate Professor Adams.

IEd 485. Labor, Industry, and the Apprenticeship Program. (G) One term, 3 hours.

A study of the problems of labor and industry as they are reflected in the Federal and State apprenticeship program and the regulations relating thereto. Prerequisite: Ed 488 or equivalent. Extramural or summer session. Associate Professor Adams.

GRADUATE COURSES

Courses numbered 400-499 and designated (G) or (G)
may be taken for graduate credit.

IEd 501. Research. Terms and hours to be arranged.
Problems in industrial education.

IEd 503. Thesis. Terms and hours to be arranged.

IEd 505. Reading and Conference. Terms and hours to be arranged.

IEd 507. Seminar. Terms and hours to be arranged.

School of Engineering and Industrial Arts

Faculty

RICHARD HAROLD DEARBORN, A.B., E.E., Dean of the School of Engineering and Industrial Arts.

BESSIE MARIE SKAALE, B.S., Secretary to the Dean.

Chemical Engineering

GEORGE WALTER GLEESON, Ch.E., Professor of Chemical Engineering; Acting Head of Department.

EDWARD GIBSON LOCKE, Ph.D., Assistant Professor of Chemical Engineering.

Civil Engineering

CHARLES ARTHUR MOCKMORE, C.E., Ph.D., Professor of Civil Engineering; Head of Department.

JAMES RINALDO GRIFFITH, C.E., Professor of Structural Engineering.

BURDETTE GLENN, M.S., Professor of Highway Engineering.

SAMUEL MICHAEL DOLAN, C.E., Associate Professor of Civil Engineering.

GLENN WILLIS HOLCOMB, M.S., Associate Professor of Civil Engineering; Chairman of General Engineering.

IVAN FREDERIC WATERMAN, C.E., Associate Professor of Civil Engineering.

FRED MERRYFIELD, M.S., Associate Professor of Civil Engineering.

RUPERT ALRED WANLESS, B.S., Assistant Professor of Civil Engineering.

FRED GRANT ROBLEY, B.S., Instructor in Civil Engineering.

Electrical Engineering

FRED ORVILLE McMILLAN, M.S., Professor of Electrical Engineering; Head of Department.

LAWRENCE FISHER WOOSTER, M.S., Professor of Applied Electricity.

ARTHUR LEMUEL ALBERT, M.S., Associate Professor of Communication Engineering.

EUGENE CARL STARR, B.S., Associate Professor of Electrical Engineering.

HAROLD COCKERLINE, B.S., Assistant Professor of Electrical Engineering.

BEN HODGE NICHOLS, M.S., Assistant Professor of Electrical Engineering.

FREDERICK ALTON EVEREST, E.E., Instructor in Electrical Engineering.

HERBERT RAYMOND JOHNSTON, B.S., Graduate Assistant in Electrical Engineering.

Mechanical Engineering

- SAMUEL HERMAN GRAF, M.E., M.S., Professor of Mechanical Engineering; Head of Department.
- WALLACE HOPE MARTIN, M.E., M.S., Professor of Heat Engineering.
- MARK CLYDE PHILLIPS, B.M.E., Professor of Mechanical Engineering.
- CHARLES EDWIN THOMAS, M.M.E., Associate Professor of Engineering Materials.
- JAMES CAREY OTHUS, M.E., M.S., Associate Professor of Mechanical Engineering.
- BENJAMIN FRANKLIN RUFFNER, Aero.E., M.S., Associate Professor of Aeronautical Engineering.
- ROBERT EDWARD SUMMERS, M.S., Assistant Professor of Mechanical Engineering.
- WILLIAM HOWARD PAUL, M.S., Assistant Professor of Mechanical Engineering.
- EARL CLARK WILLEY, B.S., Assistant Professor of Mechanical Engineering.
- JAMES LYLE MERSHON, B.S., Graduate Assistant in Mechanical Engineering.

Mining Engineering

- JAMES HERVEY BATCHELLER, B.S. (Min.E), Professor of Mining Engineering; Head of Department.

Industrial Arts

- GEORGE BRYAN COX, B.S., Professor of Industrial Arts; Head of Department; Director of Engineering Shops.
- EDWIN DAVID MEYER, B.S., Assistant Professor of Industrial Arts.
- ROBERT CHARLES RHYNEARSON, M.S., Assistant Professor of Industrial Arts.
- WILLIAM HAMILTON HORNING, Assistant Professor of Industrial Arts.
- DONALD LYMAN MASON, B.S., Graduate Assistant in Industrial Arts.
- MARION TASKER WEATHERFORD, B.S., Graduate Assistant in Industrial Arts.
- ALFRED CLINTON HARWOOD, Mechanician.

Curricula in Engineering and Industrial Arts*B.S., M.S., Ch.E., C.E., E.E., M.E. Degrees*

Chemical Engineering
Civil Engineering
Electrical Engineering

Mechanical Engineering
Industrial Arts

FOUR-YEAR curricula leading to the degree of Bachelor of Science are offered in the School of Engineering as follows: a general curriculum in Chemical Engineering with an option in Industrial Chemistry; a general curriculum in Civil Engineering with an option in Highway Engineering; a general power curriculum in Electrical Engineering with an option in Communications; a general curriculum in Mechanical Engineering with an option in Aeronautical Engineering; curricula in Industrial Arts Education and Industrial Administration. In Civil, Electrical, and Mechanical Engineering a Business minor is offered.

Requirements for Graduation. In each of the four-year curricula offered in the School of Engineering the fulfillment of the Lower-Division group requirements for technical and professional schools is prescribed.

In each of the four-year engineering curricula the student must complete the upper-division work as outlined or elected in the Engineering School with the approval of the department head and the dean.

A total of 204 term hours including the required work in physical education and military science is required for the bachelor's degree.

The requirements for the M.S., Ch.E., C.E., E.E., and M.E. degrees are printed under GRADUATE DIVISION.

Curricula Organization. The curricula offered in the Engineering School are organized into the following curricular groups:

- A. Chemical Engineering and Industrial Chemistry including a common lower-division curriculum and differentiated options in the junior and senior years.
- B. Civil, Electrical, and Mechanical Engineering including a common freshman curriculum and differentiated sophomore and upper-division curricula in these three fields.
- C. Industrial Arts Education and Industrial Administration including a common lower-division curriculum and differentiated upper-division curricula in these two fields.

Engineering curricula are organized about four general fields of knowledge or training, and the sequence of courses in each curriculum is determined for the purpose of developing strong continuity in the various fields. The four fields are: (1) general engineering science and technology; (2) mathematics and physical science; (3) language, literature, English, and social science; and (4) military education, physical education, and free electives.

Exploratory Contacts. The lower-division curricula in so far as possible have been arranged to afford early contact with engineering training for those who are undetermined in the selection of a major engineering field.

Curricular groups A and B as listed above are differentiated by their primary foundations in chemistry and physics. An undecided student who desires exploratory contact with chemical engineering should register in curricular group A, for should he decide after the first term to investigate curricular group B, he may do so without increasing his undergraduate period of training. One who, on the contrary, explores curricular group B and decides at the end of his freshman year to transfer to curricular group A will find his training necessarily extended beyond four years.

A. Chemical Engineering and Industrial Chemistry

	Term hours		
	F	W	S
Freshman Year			
Chemical Engineering Survey (ChE 111).....	1	---	---
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
Principles of Chemistry (Ch 201, 202, 203).....	4	4	4
Engineering Physics (Ph 111, 112, 113).....	3	3	3
English Composition (Eng 111, 112, 113).....	3	3	3
General Hygiene (PE 150).....	1	1	1
Military Science.....	1	1	1
¹ Physical Education.....	1	1	---
	17	16	17

¹General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education.

	Term hours		
	F	W	S
Sophomore Year			
Chemical Technology (ChE 211, 212)	2	2	—
Industrial Stoichiometry (ChE 213)	—	—	2
Quantitative Analysis (Ch 231, 232)	—	4	4
Advanced Qualitative Analysis (Ch 233)	4	—	—
Introduction to Calculus (Mth 221, 222)	4	4	—
Engineering Drawing (GE 111, 112)	—	2	2
Machine Shop Practice (IA 260) or Forging and Welding (IA 250)	2	—	—
Military Science	1	1	1
Physical Education	1	1	1
¹ Electives	3	3	5
	17	17	15

Junior Year**NORM**

Industrial Chemical Calculations (ChE 311, 312, 313)	3	3	3
Organic Chemistry (Ch 430, 431, 432)	4	4	4
Physical Chemistry (Ch 440, 441, 442)	4	4	4
² Electives	3	3	3
	14	14	14

CHEMICAL-ENGINEERING OPTION

Junior-Year Norm	14	14	14
Mechanics (Statics) (ME 212)	3	—	—
Materials of Engineering (ME 316)	—	3	—
Strength of Materials (ME 311)	—	—	3
	17	17	17

INDUSTRIAL-CHEMISTRY OPTION

Junior-Year Norm	14	14	14
Physical Measurements (Ph 321, 322, 323)	3	3	3
	17	17	17

Senior Year**NORM**

Industrial Chemistry (ChE 421, 422)	3	3	—
Unit Processes (ChE 423)	—	—	3
Industrial Chemical Laboratory (ChE 432)	—	3	—
Chemical Plant Design (ChE 433)	—	—	3
³ Electives	6	6	6
	9	12	12

CHEMICAL-ENGINEERING OPTION

Senior-Year Norm	9	12	12
Unit Operations (ChE 411, 412, 413)	3	3	3
Unit Operations Laboratory (ChE 414, 415)	3	—	3
Industrial Electricity (EE 351, 352)	3	3	—
	18	18	18

INDUSTRIAL-CHEMISTRY OPTION

Senior-Year Norm	9	12	12
Research (ChE 401)	3	3	3
Chemical Thermodynamics (Ch 445, 446)	3	3	—
Electrochemistry (Ch 447)	—	—	3
Metallography and Pyrometry (ME 481)	3	—	—
	18	18	18

¹Elect First-Year German (Ger 1, 2, 3, for Engineers only) or Social Science.²Advanced Military Training, Scientific German (Ger 320, 321, 322), or Social Science.³Elect Social Science (9 term hours) if not already completed.

B. Civil, Electrical, and Mechanical Engineering

COMMON FRESHMAN YEAR

	Term hours		
	F	W	S
Engineering Problems (GE 101, 102, 103).....	2	2	2
Engineering Drawing (GE 111, 112, 113).....	2	2	2
Unified Mathematics (Mth 101, 102, 103).....	4	4	4
Engineering Physics (Ph 111, 112, 113).....	3	3	3
English Composition (Eng 111, 112, 113).....	3	3	3
Military Science.....	1	1	1
¹ Physical Education.....	1	1	1
	16	16	16

CIVIL ENGINEERING

Sophomore Year

Plane Surveying (CE 221, 222, 223).....	5	3	3
Descriptive Geometry (CE 211).....	3	---	---
Field Curves (CE 231), Curves and Earthwork (CE 232).....	---	3	3
Mechanics (CE 212, 213).....	---	3	3
Introduction to Calculus (Mth 221, 222).....	4	---	4
General Sociology (Soc 212).....	---	3	---
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
Military Science.....	1	1	1
Physical Education.....	1	1	1
	17	17	18

Junior Year

NORM

Strength of Materials (CE 351, 352).....	3	3	---
Structural Analysis (CE 382).....	---	4	---
Reinforced Concrete (CE 383).....	---	---	4
Hydraulics (CE 311, 312), Hydraulic Machinery (CE 313).....	3	3	3
Roads and Pavements (CE 333).....	---	---	4
Materials of Engineering (ME 316).....	3	---	---
Engineering Geology (G 324).....	3	---	---
Outlines of Economics (Ec 212).....	---	---	3
American National Government (PS 212).....	---	3	---
	12	13	14

GENERAL AND HIGHWAY OPTIONS

Junior-Year Norm.....	12	13	14
Electives.....	6	4	3
	18	17	17

GENERAL OPTION, WITH BUSINESS MINOR

Junior-Year Norm.....	12	13	14
Time and Motion Studies (IA 361).....	---	2	---
Accounting for Technical Students (BA 385, 386).....	3	3	---
Analysis of Financial Statements (BA 213).....	---	---	3
Extempore Speaking (Sp 111).....	3	---	---
	18	18	17

Senior Year

NORM

Structural Engineering (CE 481), Structural Design (CE 482).....	4	4	---
Estimating and Cost Analysis (CE 460).....	---	---	3
Masonry and Foundations (CE 472).....	---	4	---
Sanitary Engineering (CE 412).....	3	---	---
Contracts and Specifications (CE 427).....	---	---	3
Industrial Electricity (EE 351).....	---	3	---
Steam, Air, and Gas Power (ME 345).....	---	---	3
	7	11	9

GENERAL OPTION

Senior-Year Norm.....	7	11	9
Seminar (CE 407).....	1	1	1
Building Design (CE 483).....	---	---	4
Hydrology (CE 411).....	3	---	---
Structural Materials Laboratory (ME 415).....	---	3	---
Electives.....	6	3	3
	17	18	17

¹General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education.

	HIGHWAY OPTION		
	Term hours		
	F	W	S
Senior-Year Norm	7	11	9
Seminar (CE 407).....	1	1	1
Highway Engineering (CE 421,422).....	4	3	---
Economics of Highway Transportation (CE 425).....	---	---	3
Highway Materials Laboratory (ME 414).....	3	---	---
Electives	3	3	3
	18	18	16

	GENERAL OPTION, WITH BUSINESS MINOR		
	Term hours		
	F	W	S
Senior-Year Norm	7	11	9
Hydrology (CE 411).....	3	---	---
Seminar (CE 407).....	---	1	---
Business Law (BA 256, 257, 258).....	3	3	3
Personnel Management (BA 414).....	4	---	---
Merchandising and Selling (SS 436).....	---	3	---
Money and Banking (Ec 413).....	---	---	4
	17	18	16

STRUCTURAL DESIGN IN ARCHITECTURE OPTION

B.S. Degree at University

Freshman and Sophomore Years (University)

The freshman and sophomore years in this curriculum are taken at the University in the School of Architecture and Allied Arts. It is recommended that the student in his freshman and sophomore years take the following courses, with such additions as may best fit individual cases: graphics, drawing or architectural modeling, architectural design, construction, unified mathematics, general physics, calculus, and architectural history. Students also take English composition, physical education, and the lower-division group requirements in arts and sciences.

	Junior Year (State College)		
	Term hours		
	F	W	S
Plane Surveying (CE 221, 222, 223).....	5	3	3
Strength of Materials (CE 351, 352).....	3	3	---
Structural Analysis (CE 382).....	---	4	---
Reinforced Concrete (CE 383).....	---	---	4
Materials of Engineering (ME 316).....	3	---	---
Structural Materials Laboratory (ME 415).....	---	3	---
Practical Electricity (IA 370).....	3	---	---
Welding Practice (IA 350).....	---	---	1
Forging and Welding (IA 250).....	---	---	2
Electives	3	3	7
	17	16	17

	Senior Year (State College)		
	Term hours		
	F	W	S
Structural Engineering (CE 481), Structural Design (CE 482).....	4	4	---
Building Design (CE 483).....	---	---	4
Masonry and Foundations (CE 472).....	---	4	---
Structural Analysis (CE 485).....	---	3	---
Hydraulics (CE 311).....	3	---	---
Estimating and Cost Analysis (CE 460).....	---	---	3
Steam, Air, and Gas Power (ME 345).....	---	---	3
Heating and Air Conditioning (ME 461).....	---	---	3
Industrial Electricity (EE 351).....	---	3	---
Electives	10	3	3
	17	17	16

ELECTRICAL ENGINEERING

Sophomore Year

	Term hours		
	F	W	S
Introduction to Electrical Engineering (EE 201, 202, 203).....	4	4	4
Plane Surveying (CE 226).....	---	---	3
Machine Shop Practice (IA 260).....	2	---	---
Forging and Welding (IA 250).....	---	2	---
Foundry Practice (IA 240).....	---	---	2
¹ Introduction to Calculus (Mth 221, 222).....	4	4	---
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
Elementary Journalism (J 111).....	3	---	---
Extempore Speaking (Sp 111).....	---	3	---
American National Government (PS 212).....	---	---	3
Military Science	1	1	1
Physical Education	1	1	1
	18	18	17

¹It is suggested that students desiring advanced mathematics substitute Mth 201, 202, 203.

	Term hours		
	F	W	S
Junior Year			
NORM			
Electrical Engineering (EE 311, 312, 313).....	3	3	3
Electrical Engineering Laboratory (EE 321, 322, 323).....	3	3	3
Mechanics (ME 212, 213).....	3	3	---
Materials of Engineering (ME 316).....	---	---	3
Heat Power Engineering (ME 331, 332).....	3	3	---
Hydraulics (CE 321).....	---	---	3
	12	12	12
POWER AND COMMUNICATION OPTION			
Norm.....	12	12	12
Accounting for Technical Students (BA 385).....	3	---	---
Outlines of Economics (Ec 212).....	---	---	3
¹ Electives.....	3	6	3
	18	18	18
BUSINESS MINOR			
Norm.....	12	12	12
Accounting for Technical Students (BA 385, 386).....	3	3	---
Analysis of Financial Statements (BA 213).....	---	---	3
Electives.....	2	2	2
	17	17	17
Senior Year			
NORM			
Electrical Engineering (EE 411, 412, 413).....	3	3	3
Electrical Design (EE 414, 415, 416).....	1	1	1
Seminar (CE 407).....	1	1	1
	5	5	5
POWER OPTION			
Senior-Year Norm.....	5	5	5
Electrical Engineering Laboratory (EE 421, 422, 423).....	3	3	3
Electrical Transients (EE 451).....	3	---	---
High-Voltage Engineering (EE 452, 453).....	---	3	3
Electives.....	5	5	6
	16	16	17
COMMUNICATION OPTION			
Senior-Year Norm.....	5	5	5
Communication Engineering (EE 461, 462, 463).....	3	3	3
Vacuum Tubes and Circuits (EE 464, 465).....	3	3	---
Engineering of Sound Systems (EE 466) or Radio Engineering (EE 467).....	---	---	3
Radio Engineering Practices ² (EE 481, 482, 483) or electives.....	1	1	1
¹ Electives.....	4	4	5
	16	16	17
BUSINESS MINOR			
Senior-Year Norm.....	5	5	5
Electrical Engineering Laboratory (EE 421, 422, 423).....	3	3	3
Vacuum Tubes and Circuits (EE 464).....	3	---	---
Illumination (EE 431, 432).....	---	3	3
Merchandising and Selling (SS 436).....	---	3	---
Business Law (BA 256, 257, 258).....	3	3	3
Outlines of Economics (Ec 212).....	3	---	---
Money and Banking (Ec 413).....	---	---	4
	17	17	18
MECHANICAL ENGINEERING			
Sophomore Year			
Heat Engineering (ME 221, 222, 223).....	3	3	3
Descriptive Geometry (ME 211).....	3	---	---
Mechanics (ME 212, 213).....	---	3	3
Plane Surveying (CE 226).....	3	---	---
Foundry Practice (IA 240).....	2	---	---
Machine Shop Practice (IA 260).....	---	2	---
Forging and Welding (IA 250).....	---	---	2
Elementary General Chemistry (Ch 101, 102, 103).....	3	3	3
Introduction to Calculus (Mth 221, 222).....	---	4	4
Military Science.....	1	1	1
Physical Education.....	1	1	1
	16	17	17

¹Students selecting the Communication Option are required to take Radio Communication (Ph 331, 332, 333) in either the junior or the senior year.

²Students taking radio engineering (EE 467, 481-483) should elect Radio Speaking (Sp 234, 235, 236).

Junior Year

NORM

	Term hours		
	F	W	S
Heat Engineering (ME 321, 322, 323).....	3	3	3
Mechanical Laboratory (ME 351, 352, 353).....	2	2	2
Strength of Materials (ME 311).....	3	---	---
Mechanism (ME 312).....	---	3	---
American National Government (PS 212).....	3	---	---
Outlines of Economics (Ec 211).....	---	4	---
Money and Banking (Ec 413).....	---	---	4
	11	12	9

GENERAL OPTION

Junior-Year Norm.....	11	12	9
Materials of Engineering (ME 316).....	---	---	3
Hydraulics (CE 341), Hydraulic Machinery (CE 342).....	3	3	---
Accounting for Technical Students (BA 385).....	---	---	3
Electives.....	4	3	3
	18	18	18

AERONAUTICAL OPTION

Junior-Year Norm.....	11	12	9
Materials of Engineering (ME 316).....	3	---	---
Aerodynamics (ME 342).....	---	3	---
Aeropropulsion (ME 343).....	---	---	3
Hydraulics (CE 341).....	---	---	3
Electives.....	4	3	3
	18	18	18

GENERAL OPTION, WITH BUSINESS MINOR

Junior-Year Norm.....	11	12	9
Materials of Engineering (ME 316).....	---	---	3
Hydraulics (CE 341), Hydraulic Machinery (CE 342).....	3	3	---
Accounting for Technical Students (BA 385, 386).....	3	3	---
Analysis of Financial Statements (BA 213).....	---	---	3
Elective.....	---	---	3
	17	18	18

Senior Year

NORM

Machine Design (ME 411, 412).....	3	3	---
Mechanical Laboratory (ME 451, 452).....	2	2	---
Modern Materials (ME 421).....	3	---	---
Industrial Engineering (ME 473).....	---	---	3
Seminar (ME 407).....	---	---	1
	8	5	4

GENERAL OPTION

Senior-Year Norm.....	8	5	4
Machine Design (ME 413).....	---	---	3
Power-Plant Engineering (ME 431, 432).....	3	3	---
Mechanical Laboratory (ME 453).....	---	---	2
Gas Technology (ME 422).....	---	3	---
Fuel Technology (ME 423).....	---	---	3
Industrial Electricity (EE 351, 352, 353).....	3	3	3
Electives.....	3	3	3
	17	17	18

¹Students selecting the Aeronautical Option should take Differential Equations (Mth 421, 422).

²Students interested in automotive engineering may substitute ME 491, 492, and 493 for ME 431, 432, and 453.

	AERONAUTICAL OPTION		
	Term hours		
	F	W	S
Senior-Year Norm	8	5	4
Airplane Design (ME 441, 442, 443)	3	3	3
Advanced Aerodynamics (ME 446)	---	---	3
Structural Analysis (CE 382, 485)	4	3	---
Electricity in Aeronautics (EE 355)	---	3	3
Airway Communication Systems (EE 356)	---	---	3
Electives	3	3	4
	18	17	17

GENERAL OPTION, WITH BUSINESS MINOR

Senior-Year Norm	8	5	4
Gas Technology (ME 422)	---	3	---
Industrial Electricity (EE 351, 352, 353)	3	3	3
Business Law (BA 256, 257, 258)	3	3	3
Merchandising and Selling (SS 436)	---	3	---
General Advertising (SS 439)	---	---	3
Investments (BA 463)	---	---	3
Electives (technical)	4	---	2
	18	17	18

C. Industrial-Arts Education and Industrial Administration

LOWER-DIVISION CURRICULUM

	Freshman Year		
	Term hours		
	F	W	S
Pattern Making (IA 111)	3	---	---
Methods in Woodworking (IA 112, 113)	---	3	3
Foundry Practice (IA 141)	3	---	---
Forging and Welding (IA 152)	---	3	---
Machine Shop (IA 163)	---	---	3
Engineering Drawing (GE 111, 112, 113)	2	2	2
English Composition (Eng 111, 112, 113)	3	3	3
Lower-Division Courses in Science Group	3-4	3-4	3-4
Military Science	1	1	1
¹ Physical Education	1	1	1
	16-17	16-17	16-17

Sophomore Year

Machine and Tool Maintenance (IA 225 or 265)	2	---	---
Lower-Division Drawing (AA 291)	3	---	---
Lower-Division Decorative Design (AA 295)	---	3	---
Sheet-Metal Work (IA 380) or Lower-Division Decorative Design (AA 295—second course) ²	---	---	3
House Planning and Architectural Drawing (AA 178)	3	---	---
House Planning and Architectural Drawing (AA 179) or Descriptive Geometry (CE 211)	---	3	---
House Planning and Architectural Drawing (AA 180) or Machine Drawing (IA 263)	---	---	3
Modern Governments (PS 201, 202)	4	4	---
Outlines of Psychology (Psy 211) ³ or Outlines of Economics (Ec 211) ⁴	---	---	6-4
Business English (Eng 217) or Elementary Journalism (J 111)	3	---	---
Extempore Speaking (Sp 111)	---	3	---
Parliamentary Procedure (Sp 231)	---	---	3
Military Science	1	1	1
Physical Education	1	1	1
Technical electives	---	2	0-2
	17	17	17

¹General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education.

²Technical option to be selected according to intended goal.

³Required of students majoring in industrial-arts education.

⁴Required of students majoring in industrial administration.

INDUSTRIAL-ARTS EDUCATION

Junior Year

	Term hours		
	F	W	S
Millwork—Machine Woodwork (IA 311) <i>or</i> Production Machine Work (IA 363)	3	—	—
Heat Treating (IA 354) <i>or</i> Carpentry (IA 333)	(2)	<i>or</i> 3	—
Wood and Metal Finishing (IA 316)	—	—	2
Automobile Mechanics (AE 312, 313, 314)	3	3	3
Educational Psychology (Ed 312)	3	—	—
Industrial Arts Organization (Ed 330)	—	2	—
Methods and Materials in Industrial Arts (Ed 333)	—	—	3
Secondary Education (Ed 311)	3	—	—
Principles of Teaching (Ed 313)	—	3	—
Measurement in Secondary Education (Ed 416)	—	—	3
Technical electives	2-0	3-5	3
General electives	3	3	3
	17	17	17

Senior Year

Practical Electricity (IA 370)	3	—	—
Stagecraft and Lighting (Sp 244) <i>or</i> Public Information Methods (J 313)	—	3	—
Materials of Engineering (ME 316) <i>or</i> Commercial Woods (WP 334)	—	—	3
The General Shop and Its Problems (IEd 473)	2	—	—
Written and Visual Teaching Aids (IEd 474)	—	3	—
Shop Planning and Organization (IA 411)	—	—	3
Trade Analysis (IEd 472)	3	—	—
Supervised Teaching (Ed 415)	—	3	3
Technical electives	3	2	2
History of Manual and Industrial Education (IEd 470)	3	—	—
History of Oregon (Hst 377)	—	3	—
Oregon School Law and Oregon System of Education (Ed 316)	—	—	2
Electives	3	3	4
	17	17	17

INDUSTRIAL ADMINISTRATION¹

Junior Year

Millwork—Machine Woodwork (IA 311) <i>or</i> Production Machine Work (IA 363)	3	—	—
Time and Motion Studies (IA 361)	—	2	—
Materials of Engineering (ME 316)	—	3	—
Practical Electricity (IA 370)	3	—	—
Metallography and Pyrometry (ME 481) <i>or</i> Commercial Woods (WP 334)	—	—	3
Elements of Organization and Production (BA 221)	4	—	—
Elements of Finance (BA 222)	—	4	—
Elements of Marketing (BA 223)	—	—	4
Accounting for Technical Students (BA 385, 386), Cost Accounting for Industrialists (BA 494)	3	3	3
Technical electives	1	2	4
General electives	3	3	3
	17	17	17

Senior Year

Trade Analysis (IEd 472)	3	—	—
Seminar (IA 407)	—	2	—
Production Engineering (IA 462, 463)	—	3	3
Personnel Management (BA 414)	4	—	—
Business Statistics (BA 470)	—	3	—
Money and Banking (Ec 413)	—	—	4
Labor Problems (Ec 425)	4	—	—
Business Law (BA 256, 258)	—	4	4
Technical electives	3	2	3
General electives	3	3	3
	17	17	17

¹See statement under Department of Industrial Arts of objectives controlling the make-up of curricula in industrial-arts education and industrial administration, and for the types of training for which they are designed (pages 312-313).

General Engineering

ENGINEERING courses required in the common freshman year for civil, electrical, and mechanical engineering are grouped in the Department of General Engineering. The courses are taught by members of the civil, mechanical, and electrical-engineering departmental staffs, who for purposes of coordination and unified effort work as a committee in planning and supervising the instruction.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

GE 101, 102, 103. Engineering Problems. Three terms, 2 hours each term.

Lectures and problems dealing in an elementary way with the general field of engineering. The purpose of the instruction is fourfold: first, to inform the student concerning the problems and occupations in the various engineering fields; second, to unify the purpose of all courses in the engineering curricula; third, to assist the student in the acquisition of elementary knowledge in the fields of civil, mechanical, and electrical engineering; and fourth, to train the student in engineering habits of thinking and expression. Parallel with Ph 111, 112, 113. One lecture; 2 two-hour problem periods.

GE 111. Engineering Drawing. Fall or winter term, 2 hours.

Training in the use of drafting instruments and in the art of lettering, and an introduction to the study of the elementary principles of orthographic projection. Intended for students who have had no previous college training in mechanical drawing. The instruments and materials for this course cost about \$17.00. The instruments are used in all later drawing courses. Three two-hour drawing periods.

GE 112. Engineering Drawing. Winter or spring term, 2 hours.

Continuation of the study of orthographic projection; methods of dimensioning and checking drawings; use of auxiliary planes of projection; section drawings; study of isometric drawing; practice in making working drawings of machine parts; making tracings from drawings. Prerequisite: GE 111 or equivalent. Three two-hour drawing periods.

GE 113. Engineering Drawing Spring term, 2 hours

A continuation of GE 112; also freehand orthographic and perspective sketching; practical application of drawing principles to working drawings; use of charts and diagrams. Prerequisite: GE 112. Three two-hour drawing periods.

Chemical Engineering

THE curriculum in chemical engineering is designed to give a broad training in principles fundamental to chemical industry. It aims to lay a foundation for responsible work in laboratory or plant, and to prepare the student for graduate work in either chemistry or chemical engineering. To this end the student is first given a thorough grounding in chemistry, mathematics, and physics. This is followed by professional work which falls into three groups: (1) courses which give a thorough

knowledge of the fundamental principles of chemistry; (2) courses in mechanical and electrical engineering subjects; and (3) courses which deal with chemical engineering as a separate entity. The last group includes a thorough study of the unit operations of chemical engineering and their applications to chemical processes.

The curriculum is intended to give a broad training in fundamentals, rather than specialized training for a narrow field. A corresponding breadth of opportunity is presented, comprising the entire field of chemical industry. Many positions of responsibility, particularly in research and development work, however, demand a more extensive training than can be given in four years, and students with the proper qualifications are strongly advised to pursue graduate work.

The option in industrial chemistry is intended for those students who wish to emphasize the chemical rather than the engineering aspects of their training, and opportunity for this is provided through a sequence of selected courses.

Equipment. The Chemical-Engineering Department is housed in the Mines Building, where laboratory facilities have been provided for instruction in both chemical engineering and industrial chemistry. Considerable equipment is available for studies in the unit operations of chemical engineering, including many of the instruments commonly employed to obtain engineering data. An adequate supply of the usual reagents and chemical apparatus is on hand for laboratory courses and research.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

ChE 111. Chemical Engineering Survey. Fall term 1 hour.

A discussion of the profession of chemical engineering with emphasis upon engineering procedures and methods. One lecture; 1 two-hour computation period.

ChE 211, 212. Chemical Technology. Fall and winter terms, 2 hours each term.

An introduction to the topics fundamental to chemical engineering, including graphical analysis, instrumentation, control of process variables, and applications in the solution of typical problems. One lecture; one recitation.

ChE 213. Industrial Stoichiometry. Spring term, 2 hours.

Elementary quantitative interpretation and application of data to various industrial chemical processes. One lecture; one recitation.

UPPER-DIVISION COURSES

ChE 311, 312, 313. Industrial-Chemical Calculations. Three terms, 3 hours each term.

A study of the application of chemical and chemical-engineering principles to industrial processes and problems. Three lectures; 1 two-hour computation period.

ChE 401 Research. Terms and hours to be arranged.

Fundamental training in the accepted methods of conducting a scientific investigation. Term report required.

- ChE 403. **Thesis.** Terms and hours to be arranged.
Elective upon approval for undergraduates.
- ChE 405. **Reading and Conference.** Terms and hours to be arranged.
Advanced problems dealing with selected unit operations or industrial chemical processes. Term report required.
- ChE 407. **Seminar.** Any term, 1 hour.
Reports on selected topics. One period.
- ChE 411, 412, 413. **Unit Operations.** (g) Three terms, 3 hours each term.
Quantitative treatment of the unit operations of chemical engineering, involving the application of the fundamental principles of the operations to typical engineering problems. Two lectures, 1 two-hour computation period.
- ChE 414, 415. **Unit Operations Laboratory.** (g) Fall and spring terms, 3 hours each term.
A laboratory study of selected unit operations of chemical engineering. One lecture; 1 four-hour laboratory period.
- ChE 421, 422. **Industrial Chemistry.** (g) Fall and winter terms, 3 hours each term.
A study of the more important industrial chemical processes with particular emphasis upon those industries of the West Coast. Lectures and assigned references. Three periods.
- ChE 423. **Unit Processes.** (g) Spring term, 3 hours.
A fundamental study of the more common unit processes of chemical industry with particular attention to types of equipment, methods of control, and evaluation of process variables. Lectures and assigned references. Three periods.
- ChE 432. **Industrial Chemical Laboratory.** (g) Winter term, 3 hours.
Study of the small-scale development of an industrial process by laboratory experimentation. Particular consideration is given the economic factors, the selection and arrangement of equipment, materials of construction, and the variables involved. Term report required. One lecture, 1 four-hour laboratory period.
- ChE 433. **Chemical Plant Design.** (g) Spring term, 3 hours.
Problems in the design of a chemical plant or chemical-engineering equipment. Emphasis is placed upon application of the fundamentals of mechanics, materials of engineering, and the unit operations to a selected problem. Design room procedures are stressed. Term report required. One lecture; 2 two-hour computation periods.
- ChE 442. **Economic Balance.** (G) Winter term, 3 hours.
The solution of typical engineering and industrial-chemistry problems from the standpoint of economic considerations. Optimum design and optimum operating conditions are determined from a study of costs and possible economic return. Three lectures.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G)
may be taken for graduate credit.

- ChE 501. **Research.** Terms and hours to be arranged.
The investigation of a selected problem in chemical engineering or industrial chemistry for an advanced degree.

ChE 503. **Thesis.** Terms and hours to be arranged.

Research and preparation of a thesis for an advanced degree.

ChE 505. **Reading and Conference.** Terms and hours to be arranged.

Conference and problems dealing with the unit operations of chemical engineering or industrial chemical processes at graduate level. Reference work required.

ChE 507. **Seminar.** Terms and hours to be arranged.

Civil Engineering

THE curriculum in civil engineering is organized to train young men in those fundamental principles of engineering science and technology which are basic and common to the fields of geodesy and surveying, highways, railroads, irrigation and drainage, river and harbor improvements, structures, hydraulics, sanitation, and municipal engineering, and to permit some latitude of choice in the three general fields of structures, hydraulics, and highways. The civil engineer's problems in the development of the Northwest are directly related to the structural, hydraulic, and highway fields. The curriculum is planned to prepare graduates for advancement to responsible positions in these fields.

Highway engineering is offered as an option in the civil-engineering curriculum and is differentiated from that curriculum only in the senior year. The purpose of these courses is to meet the demand in this state and throughout the Northwest for men equipped to take charge of road and street construction and maintenance work.

Thorough theoretical instruction is accompanied by as much laboratory and field practice as possible. In the study of highways, special reference is made to the conditions and needs of Oregon.

Equipment. The department is provided with quarters and equipment for adequately and thoroughly performing its work. The third floor of Aperson Hall is devoted to classrooms and drawing rooms. A large room on the ground floor of Industrial Arts Building houses the surveying instruments, and the entire middle third of the Engineering Laboratory is occupied by hydraulic equipment. The equipment of the instrument room consists of 25 transits, 25 levels, and 7 plane-tables; together with the necessary auxiliary supply of stadia, level, and line rods, hand levels, tapes, and other minor equipment.

The equipment of the hydraulic laboratory is adequate for the execution of all basic experimental work in the field of hydraulic engineering. The machinery installed is modern and complete. It is extensive enough so that all the theoretical studies of the classroom may be verified by the performance of machines in the laboratory. Classified upon the factors of quantity of water, pressure under which water is available, square feet of floor space, and value of equipment, it ranks among the leading hydraulic laboratories of the United States. The major items of the equipment are two direct-connected 8-inch centrifugal pumps operated by 40-horse-power motors; a 35-inch Pelton impulse wheel with oil-pressure governor; a 14-inch spiral-cased Francis-type reaction turbine with Pelton governor; a large pressure tank five feet in diameter by twenty feet high; and two 16,000-pound capacity weighing tanks mounted upon direct reading scales.

The Department of Mechanical Engineering is equipped with modern testing laboratories, including the best cement and highway-testing machinery, thus affording students in civil engineering the opportunity of studying by direct observation and experiment the strength and properties of the various engineering materials.

The structural division is equipped with the most modern apparatus for the mechanical analysis of statically indeterminate structures including a twelve-gage, three-microscope Beggs Deformeter set, and a Gottchalk Continostat.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

- CE 211. **Descriptive Geometry.** Fall or winter term, 3 hours.
A study of the principles of orthographic projection and of their applications to the graphical solution of engineering problems. Prerequisite: GE 112. One recitation; 2 three-hour drawing periods.
- CE 212. **Mechanics (Statics).** Winter term, 3 hours.
Applied mechanics for engineering students; forces and force systems with reference to the equilibrium of rigid bodies, including simple framed structures; methods of finding centers of gravity and moments of inertia and their practical applications; numerous problems having engineering application. Prerequisite: differential calculus. One recitation; 2 two-hour computing periods.
- CE 213. **Mechanics (Dynamics).** Winter or spring term, 3 hours.
A continuation of CE 212 dealing with principles and problems in kinetics; force as a factor causing motion; work, energy, friction, and impact studied and illustrated by means of numerous problems. Prerequisite: CE 212. One recitation; 2 two-hour computing periods.
- CE 221. **Plane Surveying.** Fall or spring term, 5 hours.
Theory, use, and adjustment of level and transit. Measurement and subdivision of land. Two recitations; 3 three-hour periods field work.
- CE 222. **Plane Surveying.** Winter term, 3 hours.
A continuation of CE 221. A study of surveying problems as related to subdivision of public land, farm and city surveying; special problems and methods; further practice in use of instruments; note-keeping. Prerequisite: CE 221. One recitation; 2 three-hour periods field work.
- CE 223. **Plane Surveying.** Spring term, 3 hours.
Use of stadia and of plane-table; topographical mapping and drawing; determination of meridian by stellar and by solar observation. Prerequisite: CE 222. One recitation; 2 three-hour field periods.
- CE 224. **Precise Surveying and Geodesy.** Any term, 3 hours.
Instruction in precise leveling, triangulation, base-line measurement, stellar and solar observations. Prerequisite: CE 223. One recitation; 2 three-hour periods field work.

- CE 226. **Plane Surveying.** Fall or spring term, 3 hours.
Theory, use, and adjustment of engineer's level and transit. One recitation; 2 three-hour periods field work.
- CE 231. **Field Curves.** Winter term, 3 hours.
Instruction and field work in simple curves and compound curves as related to railroads, highways, and canals. Prerequisite: CE 221. Two recitations; 1 three-hour period field work.
- CE 232. **Curves and Earthwork.** Spring term, 3 hours.
Instruction and field work in easement, and parabolic curves as related to railroads, highways, and canals. Complete survey of a transportation line, reconnaissance, preliminary, and location surveys; estimates of quantities. Prerequisite: CE 231. One recitation; 2 three-hour periods field work.

UPPER-DIVISION COURSES

- CE 311. **Hydraulics.** Fall term, 3 hours.
A study of the principles underlying pressure and flow of water; laboratory measurements of pressure and flow. Planned particularly for civil-engineering students. Two recitations; 1 three-hour laboratory period.
- CE 312. **Hydraulics (Advanced).** Winter term, 3 hours.
A continuation of CE 311. A study of the impulse and reaction of jets and energy of water. Prerequisite: CE 311. One recitation; 2 two-hour laboratory periods.
- CE 313. **Hydraulic Machinery.** Spring term, 3 hours.
Operation, characteristics, efficiency, theory, design, and installation of pumps and turbines; laboratory studies. Planned particularly for civil-engineering students. Prerequisite: CE 312. Two recitations; 1 three-hour laboratory period.
- CE 321. **Hydraulics.** Spring term, 3 hours.
A study of the principles underlying and laboratory measurements of the pressure, flow, and energy of water. Planned particularly for electrical-engineering students. Two recitations; 1 three-hour laboratory period.
- CE 322. **Hydraulic Power Plants.** Fall term, 3 hours.
A study of the application of the principles of hydraulics to power production in hydro-electric plants; stream flow, dams, head works, pipe lines, wheels, and speed regulation. Prerequisite: CE 321. Two recitations; 1 three-hour laboratory period.
- CE 331. **Navigation.** Spring term, 3 hours.
Fundamental laws of navigation; longitude, latitude, spherical trigonometry; commercial flight routes; flight instruments. Three recitations.
- CE 333. **Roads and Pavements.** Spring term, 4 hours.
A study of the fundamental principles of location, construction, and maintenance of roads; materials used in road and street building. Four recitations.

- AE 341. Use of Explosives.** Winter term, 2 hours.
Taught cooperatively by departments of Agricultural Engineering and Civil Engineering. The use of explosives, hand stump-pullers, horse stump-pullers; tractor and donkey engine for removing stumps, charpitting, stump burning, and chemical treatment; what is being done in other states; clearing, terracing, and leveling of lands. One recitation; 1 three-hour laboratory period.
- CE 341. Hydraulics.** Fall or spring term, 3 hours.
A course similar to CE 321 for students in mechanical engineering. Two recitations; 1 three-hour laboratory period.
- CE 342. Hydraulic Machinery.** Winter term, 3 hours.
A study of the application of the principles of hydraulics to the performance and design of pumps and turbines and the layout of pumping and power plants. Prerequisite: CE 321 or 341. Two recitations; 1 three-hour laboratory period.
- CE 351, 352. Strength of Materials.** Fall and winter terms, 3 hours each term.
In this course the general principles of mechanics are applied to the elements of engineering structures to determine their strength and fitness. Tensile and crushing strengths of various engineering materials; stresses in beams and girders under different systems of loading and support; supporting strength of columns; application of torsion to shafts. Prerequisite: CE 212 or ME 212. One recitation; 2 two-hour computing periods.
- CE 382. Structural Analysis.** Fall or winter term, 4 hours.
Graphical and algebraic analysis of statistically determinate structures such as simple beams, cranes, roof and bridge trusses. Aeronautical-option students will study airplane drag and fuselage trusses. Prerequisite: CE 212 or ME 212. Two recitations; 2 two-hour laboratory periods.
- CE 383. Reinforced Concrete.** Spring term, 4 hours.
Study and design of the elements of reinforced concrete including beams, slabs, girders, and columns by various methods such as the transformed section, graphical, and commercial short-cut methods. Prerequisite: CE 351, 382. Two recitations; 2 two-hour laboratory periods.
- CE 387. Structural Analysis.** Winter term, 2 hours.
Analysis of roof trusses. Prerequisite: CE 212 or ME 212. One recitation; 1 three-hour laboratory period.
- CE 401. Research.** Terms and hours to be arranged.
- CE 403. Thesis.** Any term, hours to be arranged.
Elective on approval to undergraduates whose records indicate ability and initiative to complete special projects.
- CE 405. Reading and Conference.** Terms and hours to be arranged.
Readings or research with reports on special topics.
- CE 407. Seminar.** Any term, 1 hour each term.
Presentation of abstracts and discussion of articles in the current periodicals. One recitation.

- CE 411. **Hydrology.** (G) Fall term, 3 hours.
A study of precipitation, storage, and run-off; field studies in standard methods of measurement. Two recitations; 1 three-hour laboratory period.
- CE 412. **Sanitary Engineering.** (G) Fall term, 3 hours.
A study of the fundamental processes and operations of the conditioning of water as applied to water supply and sewage disposal. Prerequisite: CE 311. Two recitations; 1 three-hour laboratory period.
- CE 413. **Reclamation Engineering.** (G) Spring term, 3 hours.
Design and operation of drainage and irrigation systems. Prerequisite: CE 311. Two recitations; 1 three-hour laboratory period.
- CE 421. **Highway Engineering.** (g) Fall term, 4 hours.
Economic grades and proper location of highways, culvert design; construction and maintenance of various types of roads; cost data; methods of handling work. Prerequisite: CE 333. Two recitations; 2 three-hour laboratory periods.
- CE 422. **Highway Engineering.** (g) Winter term, 3 hours.
Continuation of CE 421. One recitation; 2 three-hour laboratory periods.
- CE 425. **Economics of Highway Transportation.** (G) Spring term, 3 hours.
A study of the factors affecting highway transportation such as motor-vehicle-operation costs per mile; delays to traffic; density of traffic; traffic surveys. Prerequisite: CE 333. Three recitations.
- CE 426. **Highway Administration and Finance.** (G) Spring term, 3 hours.
A study of the development of highway systems; organization of state and national highways; principles of highway finance; Federal aid; technical functions of various highway units. Prerequisite: CE 333. Three recitations.
- CE 427. **Contracts and Specifications.** (g) Spring term, 3 hours.
A study of the general principles and laws of contracts as applied to engineering. Three recitations.
- CE 433. **Railroad Engineering.** (G) Winter term, 3 hours.
A study of methods in railway construction and maintenance.
- CE 438. **Municipal Engineering and City Planning.** (G) Spring term, 3 hours.
The modern city streets, boulevards, and transportation systems; drainage and sanitation; water supply; lighting. A course of lectures and assigned readings. Three recitations.
- CE 451. **Water-Power Engineering.** (G) Any term, 3 hours.
Development of water power; storage and load; characteristics of modern turbines; selection of turbines; practical problems in design. Prerequisite: CE 313, 322, or 342. One recitation; 2 three-hour laboratory periods.
- CE 452. **Water Supply.** (G) Any term, 3 hours.
A study of the quality and quantity of water necessary for a municipal supply and of works for its collection, purification, and distribution. Two recitations; 1 three-hour laboratory period.

- CE 454. Sewage Disposal.** (G) Spring term, 3 hours.
The several processes for the disposal and treatment of sewage; problems and considerations encountered in the design and operation of sewage-treatment plants. Prerequisite: CE 311. Two recitations; 1 three-hour laboratory period.
- CE 460. Estimating and Cost Analysis.** (g) Spring term, 3 hours.
Procedure in quantity surveying; general and detailed considerations in establishing unit prices; subcontracts, overhead cost and profit; methods of preparing estimates in construction. Two recitations; 1 three-hour laboratory period.
- CE 472. Masonry and Foundations.** (g) Fall or winter term, 4 hours.
Study and design of masonry foundations, walls, piers, dams, and arches. Prerequisite: CE 383. Two recitations; 2 three-hour laboratory periods.
- CE 481. Structural Engineering.** (g) Fall term, 4 hours.
Study and design of elements of riveted steel including members in tension, compression, and in flexure, with their connections. Consideration will also be given to the design and detail of riveted-steel structures such as industrial roof trusses, and plate-girder bridges. Prerequisite: CE 351, 382. Two recitations; 2 three-hour laboratory periods.
- CE 482. Structural Design.** (g) Winter term, 4 hours.
Study and design of timber members in tension, compression, and flexure, with their connections. Consideration will also be given to the design and details of simple timber structures such as roof and bridge trusses. Prerequisite: CE 351, 382. Two recitations; 2 three-hour laboratory periods.
- CE 483. Building Design.** (G) Spring term, 4 hours.
Study and design of building elements constructed of welded steel and reinforced-brick masonry, and a study of the methods of such fabrication and construction. Prerequisite: CE 472, 481. Two recitations; 2 three-hour laboratory periods.
- CE 485. Structural Analysis** (G) Winter term, 3 hours.
Study and stress analysis of statically indeterminate structures such as continuous beams and rigid frames. Time is spent on both the mechanical and algebraic methods of analysis. Prerequisite: CE 382. One recitation; 2 three-hour laboratory periods.
- CE 486. Elastic Deformations and Secondary Stresses.** (G) Spring term, 3 hours.
A continuation of CE 485. Prerequisite: CE 485. One recitation; 2 three-hour laboratory periods.
- CE 487. Structural Design.** (G) Spring term, 5 hours.
Design of voussoir and elastic arches. Prerequisite: CE 485. Two recitations; 3 three-hour laboratory periods.
- CE 488. Elements of Structures.** Any term, 3 hours.
Study and application of the theory of simple structures. Prerequisite: CE 212 or ME 212. One recitation; 2 three-hour laboratory periods.

GRADUATE COURSES

Courses numbered 400-499 and designated (G) or (G)
may be taken for graduate credit.

- CE 501. Research. Terms and hours to be arranged.
CE 503. Thesis. Terms and hours to be arranged.
CE 505. Reading and Conference. Terms and hours to be arranged.
CE 507. Seminar. Terms and hours to be arranged.

Electrical Engineering

THE curriculum is designed to train the young engineer in the fundamental principles of electrical engineering. Both electrical theory and practice are presented by means of lectures, recitations, laboratory courses, and inspection trips. Experience with actual conditions can be acquired only in the field during vacation and after graduation. For this reason, and in order to afford mutual contact between the student and the men in his profession, the student is urged to spend his vacation periods in some phase of electrical industry.

As noted on page 286, the work in the senior year is divided into the Power and Communication options, and the Business Minors. The student selects the program in which his interests lie.

The Power Option includes courses dealing with machines and electronic devices for generating and utilizing electrical energy. Emphasis is also placed on the technical problems involved in high-voltage transmission.

The Communication Option provides courses for the students whose interests are in the field of wire communication, radio, sound reproduction, television, and related work. Instruction is available to seniors particularly interested in radio broadcasting to enable them to qualify for a government license.

The Business Minor offers courses in business administration and law for those students whose interests lie in the field of management rather than in the technical fields.

Equipment. The Electrical Engineering laboratories are located in Apperson Hall. Laboratory equipment is available for demonstrating and verifying the fundamental electrical principles and theory and also for original research in some of the important fields. This equipment is located in the electric-power, communications, electrical-measurements, high-voltage, standardizing, and battery laboratories.

The power laboratory is equipped with alternating and direct-current machinery and electronic power apparatus.

The communications laboratory is well provided with equipment for making studies involving currents, voltages, and frequencies of the magnitudes used in both wire and wireless communication; for studying radio and television apparatus, electronic devices, electroacoustic equipment, and similar apparatus. Standardized oscillators and measuring equipment are available for studying frequencies from 20 to 50,000,000 cycles per second. The facilities of Radio Station KOAC, including the 1,000-watt Western Electric transmitter, and the extensive sound-amplifying equipment of the

State College group-address systems are also available for instructional and experimental purposes.

The measurements laboratory has adequate facilities designed for laboratory work on basic electrical theory during the sophomore year.

The high-voltage laboratory is equipped with apparatus for 60-cycle potentials up to 200,000 volts and impulse or "lightning" voltage waves of adjustable shape and magnitude up to 600,000 volts. This laboratory is also provided with a high-voltage Du Four cathode-ray oscillograph, sphere gap voltmeters, surge-voltage recorders, high-voltage rectifiers, and other apparatus necessary for the usual high-voltage tests.

The standardizing laboratory is provided with instruments for the precise measurement of potential, current, and power over wide ranges and for the standardization and calibration of electrical measuring instruments and meters.

The battery laboratory contains both lead-acid and alkaline storage batteries and charging equipment for maintenance and testing.

Oscillographs and oscilloscopes of the Duddell type and also of the high-voltage and low-voltage cathode-ray types are available for the study of transients and other phenomena in any of the laboratories.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

EE 201, 202, 203. **Introduction to Electrical Engineering.** Three terms, 4 hours each term.

An introductory study of fundamental electrical phenomena and their application to electrical engineering. One lecture; 2 two-hour computation periods; 1 three-hour laboratory period.

UPPER-DIVISION COURSES

EE 311, 312, 313. **Electrical Engineering.** Three terms, 3 hours each term.

A study of the electric circuit, direct- and alternating-current machines, their theory and characteristics. Three recitations.

EE 321, 322, 323. **Electrical Engineering Laboratory.** Three terms, 3 hours each term.

A laboratory course coordinated with EE 311, 312, 313. One lecture; 1 three-hour laboratory period.

EE 351, 352, 353. **Industrial Electricity.** One, two, or three terms, 3 hours each term.

A study of fundamental electrical principles and electrical equipment emphasizing the applications to industry. Prerequisite: Junior Certificate. Two recitations; 1 three-hour laboratory period.

EE 355. **Electricity in Aeronautics.** Winter term, 3 hours.

A study of the fundamentals of electrical engineering as applied to aircraft and aerial navigation. Special emphasis is placed upon instruments; circuits; starting, lighting, and ignition systems. Prerequisite: Junior Certificate. Two recitations; 1 three-hour laboratory period.

EE 356. **Airway Communication Systems.** Spring term, 3 hours.

A course covering systems of electrical communication used in air transportation. Prerequisite: Junior Certificate. Two recitations; 1 three-hour laboratory period.

- EE 401. **Research.** Terms and hours to be arranged.
- EE 403. **Thesis.** Any term, 3 hours each term.
Elective on approval for undergraduates whose records indicate ability to initiate and complete special projects.
- EE 405. **Reading and Conference.** Terms and hours to be arranged.
- EE 407. **Seminar.** Three terms, 1 hour each term.
Presentation of abstracts and discussion of articles in the current electrical periodicals. One recitation.
- EE 411, 412, 413. **Electrical Engineering.** (g) Three terms, 3 hours each term.
An analysis of electric-power generation, transmission, and distribution with special reference to the economic and financial problems involved. Three lectures.
- EE 414, 415, 416. **Electrical Design.** (g) Three terms, 1 hour each term.
Design and computations supplementary to EE 411, 412, 413. One three-hour period.
- EE 421, 422, 423. **Electrical Engineering Laboratory.** (G) Three terms, 3 hours each term.
A study of direct- and alternating-current machinery and electronic power apparatus to determine the fundamental characteristics and coordinate them with theory. The generation, regulation, conversion, rectification, and control of alternating currents are given special consideration. One lecture; 1 three-hour laboratory period.
- EE 431, 432. **Illumination.** (G) Winter and spring terms, 3 hours each term.
A study of light sources and their application to exterior and interior illumination. One lecture; two recitations.
- EE 442. **Electrical Transportation.** (g) Winter term, 3 hours.
Study of the application of electricity to street and interurban railways; traffic conditions; rolling stock; speed time curves. Three recitations.
- EE 443. **Railway Electrification.** (g) Spring term, 3 hours.
A study of factors governing the electrification of trunk lines. Three lectures.
- EE 451. **Electrical Transients.** (G) Fall term, 3 hours.
A theoretical and experimental study of both direct- and alternating-current single-energy and double-energy transients in circuits and machines having both fixed and variable circuit constants. One lecture; 1 recitation; 1 four-hour laboratory period.
- EE 452, 453. **High-Voltage Engineering.** (G) Winter and spring terms, 3 hours each term.
The experimental investigation and study of dielectric phenomena in high-voltage engineering. Special attention is given to the dielectric field, the ionization and conduction of electricity through gases, corona problems encountered in high-voltage power transmission, and the characteristics of liquid and solid dielectrics. Two lectures; 1 four-hour laboratory period.

EE 455. **Electrical Characteristics of Transmission Circuits.** (G) Winter term, 3 hours.

A study of transmission theory and of the electrical characteristics of transmission lines and electrical networks. Two lectures; 1 three-hour laboratory period.

EE 461, 462, 463. **Communication Engineering.** (G) Three terms, 3 hours each term.

A study of the fundamental theory of electrical communication, including commercial telephone, telegraph, radio, and television systems. Special attention given to communication instruments and measurements; to the design of equipment; and to related subjects such as long-line transmission theory, networks, and wave filters. Two lectures; 1 three-hour laboratory period.

EE 464, 465. **Vacuum Tubes and Circuits.** (G) Fall and winter terms, 3 hours each term.

A theoretical and experimental study of thermionic vacuum tubes, phototubes, and other electronic devices, and their uses in electrical circuits. Two lectures; 1 three-hour laboratory period.

EE 466. **Engineering of Sound Systems.** (G) Spring term, 3 hours.

A study of microphones, amplifiers, loud speakers, and other similar apparatus, and the engineering problems involved in the design, installation, and operation of sound systems. Two lectures; 1 three-hour laboratory period.

EE 467. **Radio Engineering.** (G) Spring term, 3 hours.

A theoretical and experimental study of the transmission and reception of radio and television signals, including the design of transmitters, antennas, and associated equipment. Prerequisite: EE 313, 462, 465. Two lectures; 1 three-hour laboratory and computation period.

EE 473. **Electrical Problems.** (G) Fall term, 3 hours.

Advanced problems in electrical engineering, unbalanced circuits, symmetrical components, and equivalent networks. Three recitations.

EE 481, 482, 483. **Radio Engineering Practices.** Three terms, 1 hour each term.

A study of the engineering and operating practices employed in modern radio broadcasting. Radio Station KOAC, employing a 1,000-watt transmitter operating on 550 kc., is used as a practical laboratory, and the instruction is given by the engineer-in-charge. The work prepares the student for the examination that must be passed to obtain the first-class radio telephone operator's license issued by the Federal Communications Commission. Open to seniors in electrical engineering, and to others with adequate preparation. One lecture; 1 two-hour laboratory period.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

EE 501. **Research.** Terms and hours to be arranged.

Advanced studies in the science or technology of electrical engineering. Comprehensive reports indicating a thorough mastery of the fields studied are required in each case.

EE 503. **Thesis.** Terms and hours to be arranged.

Original problems of a research nature chosen by the student or suggested by the department are studied and reported upon in thesis form.

EE 505. **Reading and Conference.** Terms and hours to be arranged.

EE 507. **Seminar.** Terms and hours to be arranged.

Mechanical Engineering

THE curriculum in mechanical engineering is planned to prepare young men for useful and responsible positions in power plants, various manufacturing enterprises, oil refineries, the metal industries, heating and ventilating, refrigerating, air conditioning, and in the automotive and aeronautical industries.

Equipment. The department has drafting and computing rooms supplied with the necessary desks, boards, and lockers. The laboratories are equipped for tests and demonstrations in steam, gas, and aeronautical engineering, and on engineering materials. This equipment is located in the Engineering Laboratory and the old power house.

The steam laboratory contains two turbines and four engines of different types, installed in such a way that complete tests for economy and efficiency can be made. Other steam engines, permanently installed, are used for the more elementary work. A horizontal water-tube boiler furnishes the steam for laboratory purposes and for heating the building, and is provided with the necessary facilities for testing. The college heating plant, consisting of three 5,000-square-foot boilers and necessary auxiliaries, is also provided with testing facilities.

A special laboratory has been equipped for tests on domestic heating, ventilating, and air-conditioning apparatus. Several small boilers fired by oil burner, coal stoker, and sawdust burner have been provided and fitted for experimental tests and research. A gas-fired air-conditioning unit is also available.

The internal-combustion engine laboratory contains gas and gasoline engines, two semi-Diesels, a full Diesel connected to generator, a four-cylinder 120-horsepower two-stroke-cycle oil engine, both fully equipped for testing, a 100-horsepower Sprague electric dynamometer, and automobile engines installed with necessary facilities for complete tests for economy and efficiency. Several other gasoline engines are available for the more elementary work, together with the usual accessories, auxiliaries, and instruments for testing and analysis of tests.

The aeronautical laboratory includes a selection of modern aircraft engines, both air and water cooled; a complete airplane of the Navy fighter type; and numerous wing panels, tail surfaces, instruments, and miscellaneous airplane parts. A small water channel for the study of fluid flow is also available.

Approximately 14,000 square feet of floor space is devoted to engineering materials affording separate laboratories for structural materials, cement and concrete, bituminous and nonbituminous highway materials, photoelasticity, oils, fuels, and the microscopic examination, radiography, spectrum analysis, and heat treatment of metals. The equipment is modern and is well arranged for the work of instruction and research.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

ME 211. Descriptive Geometry. Fall term, 3 hours.

Theory and problems on the projection of points, lines, surfaces, and solids. An effort is made to make the work as practical as possible and to reveal to the student its value in solving drafting-room problems. Prerequisite: GE 111, 112. One recitation; 2 three-hour drawing periods.

ME 212. Mechanics (Statics). Fall or winter term, 3 hours.

Forces and force systems with reference to the equilibrium of rigid bodies, including simple framed structures; methods of finding centers of gravity and moments of inertia and their practical applications; numerous problems having engineering application. Prerequisite: differential calculus. One recitation; 2 two-hour computing periods.

ME 213. Mechanics (Dynamics). Winter or spring term, 3 hours.

A continuation of ME 212 dealing with principles and problems in kinetics; force as a factor causing motion; work, energy, friction, and impact studied and illustrated by means of numerous problems. Prerequisite: ME 212. One recitation; 2 two-hour computing periods.

ME 221, 222, 223. Heat Engineering. Three terms, 3 hours each term.

An introduction to the theory of heat and its engineering applications. Study of the gas laws, properties of steam, and fuels. Descriptive presentation of internal-combustion and steam engines and other heat-power equipment. Prerequisite: GE 101, 102. Three recitations first term; 2 recitations, 1 three-hour laboratory period second and third terms.

UPPER-DIVISION COURSES

ME 311. Strength of Materials. Fall or spring term, 3 hours.

In this course the general principles of mechanics are applied to the elements of engineering structures to determine their strength and fitness. Tensile and crushing strength of various engineering materials; stresses in beams and girders under different systems of loading and support; supporting strength of columns; application of torsion to shafts in transmission of power. Prerequisite: ME 212. One recitation; 2 two-hour computing periods.

ME 312. Mechanism. Winter term, 3 hours.

A study of mechanical movements, including velocity ratios, transmission of motion by link works, gearing, cams, and belting. One recitation; 2 three-hour laboratory periods.

ME 316. Materials of Engineering. Any term, 3 hours.

A lecture and laboratory course on the materials of engineering construction with special reference to the methods and specifications adopted by the American Society for Testing Materials and other national engineering organizations. One lecture; 1 three-hour laboratory period.

ME 321, 322, 323. Heat Engineering. Three terms, 3 hours each term.

Thermodynamic processes involved in the transformation of heat energy into work; steam cycles; gas laws; air-compressor cycle; gas

and vapor mixtures; internal-combustion engine cycles; steam turbines; refrigeration cycle; and problems involving special applications of thermodynamic principles. Prerequisite: Mth 222; Ph 113; ME 221, 222. Two recitations; 1 three-hour problem period.

ME 331, 332. Heat Power Engineering. Fall and winter terms, 3 hours each term.

A brief descriptive survey of the heat power plant and principal auxiliaries; study of the physical properties and laws of gases; their application to the air compressor, air motor, automobile engine, and Diesel engine; introduction to study of vapors; use of steam tables, humidity, steam cycles; a flow sheet for a modern central station sketched; function of each piece of equipment; study of fuels, combustion, evolution of the boiler furnace, types and characteristics of boilers, furnace and boiler efficiency, superheaters, economizers, air preheaters, feed water heaters, condensers, heat transfer, flow of gases and vapors, steam turbines, and power-plant piping. Prerequisite: Mth 222, Ph 113. Two recitations; 1 three-hour computation or laboratory period.

ME 333. Heat Power Laboratory. Spring term, 3 hours.

Continuation of ME 332. Operating characteristics of steam boilers; steam and internal-combustion prime movers; air machinery; and air-conditioning equipment. Relation of actual machine performance to thermodynamic theory. One recitation; 1 three-hour laboratory period.

ME 342. Aerodynamics. Winter term, 3 hours.

Study of elementary aerodynamic theory and phenomena. Characteristics of airfoils and airfoil combinations. Factors affecting stability, control, and performance. Prerequisite: junior standing. Three recitations.

ME 343. Aeropropulsion. Spring term, 3 hours.

Study of screw propeller theories; factors influencing selection of engines, propellers, and power-plant accessories for specific airplane; power-plant installation. Prerequisite: ME 342. Two recitations; 1 three-hour laboratory period.

ME 345. Steam, Air, and Gas Power. Spring term, 3 hours.

A course adapted to the needs of civil engineering students. Elementary principles of thermodynamics; properties of steam; fuels and their combustion; boilers; and auxiliaries. Prerequisite: GE 101, 102; Mth 222. Two recitations; 1 three-hour computation period.

ME 346. Steam, Air, and Gas Power. Spring term, 3 hours.

Performance and operation of internal-combustion engines; steam turbines, steam engines; fans, blowers, and air compressors. Various laboratory tests are made. Two recitations; 1 three-hour laboratory period.

ME 351, 352, 353. Mechanical Laboratory. Three terms, 2 hours each term.

A basic year sequence in machine testing. Detailed study of the proper application of instruments such as gages, engine indicators, planimeters, calorimeters, gas analyzers, flow meters, and dynamometers. Tests of common machines and the interpretation of test re-

sults. Instruction in the preparation of the usual types of engineering reports. Must be taken parallel to ME 321, 322, 323. One recitation; 1 three-hour laboratory period.

ME 401. Research. Terms and hours to be arranged.

ME 403. Thesis. Any term, 3 hours.

Elective on approval for undergraduates whose records indicate ability and initiative to complete special projects.

ME 405. Reading and Conference. Terms and hours to be arranged.

Readings or research, with reports, on special topics.

ME 407. Seminar. Spring term, 1 hour.

Practice in effective writing and speaking on engineering and allied subjects. Preference is given to the discussion of new developments in the field of mechanical engineering. The work supplements that of the prescribed courses.

ME 411, 412, 413. Machine Design. (g) Three terms, 3 hours each term.

Three terms of work covering application of the principles of mechanism, mechanics, and strength of materials to design of machine elements. Problems involving riveted joints; screws; shafts and shafting; belt and rope drive; pulleys; gearing; bearings; machine frames; analysis of force and energy problems; fly-wheels; engine balancing; computations and drawings necessary to the design of one or more complete machines; for students in the aeronautical option, similar exercises on various mechanical components of airplanes. Prerequisite: ME 311. One recitation; 2 three-hour design periods.

ME 414. Highway Materials Laboratory. (g) Fall term, 3 hours.

Designed particularly for students specializing in highway engineering. Different road and paving materials and binders are tested and their relative values determined. Sheet-asphalt mixtures and bituminous mortars are studied to determine the effects of various changes in the grading of the aggregates. Finally, samples of various types of roads and pavements are analyzed for density, composition, and grading, with special reference to their conformity with specifications. Assigned references. One lecture; 1 four-hour laboratory period.

ME 415. Structural Materials Laboratory. (g) Winter term, 3 hours.

An advanced laboratory course on plain and reinforced concrete beams and columns to study methods of reinforcing. Design of concrete mixtures. Stress distribution under unsymmetrical loads. Riveted and welded joints. Thermal conductivity of concrete. Study of stresses in structures by strain gage. Prerequisite: ME 316. One lecture; 1 four-hour laboratory period.

ME 416. Stress Analysis. (G) Fall term, 3 hours.

Designed to give a working knowledge of methods of solving problems in strength of materials which the usual methods of analysis will not satisfy. Emphasis on localized stresses and statically indeterminate conditions. Prerequisite: ME 311. Three recitations.

ME 417, 418. Photoelasticity. (G) Winter and spring terms, 3 hours each term.

Experimental determination of stresses in components of mechanisms and structures by use of photoelastic methods. Theory and op-

eration of apparatus with laboratory exercises to illustrate. Prerequisite: ME 316, 416. One lecture, 1 four-hour laboratory period.

ME 419. Soil Mechanics. (g) Spring term, 3 hours.

Lecture and laboratory work, supplemented with assigned readings, in the evaluation and utilization of soil materials for engineering applications, with special reference to highway subgrades, earth-dam construction, and foundation support. Prerequisite: ME 316, CE 351 or ME 311. One lecture, 1 four-hour laboratory period.

ME 421. Modern Materials. (G) Fall term, 3 hours.

Late developments in engineering materials by critical reviews of recent and current literature. Light and other special alloys; welding; surface processing for hardness, corrosion resistance, and appearance; endurance limits and creep; heat treating and fabrication; special properties and their applications in design. Prerequisite: ME 311, 316. Three recitations.

ME 422. Gas Technology. (G) Winter term, 3 hours.

Manufactured and natural gas production, transmission, and distribution; industrial applications; problems of the industry including some reference to rate making and regulation. Prerequisite: ME 351, 352, 353. Three recitations.

ME 423. Fuel Technology. (G) Spring term, 3 hours.

The preparation and processing of fuels primarily liquid or solid. A rigorous treatment of the combustion process. Consideration of chief factors governing efficient fuel utilization in internal-combustion engines and boiler furnaces. Prerequisite: ME 323. Two lectures; 1 three-hour computation period.

ME 425. Fuel and Lubricant Testing. (G) Spring term, 3 hours.

A laboratory course covering the testing of fuels, and of materials such as oils, bearing metals, etc., used in power transmission. Designed particularly as an elective course for mechanical and electrical engineering students. Assigned readings and reports. Prerequisite: ME 316. One lecture; 1 four-hour laboratory period.

ME 431, 432. Power-Plant Engineering. (g) Fall and winter terms, 3 hours each term.

A study of the performance of steam and internal-combustion engine power plants from the design standpoint; heat transfer in engineering apparatus; selection of equipment to secure proper unification and efficient operation as well as economic balance. Prerequisite: ME 323. Two recitations; 1 three-hour problem or design period.

ME 441, 442, 443. Airplane Design. (g) Three terms, 3 hours each term.

Design of airplanes for specific duties. Estimation of weights, balance, stability, and performance. Computation of loadings and design of major structural parts. Prerequisite: ME 342. One recitation; 2 three-hour laboratory periods.

ME 446. Advanced Aerodynamics. (G) Spring term, 3 hours.

Fundamental theory of fluid flow, infinite and finite wing theory as developed by Kutta-Joukowski, Prandtl, and others. Prerequisite: ME 342. Three recitations.

ME 451, 452. Mechanical Laboratory. (g) Fall and winter terms, 2 hours each term.

Testing of steam turbines, heating and ventilating equipment, a complete boiler plant, and internal-combustion engines. Fundamentals of boiler-water treatment and control. Calculation and analysis of test results. Preparation of reports. Prerequisite: ME 353. One four-hour laboratory period.

ME 453. Mechanical Laboratory. (g) Spring term, 2 hours.

Special laboratory problems selected on the basis of interest of the student and equipment available. Prerequisite: ME 452. Periods arranged according to project.

ME 461. Heating and Air Conditioning. (G) Spring term, 3 hours.

Study of modern methods of heating, ventilating, and air conditioning; approved systems of heating by means of air, steam, and hot water; methods of computing radiating surface; effective methods of ventilation; general design, construction, and operation of heating and air-conditioning plants. Prerequisite: ME 323. One recitation; 2 three-hour laboratory periods.

ME 462. Refrigeration. (G) Spring term, 3 hours.

A study of the thermodynamics of refrigeration, systems in use and principal characteristics of each, fundamentals of design, principal applications with special reference to the industries of the Northwest. Prerequisite: ME 323. Two recitations; 1 three-hour laboratory period.

ME 473. Industrial Engineering. (G) Spring term, 3 hours.

Especially arranged for engineering students. Various industrial organization systems and their methods of operation, including apprenticeship courses, labor problems, and process work; the problems of engineering contracts and specifications, laying special stress upon the engineering phraseology and introducing modern legal standards. Three recitations.

ME 481. Metallography and Pyrometry. (G) Fall or winter terms, 3 hours.

Lectures and laboratory work designed to give a working knowledge of the methods of study of structure of metals and alloys; particular attention given to correlation of thermal and mechanical treatment with structure and physical properties of iron and steel; calibration and use of various types of pyrometers; laboratory experiments in heat treatment; preparation of specimens; etching; studying structure under the microscope; making photomicrographs; physical tests, whenever possible, to show the effects on strength, ductility, hardness, or other mechanical properties of the different thermal treatments or other industrial processes. Prerequisite: ME 316. One lecture; 1 four-hour laboratory period.

ME 482. Metallography. (G) Spring term, 3 hours.

Study of alloy equilibrium diagrams; preparation of difficult specimens; high power photomicrography; correlation of thermal, electrical, and magnetic properties of iron and some of its alloys with microstructure; dilatometry as related to heat-treatment; study of structure and treatment of special steels and other alloys; metal radiography. Prerequisite: ME 481. One lecture; 1 four-hour laboratory period.

ME 491, 492, 493. **Automotive Engineering.** (G) Three terms, 3 hours each term.

A sequence of three courses. Fall term: fuel quality, fuel induction systems, interpretation of exhaust gas analyses, lubrication, and power-plant testing. Winter term: automobile body and chassis engineering, tractive resistance. Spring term: problems in fleet operation, maintenance, and economics. Prerequisite: ME 321, 322, 323. Two lectures; 1 three-hour laboratory or problem period.

GRADUATE COURSES

Courses numbered 400-499 and designated (G) or (G) may be taken for graduate credit.

ME 501. **Research.** Terms and hours to be arranged.

Special problems which may involve assembling and correlating of existing data on some specific subject; design; analysis of experimental data; or research. Detailed written reports are required.

ME 503. **Thesis.** Terms and hours to be arranged.

Original problems of a research nature chosen by the student or suggested by the department are studied and reported upon in thesis form.

ME 505. **Reading and Conference.** Terms and hours to be arranged.

Readings or research, with reports, on special topics.

ME 507. **Seminar.** Three terms, 1 hour each term.

A discussion of research problems and projects of the Engineering Experiment Station; critical reviews of developments in the fields of science and technology.

Mining Engineering

MINING engineering courses provide instruction in those fundamental principles of engineering technology which are basic and common to the fields of ore excavation (mining), ore dressing (beneficiation), and smelting (metal production)—the whole field, in fact, of the mineral industry. The courses in metallurgy and mining engineering are service courses open to all students properly qualified. As a result of the action of the State Board of Higher Education in 1932, no degree is offered in Mining Engineering. Not all of these courses are offered in any one year. Those offered in the current year are so designated in the descriptions of courses.

Equipment. The department occupies jointly with the Chemical Engineering and Geology departments the three-story and basement building known as the Mines Building which was designed especially to house the lecture rooms and laboratories devoted to mining, metallurgy, ore dressing, and closely allied subjects. The assaying and metallurgical laboratories are completely equipped with the necessary apparatus for efficiently conducting experimental metallurgical operations, crushing, and grinding. Ore-dressing laboratories affording modern metallurgical testing equipment are located in the basement. Adequate class and drafting-room facilities are available in this building.

Courses in scientific and economic geology are taught in the same building under the direction of the Department of Geology, as described under SCHOOL OF SCIENCE.

COURSES IN METALLURGY

LOWER-DIVISION COURSE

- Met 263. Assaying.** Spring term, 3 hours.
Commercial methods of wet and dry assay ores, metallurgical products. Prerequisite: Ch 232 or equivalent. One recitation; 2 three-hour laboratory periods.

UPPER-DIVISION COURSES

- Met 461. General Metallurgy.** (g) Fall term, 3 hours.
An introduction to general metallurgy. Properties of metals, alloys, fuels, refractories; pyrometallurgy, hydrometallurgy, electro-metallurgy; general operations. Prerequisite: Ch 232 or equivalent. Three recitations.
- Met 462. Metallurgy of the Base and Precious Metals.** (g) Winter term, 4 hours.
Metallurgy of gold, silver, copper, lead, and zinc. Short course in iron and steel included. Prerequisite: Met 461. Four recitations.
- Met 471, 472. Fire Assaying.** (g) Fall and winter terms, 2 hours each term.
Testing reagents; sampling ores; fire assay methods for precious and base metals; bullion assays. Prerequisite: Ch 232 or equivalent. Two three-hour laboratory periods. Offered 1938-39.
- Met 481, 482, 483. Ore Dressing.** (g) Three terms, 3 hours each term.
The principles of crushing and concentrating ore minerals; various treatment processes. Prerequisite to Met 481, 482: G 201, 202, 203, or their equivalent. Prerequisite to Met 483: Met 482, Ch 232, 340. Three recitations first two terms; 2 recitations, 1 three-hour laboratory period third term. Met 481, 482 offered 1938-39.
- Met 491, 492. Ore-Dressing Laboratory.** (g) Fall and winter terms, 3 hours each term.
Laboratory work in connection with Met 481, 482. Prerequisite: Met 471, 472, 481, 482. One seminar period; 4 two-hour laboratory periods.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) may be taken for credit toward a graduate minor.

COURSES IN MINING ENGINEERING

LOWER-DIVISION COURSES

- MiE 141, 142. Mineral Industry Survey.** Winter and spring terms, $\frac{1}{2}$ hour each term.
An introductory course including engineering problems and constituting an integral part of a general survey of our mineral resources. One lecture.

MiE 243. **Excavation, Explosives, and Blasting.** Spring term, 3 hours.

A course dealing with special methods of surface excavations. Three recitations.

UPPER-DIVISION COURSES

MiE 405. **Reading and Conference.** (g) Terms and hours to be arranged. Readings and reports on special topics. Offered 1938-39.

MiE 407. **Seminar.** (g) Any term, 1 hour each term.

Discussion of current problems, practices, developments, trends. One period.

MiE 433. **Mining Machinery, General Mining Operations.** (g) Spring term, 3 hours.

A study of machinery and equipment required in mining operations and their application to specific field uses. Students should consult with the staff before registering. Prerequisite: GE 111, 112, 113. Three recitations. Offered 1938-39.

MiE 441. **Mining Methods.** (g) Fall term, 4 hours.

General considerations involved in choice of methods used to develop and mine mineral deposits. Prerequisite: GE 111, 112, 113. Four recitations.

MiE 442, 443. **Mining Engineering.** (g) Winter and spring terms, 3 hours each term.

Continuation of MiE 441 with reference to correlation of various operations involved, ventilation, transportation, drainage, power-plant design, mining law, etc. Detailed consideration of problems in mine management and operation. Problem analysis. Prerequisite: MiE 441 or equivalent. Three recitations winter term; one lecture, 2 three-hour laboratory periods spring term.

MiE 453. **Mine Surveying.** (g) Spring term, 3 hours.

Thorough consideration of surveying problems met with in mining-engineering practice. Determination of true meridian. Includes two weeks of field work at end of term in actual mining-survey work. Prerequisite: CE 221; GE 111, 112, 113. Two recitations; 1 three-hour laboratory period. Offered 1938-39.

MiE 461. **Mine Economics and Mining Law.** (g) Fall term, 3 hours.

Special attention is given to mining costs and legal phases. Students should consult with the department before registering. Three recitations.

MiE 462. **Mine and Power Equipment.** (g) Winter term, 3 hours.

A study of mining machinery, power installation, their correlation. Students should consult with the department before registering. Prerequisite: MiE 433. Three recitations.

MiE 463. **Mine-Plant Design.** (g) Spring term, 2 hours.

Advanced problem study. Students should consult with the department before registering. Prerequisite: MiE 433, 442. Two three-hour laboratory periods.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) may be taken for credit toward a graduate minor.

Industrial Arts

INDUSTRIAL-arts education aims to aid in the promotion of industry by providing technical training for those who plan to follow industrial careers and for those who expect to teach industrial-arts subjects in the public schools. The work of the department, in meeting these aims and purposes, falls under three main divisions of training.

- (1) Industrial-Arts Education: Training teachers of industrial subjects.
 - (a) Industrial arts in secondary schools.
 - (b) Trade and industrial instructors.
- (2) Industrial Administration: Training for junior executives in industry.
 - (a) Technical operations, sales, and service.
 - (b) Production management.
- (3) Service courses in shop work for engineering students.

Training in technical operations and the technology of industrial processes is fundamental in all three fields and forms the main part of the work of the first two years in groups (1) and (2) above. Each of these two fields of major choice offers a great number of specific objectives through different avenues of training.

The Curriculum in Industrial-Arts Education (pages 288-289) is designed to give the type of training required for successful teaching in the public schools and for entrance into college teaching. The work of the last two years is given over mainly to the science and philosophy of education and to applied principles of pedagogy. These courses are based upon and interpreted through the technical background formed during the first two years. While a strong motivating thread of technical training is present throughout the four-year curriculum, the work of the junior and senior years is outstanding in the opportunities created for election of both technical and nontechnical subjects that will meet the needs of individual students following different avenues of training and provide opportunity for at least one minor norm in another field.

The Curriculum in Industrial Administration (page 289) is based upon a fundamental combination of manufacturing processes and principles of business administration. Specialization during the junior and senior years involves further study of industrial organization and management, labor problems, cost accounting, and production control. This curriculum is designed to meet the increasing demand for workers in industry who are trained in the basic sciences and in the fundamentals of industrial organization and management, and who through their knowledge of technical and industrial operations can work more quickly and efficiently into junior executive positions. Provision is made for election of both technical and nontechnical subjects that will meet the needs of individual students.

Facilities. The Department of Industrial Arts is housed in the Industrial Arts Building and the Foundry, both being modern, well-lighted structures, with a combined floor space of approximately twenty-five thousand square feet. The principal subdepartments comprise Drafting, Woodwork and Furniture Construction, Millwork in Wood, Wood and Metal Finish-

ing, Pattern Making, Foundry, Forging and Welding, Machine Shop, and Sheet Metal. Each of these subdepartments is provided with individual shops of ample size and is equipped along modern and approved lines. These strictly departmental facilities are reinforced through the facilities and equipment of other departments, such as Art and Architecture, Agricultural Engineering (Farm and Automobile Mechanics), Technical Forestry, Mechanical Engineering, the School of Science, and the Corvallis Public Schools, all of which contribute toward the enrichment of curricular opportunities for industrial-arts students. The supervised teaching for those majoring in Industrial-Arts Education is done in the Corvallis Public Schools. The program for the last two years of work is administered jointly with the Department of Industrial Education (see SCHOOL OF EDUCATION).

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

IA 111. Pattern Making. Fall term, 3 hours.

Instruction and practice in the fundamentals of pattern making, with emphasis upon the relation of pattern making to drafting, design, foundry and machine-shop operations. One lecture; 6 laboratory hour-periods.

IA 112, 113. Methods in Woodworking. Winter and spring terms, 3 hours each term.

A course in woodworking, with special reference to tool technique, applied design, and craftsmanship in new and individual projects. Primarily an elementary course, with incidental reference to course outlines and methods of teaching, illustrated by the technique used. One lecture; 6 laboratory hour-periods.

IA 141. Foundry Practice. Fall term, 3 hours.

A study of the materials and processes employed in the production of metal castings of gray iron and nonferrous alloys. One lecture; 2 three-hour laboratory periods.

IA 152. Forging and Welding. Winter term, 3 hours.

Exercises and projects in bending, shaping, upsetting, and welding of iron; hardening and tempering steel; brazing and elementary acetylene and electric welding. Suggestions for care of equipment and for organization of instructional materials. One lecture; 8 laboratory hour-periods.

IA 163. Machine Shop. Spring term, 3 hours.

Exercises and projects involving instruction in the use of basic machine tools, with suggestions for courses of study and teaching. One lecture; 2 three-hour laboratory periods.

IA 220. Wood Turning. Winter term, 2 hours.

Thorough instruction in tool processes and lathe technique, executed through the designing, turning, and finishing of individual projects of merit. Prerequisite: IA 111, 112, or equivalent. One lecture, 5 laboratory hour-periods.

IA 225. Machine and Tool Maintenance (Wood Shop). Fall term, 2 hours.
Methods of care and maintenance of woodworking tools, machines,

and supplementary equipment. Band-saw brazing, saw sharpening, sharpening and setting of planer, jointer, tenoner, and shaper knives, and the repair and maintenance of hand tools. Prerequisite: IA 112. Two lectures; 4 laboratory hour-periods.

IA 240. Foundry Practice. Any term, 2 hours.

To acquaint engineering students with the importance of the foundry industry in the engineering field. A study of the methods employed, materials used, and the properties, constitution, and design of castings in gray iron, malleable iron, steel, and nonferrous alloys. Not open to students majoring in industrial arts. One lecture; 1 four-hour laboratory period.

IA 242. Foundry Practice. Spring term, 2 hours.

Advanced course. A continuation of IA 141 or IA 240, with emphasis on more advanced processes and a study of production methods. Six laboratory hour-periods.

IA 250. Forging and Welding. Any term, 2 hours.

Principles and practice of forging and welding, including gas, electric, thermit, and hammer welding, in line with modern manufacturing processes. Intended primarily for engineering students. Not open to students majoring in industrial arts. One lecture; 1 four-hour laboratory period.

IA 252. Blacksmithing. One term, 2 hours.

Advanced course. A continuation of IA 152 or IA 250, with emphasis on farm blacksmithing and repair problems. Six laboratory hour-periods.

IA 260. Machine Shop Practice. Any term, 2 hours.

Manipulation of basic machine tools with prescribed projects. Correlation of engineering, managerial, and manufacturing problems. One lecture; 1 four-hour laboratory period.

IA 261. Machine Shop Practice. Winter term, 2 hours.

Manipulation of basic machine tools with individual projects. Survey of machines used for quantity production. Prerequisite: IA 163 or 260. Six laboratory hour-periods.

IA 263. Machine Drawing. Spring term, 3 hours.

Application of the elements of machine design through the designing and drawing of machine parts, jigs, and special fixtures. Given in cooperation with the machine shop and intended primarily for industrial-arts students. One lecture; 8 drafting hour-periods.

IA 265. Machine and Tool Maintenance (Machine Shop). Fall term, 2 hours.

Maintenance and repair problems for mechanical equipment. Methods and procedures in tool and cutter sharpening. Prerequisite: IA 163 or 260. Two lectures; 4 laboratory hour-periods.

UPPER-DIVISION COURSES

IA 311. Mill Work—Machine Woodwork. Fall term, 3 hours.

A production course in machine woodworking in which jobs are selected and the class personnel so organized that the work follows closely those methods used in factory production. Prerequisite: IA 112. One lecture; 8 laboratory hour-periods.

- IA 312. Furniture Design.** Fall term, 2 hours.
A study of types and periods of furniture and an application of the principles of design to the technique of furniture and cabinet drawing. Prerequisite: GE 112, AA 295 or equivalent. One lecture, 5 laboratory hour-periods.
- IA 313, 314. Furniture Construction.** Winter and spring terms, 2 hours each term.
The designing and construction of furniture and cabinet work, according to the needs and ability of the individual student. Prerequisite: IA 131, 312. Six laboratory hour-periods.
- IA 315. Upholstering and Seat Weaving.** Spring term, 2 hours.
A study of typical upholstering processes including the construction of frames and foundations with and without springs. Seat and panel weaving with cane and fiber. Prerequisite: IA 112 or equivalent. One lecture; 5 laboratory hour-periods.
- IA 316. Wood and Metal Finishing.** Spring term, 2 hours.
A study of materials, processes, and methods of application on old and new work for both wood and metal surfaces; brush and spray application of all types of finishing materials; special attention to the modern lacquer and synthetic finishes for both furniture and automobile work. Prerequisite: IA 112 or equivalent. One lecture; 5 laboratory hour-periods.
- IA 321. Wood Turning.** Winter term, 1 hour.
Advanced course. A continuation of IA 220. Emphasis upon more intricate cuts and turning processes, special chucking devices and fancy turning. Prerequisite: IA 220. One three-hour laboratory period.
- IA 326. Fiber Furniture Weaving.** Winter term, 2 hours.
The construction of frames and the weaving of art-fiber furniture, with suggestions for the use of this material in public-school teaching. Prerequisite: IA 112 or equivalent. Six laboratory hour-periods.
- IA 332. Pattern Making.** Winter term, 2 hours.
Advanced course. A continuation of IA 111, with emphasis upon the problems in the making of patterns for more complicated machine parts and upon factors influencing production cost of these parts. Six laboratory hour-periods.
- IA 333. Carpentry.** Winter term, 3 hours.
The fundamentals of house carpentry, involving discussion of forms and foundations and the practical application of problems in framing, use of steel square, exterior and interior finish, and estimating. Prerequisite: IA 112. One lecture; 6 laboratory hour-periods.
- IA 343. Brass and Alloy Foundry.** Winter term, 1 hour.
Practice in brass and alloy foundry and the compounding of simple alloy mixtures. Prerequisite: IA 141 or 240. One lecture; 2 laboratory hour-periods.
- IA 350. Welding Practice.** Fall or spring term, 1 hour.
Advanced course. A study of the problems of electric and acetylene welding, with reference to intricate and specialized operations.

- Conducted upon an investigational basis. Prerequisite: IA 152 or 250. One lecture; 2 laboratory hour-periods.
- IA 353. **Ornamental Iron Work.** Spring term, 2 hours.
Craftsmanship in wrought-iron work. The designing and making of wrought-iron furnishings, lamps, light fixtures, etc. Prerequisite: IA 152 or 250. Six laboratory hour-periods.
- IA 354. **Heat Treating.** Fall term, 2 hours.
A study of methods and materials for heat treating and the practical application of the principles of hardening, tempering, annealing and case hardening. Prerequisite: IA 152 or IA 250. One lecture; 4 laboratory hour-periods.
- IA 357. **Metal Crafts.** Spring term, 2 hours.
Instruction in diversified metal crafts, including advanced sheet-metal work, metal spinning, and craft work in iron, copper, and Britannia metal. Processes applied to projects of practical value and artistic merit. Prerequisite: AA 295; IA 343, 353, 380, or equivalent. Six one-hour laboratory periods.
- IA 361. **Time and Motion Studies.** Winter term, 2 hours.
Use of time studies as an aid in management. Methods and procedure for determining time and motion standards. Prerequisite: IA 163 or 260. One lecture; 4 laboratory hour-periods.
- IA 362. **Machine Shop.** Spring term, 2 hours.
Manipulation of basic machine tools and the performance of operations requiring accomplished skills. Individual projects and problems. Application of jigs, fixtures, and dies used in modern manufacturing industries. Prerequisite: IA 261. Six laboratory hour-periods.
- IA 363. **Production Machine Work.** Fall term, 3 hours.
Problems in design of tools, jigs, fixtures, and dies in relation to quantity production. Individual problems and projects in tool design and die making. Prerequisite: IA 261. One lecture; 6 laboratory hour-periods.
- IA 370. **Practical Electricity.** Fall term, 3 hours.
Electrical wiring problems, including signal, light, and power circuits, and a study of underwriters' specifications for electrical installation; making electrical projects suited for use in public-school teaching. Prerequisite: Ph 203 or equivalent. One lecture; 6 laboratory hour-periods.
- IA 380. **Sheet-Metal Work.** Spring term, 3 hours.
Projects in sheet-metal work and pattern drafting involving the fundamental machine and hand-tool operations. A study of equipment and supplies needed in the school shop. Prerequisite: GE 112. One lecture; 6 laboratory hour-periods.
- IA 405. **Reading and Conference.** Terms and hours to be arranged.
Readings and investigations on special problems involving techniques and processes used in teaching industrial subjects.
- IA 407. **Seminar.** Winter term, 2 hours.
A study of current practices in industry and manufacturing, culminating in a term report on assigned subjects within the field of specialization. Prerequisite: IA 361, 363.

- IA 411. **Shop Planning and Organization.** (G) Spring term, 3 hours.
Planning and organizing the physical plant for different types of school shops. Prerequisite: Ed 315. One lecture; 6 laboratory hour-periods.
- IA 462, 463. **Production Engineering.** (G) Winter and spring terms, 3 hours each term.
Principles of management applied to production problems, stressing planning and despatching, personnel organization, and use of records. Prerequisite: IA 163 or 260, IA 361. One lecture; 6 laboratory hour-periods.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit. Graduate courses in industrial education are listed under SCHOOL OF EDUCATION.

- IA 505. **Reading and Conference.** Terms and hours to be arranged.
Readings and investigations, with reports, on special problems involving methods, techniques, and processes used in teaching industrial subjects.

School of Forestry

Faculty

GEORGE WILCOX PEAVY, M.S.F., Sc.D., LL.D., Dean of the School of Forestry; Professor of Forestry.

EARL GEORGE MASON, M.F., Assistant to the Dean; Professor of Forestry.

ADELAIDE LIDDLE, Secretary to the Dean.

Logging Engineering

HENRY RICHARD PATTERSON, JR., B.S., Professor of Logging Engineering; Head of Department.

CLARENCE JOSEPH BUDELIER, B.S., Instructor in Logging Engineering.

SAMUEL JOSEPH MAMMANO, B.S., Graduate Assistant in Logging Engineering.

JOSEPH FAIN SIMPSON, B.S., Graduate Assistant in Logging Engineering.

Technical Forestry

THURMAN JAMES STARKER, B.S., Professor of Forestry; Head of Department.

RICHARD SENG KEARNS, M.S., Assistant Professor of Forestry.

HARRY IRA NETTLETON, M.F., Assistant Professor of Forestry.

WILLIAM FRASER McCULLOCH, M.S., Assistant Professor of Forestry.

GEORGE HARWOOD SCHROEDER, M.S., Instructor in Forestry.

CLARENCE WILFRED RICHEN, B.S., Instructor in Forestry.

HENRY JAMES VAUX, M.S., Instructor in Forestry.

VERN MCDANIEL, M.S., Forest Nurseryman.

CHARLES MAURICE LORD, B.S., Graduate Assistant in Forestry.

CARL LOUGH HAWKES, B.S., Graduate Assistant in Forestry.

Wood Products

ROBERT MURRAY EVENDEN, M.S., Assistant Professor of Wood Products.

GLENN VOORHIES, M.S., Instructor in Wood Products.

DAVID LESTER LYNCH, B.S., Research Assistant in Wood Products.

General Statement

OREGON'S immense timber resources and the vast area of land within the state suited to no other use than the continued production of timber crops point to a very definite obligation on the part of the Oregon State School of Forestry. That obligation is to train men so to manage these great properties that the maximum product may be received from them, that this maximum production may be continuous, and that the product itself may be economically and most efficiently utilized. Oregon has an interest in forestry greater than any other state in the Union. The state has within its limits an area of 22,000,000 acres which, because of

peculiarities of soil, topography, and climate, appears to be permanently classified as forest land. The economic interests of the state unquestionably demand that this great basic resource should be kept at work producing that which it is best adapted to grow. Under present methods of utilization, Oregon has approximately 400 billion feet of standing timber, the largest amount possessed by any state, and an amount equaling fully 20 per cent of the total stand remaining in the United States.

Undergraduate Curricula. The School of Forestry offers major undergraduate curricula providing training for service in three distinct fields of the forestry profession: technical forestry, logging engineering, and wood products. In the freshman and sophomore years all students pursue the same program of studies, following which they may elect one of the three major curricula.

LOGGING ENGINEERING. The logging engineer is the product of the Pacific Northwest. Farsighted men in the industry, realizing the peculiar engineering requirements of their business, requested the school of forestry to train men for service in this branch of the lumber industry. Departments of logging engineering were organized in response to this request. The logging engineer is trained in timber appraising, in topographic surveying in rough country, in the preparation of topographic and relief maps from field data, in the location and construction of logging railroads, in bridge design, and in making topographic logging plans. The major curriculum in Logging Engineering, prepared in consultation with some of the ablest timbermen in the state, leads to the degree of Bachelor of Science in Logging Engineering.

TECHNICAL FORESTRY. In technical forestry the School has a dual responsibility. It has its obligation to the Federal Government in training men to be of service in helping to manage the National Forests, which now comprise an area of more than 160,000,000 acres. This is a very definite responsibility for the reason that the nation normally is cutting its timber crop four times as rapidly as a new crop is being grown. This fact points to a time, not far distant, when the country will be without reasonably priced timber. History has very clearly shown that adequate timber supplies have made a decided contribution to the general welfare. Closely related to the problem of an adequate timber supply is the problem of the use of uncultivated lands. The School has its more immediate obligation to the State of Oregon in preparing men to aid in solving the forestry problems which are involved chiefly in the reforestation and protection of the commonwealth's 10,000,000 acres of privately owned timberlands. An industry which normally has a pay roll of 47,000 men and which annually produces wealth in excess of \$100,000,000 is one which every economic and social consideration dictates should be conserved and perpetuated. This accomplishment is one of the chief objectives of the School of Forestry. The major curriculum leads to the degree of Bachelor of Science in Forestry.

A major option is offered in **FOREST RECREATION**, preparing students for professional and administrative service in the development and use of national and state forests for recreational purposes. Students in this option pursue the regular technical forestry curriculum except during the junior year when they follow a special program of study.

WOOD PRODUCTS. Sawing logs into boards can no longer be regarded as the sole objective of the sawmill man. His business involves such problems

as the design of his plant for efficient operation, the organization and management of the plant, kiln-drying of lumber, refinement of manufacture, human efficiency, and scientific merchandising. In response to the demands of the industry for men with basic training along these lines, a carefully selected group of subjects is offered young men desiring to enter the wood-products field. This major curriculum may be elected following the two basic years and leads to the degree of Bachelor of Science in Wood Products.

Requirements for Graduation. For graduation the student is required to complete 204 term hours of collegiate work. Every student before graduation must have completed the requirement of 9 term hours in each of two groups in arts and sciences. A minimum of 70 professional hours is required by the School of Forestry. No student will be recommended for graduation who has not had at least six months of practical field work which is in line with his objective and which has been accepted as satisfactory by the faculty of the School of Forestry.

Minors. Graduates of the School of Forestry often are employed in work that combines forestry with related fields. Students desiring training for such work may take a minor in the field of their choice. Minors most commonly selected by students majoring in technical forestry are fish and game management, grazing, soil conservation, recreation, entomology, and pathology; students majoring in wood products may take a minor in pulp and paper.

Five-Year Curriculum. The forester is being called upon more and more to serve as planner and coordinator in the use of wild land. It is not enough to determine merely the kind of use for which the land is inherently best suited. An appropriate balance must be sought between farm, pasture, forest, range, recreation, wildlife, watershed, and other uses, in the light of sound national requirements for products and service. In this light the forester who enters the practice of his chosen field must be better prepared in the basic and social sciences. To compete successfully, he should have a broader training. To meet this demand for men trained in the broader field, the five-year curriculum, including four years of undergraduate work leading to the degree of Bachelor of Science and a graduate year leading to the degree of Master of Forestry is strongly recommended (see page 325).

Advanced Degrees. The degrees of Master of Forestry and Master of Science are offered to graduates of the State College, or other colleges of equal rank, who have met the State College requirements for graduate study. The graduate program and thesis for the Master of Forestry degree are designed to fit the student for administrative or professional work in forestry, logging engineering, or wood products. The work for the Master of Science degree develops the student for research work in his particular field.

The degree of Forest Engineer is offered to graduates of the School of Forestry who have had at least five years of successful forestry practice following graduation. A satisfactory thesis must be presented and application for the degree must be made not later than January 1 preceding the commencement at which the degree is conferred.

The requirements for advanced degrees are given in full under GRADUATE DIVISION.

Summer Employment. The principal operations of the lumber industry of the United States are in the Pacific Northwest. This fact creates conditions which make it easy for students who are physically fit to find employment in the logging camps and in sawmills. The United States Forest Service has adopted a definite policy of employing forestry students during vacation periods. Because of this policy students expecting to engage in forestry work are enabled to obtain valuable field experience at reasonable pay without incurring the costs incident to traveling long distances.

Equipment. The School of Forestry is housed in the Forestry Building, a thoroughly modern three-story structure 80 feet wide by 136 feet long. The building contains roomy laboratories for work in silviculture, dendrology, mensuration, forest protection, wood technology, drafting, lumber grading, and logging devices and equipment. These laboratories are well equipped with appropriate instruments and apparatus. Through the courtesy of the manufacturers of logging equipment much valuable logging machinery has been accumulated for demonstration purposes. Lumber manufacturing concerns have generously supplied the School with wood products made from various species of Oregon trees. All available publications dealing with general forestry, logging, or lumber manufacture are provided for the use of students.

Actual field work, so essential in preparing men for work in forestry and logging engineering, is made possible by the fact that large areas of timbered lands are easily accessible from the State College. Some of the largest lumber manufacturing and pulp and paper plants in the Northwest are located within two or three hours' ride from Corvallis. Located as it is in the heart of the greatest timbered region of the United States, the School of Forestry possesses unique advantages for preparing men for service in professional forestry, logging engineering, and wood products.

A dry-kiln of commercial size, completely equipped for research in lumber seasoning, is available for use of students in wood products.

Lands. A State forest of 75,000 acres has been placed, by law, at the disposal of the School of Forestry for scientific management. This forested area lies within 75 miles of the State College. An area of 160 acres of logged and second-growth fir, presented to the School by the Spaulding Logging Company, lies within ten miles of the campus. Mrs. Mary J. L. McDonald of San Francisco gave the School 640 acres of timbered land for demonstration purposes. This land lies near Prospect in the Crater Lake region. Mrs. McDonald also made possible the acquisition of 4,000 acres of second-growth Douglas fir. This tract lies within seven miles of the campus and is known as the McDonald Forest. It is devoted to experimental work in reforestation. The area also serves as a base for laboratory work for surveying, mapping, timber estimating, and logging railroad location. A tract of cut-over land, 115 acres in extent, is devoted to arboretum and experimental planting purposes. A forest nursery on the arboretum tract, financed by the United States Forest Service and the State Board of Forestry, is operated under the supervision of the School. A full-time nurseryman is required for this project.

Through the generosity of John W. Blodgett, a prominent timberman, a tract of 2,400 acres of cut-over land in Columbia County has been presented to the School of Forestry. This area is to be devoted to research work in reforestation.

Curricula in Forestry

Logging Engineering
Technical Forestry
Wood Products

LOWER-DIVISION CURRICULUM

	Term hours		
	F	W	S
Freshman Year			
General Forestry (F 111).....	4	—	—
Forest Protection (F 112).....	—	4	—
Tree Identification (F 153).....	—	—	4
General Botany (Bot 201, 202).....	3	3	—
Forest Engineering (LE 123).....	—	—	3
Intermediate Algebra (Mth 100).....	4	—	—
Trigonometry (Mth 106).....	—	4	—
Elements of Statistics (Mth 109).....	—	—	4
English Composition (Eng 111, 112, 113).....	3	3	3
Military Science.....	1	1	1
¹ Physical Education.....	1	1	1
	16	16	16
Sophomore Year			
Mensuration (F 221, 222, 223).....	4	4	4
² Forest Engineering (LE 224, 225, 226).....	5	5	5
Qualitative Physics (Ph 211, 212).....	3	3	—
Outlines of Economics (Ec 212).....	3	—	—
Descriptive General Chemistry (Ch 130).....	—	—	3
National Government (PS 201).....	—	4	—
State and Local Governments (PS 202).....	—	—	4
Military Science.....	1	1	1
Physical Education.....	1	1	1
	17	18	18

UPPER-DIVISION CURRICULA³

LOGGING ENGINEERING

B.S. Degree

Junior Year

Bridge Design (LE 381).....	3	—	—
Logging Methods (LE 392).....	—	3	—
Logging Machine Design (LE 386).....	—	—	3
Engineering Geology (G 324).....	3	—	—
Silviculture (F 345).....	—	3	—
Commercial Woods (WP 331).....	—	—	3
Business Law (BA 256, 257).....	4	4	—
Accounting for Technical Students (BA 385, 386).....	—	3	3
Cost Accounting for Industrials (BA 494).....	—	—	3
Timber Transportation (LE 374).....	4	—	—
Electives.....	3	4	6
	17	17	18

Senior Year

Timber Transportation (LE 474, 475, 476).....	4	4	4
Logging Plans (LE 471, 472, 473).....	5	5	5
Forest Finance (F 411, 412).....	4	4	—
Forest Economics (F 413).....	—	—	4
Seminar (F 407).....	1	1	1
Electives.....	3	3	3
	17	17	17

Recommended Electives: Logging Equipment (LE 382), Lumber Seasoning (WP 494), Production Control (WP 312), Personnel Management (BA 414), Labor Problems (Ec 425), Transportation (Ec 435), Differential and Integral Calculus (Mth 201, 202, 203), Steam, Air, and Gas Power (ME 345), Dietetics (FN 225), Principles of Forest Entomology (Ent 321).

¹General Hygiene (PE 150), 2 term hours, is taken in place of physical education one term of the freshman year.

²Students expecting to major in wood products may take approved courses in lieu of this subject.

³In any of the curricula the student may take one or more minors in liberal arts and sciences according to his needs and interests. Students in the five-year curriculum (page 325) have a broader opportunity to elect additional courses according to individual aims and aptitudes.

TECHNICAL FORESTRY

B.S. Degree

Junior Year

	Term hours		
	F	W	S
Identification of Woods (WP 334).....	4	---	---
Wood Utilization (WP 330).....	---	---	4
Dendrology (F 353).....	4	---	---
Logging Methods (LE 392).....	---	3	---
Forest Pathology (Bot 315).....	---	3	---
Forest Soils (Sls 214).....	---	---	3
Geology (G 201).....	3	---	---
Silviculture (F 341, 342, 343).....	4	4	4
Principles of Forest Entomology (Ent 321).....	3	---	---
Accounting for Technical Students (BA 385).....	---	---	3
¹ Electives.....	3	3	3
	17	17	17

FOREST RECREATION OPTION

Silviculture (F 341, 343).....	4	---	4
Fish and Game Management (FG 351, 352, 353).....	3	3	3
Extempore Speaking (Sp 111).....	---	---	3
Landscape Architecture (LA 279).....	3	---	---
Plant Materials (LA 326).....	---	3	---
Landscape Architecture (LA 379).....	---	---	3
Forest Sanitation (Bac 361).....	3	---	---
¹ Electives.....	4	11	4
	17	17	17

Senior Year

Forest Finance (F 411, 412).....	4	4	---
Forest Economics (F 413).....	---	---	4
Wood Properties, Seasoning, and Grading (WP 397).....	---	4	---
Forest Management: Recreation (F 421), Forest Management: Regulation (F 422), Forest Management: Forest Plans (F 423).....	3	3	3
Forest Administration (F 311, 312, 313).....	3	3	3
Seminar (F 407).....	1	1	1
² Electives.....	6	3	6
	17	18	17

MINORS

Entomology			
Principles of Forest Entomology (Ent 321), Forest Entomology (Ent 322, 323).....	3	3	3
Advanced Forest Entomology (Ent 423).....	4	or (4)	or (4)
Entomological Nomenclature and Literature (Ent 352).....	---	3	---
Aquatic Entomology (Ent 341).....	---	---	3
Fish and Game Management			
Fish and Game Management (FG 351, 352, 353).....	3	3	3
Range and Pasture Botany (Bot 314).....	3	---	---
Management of Livestock on the Range (AH 419, 420).....	---	3	3
Management of Game Fish (FG 454).....	3	---	---
Management of Big Game (FG 457).....	---	3	---
Grazing			
Range and Pasture Botany (Bot 314).....	3	---	---
Systematic Botany (Bot 313).....	---	---	4
Principles of Plant Ecology (Bot 341).....	---	4	---
Principles of Plant Physiology (Bot 331).....	---	---	4
Range Improvement and Maintenance (FC 319).....	---	3	---
Management of Livestock on the Range (AH 419, 420).....	---	3	3

¹Recommended Electives: Geology (G 201, 202, 203), Systematic Botany (Bot 313), Principles of Plant Ecology (Bot 341), Animal Ecology (Z 311), Economic Ornithology (Z 321), Economic Mammalogy (Z 322), Biology of Fishes (Z 323), Graphics I (AA 111, 112), Wildlife Food Crops (FC 318).

²Recommended Electives: Modern Governments (PS 202), Business Law (BA 256, 257, 258), Range and Pasture Botany (Bot 314), Principles of Plant Ecology (Bot 341), Forest Entomology (Ent 323), Principles of Zoology (Z 130), Money and Banking (Ec 413), Transportation (Ec 435), American Literature (Eng 161), Camp Cookery (FN 250), Dietetics (FN 225), Climatology (Sls 319), Evolution and Eugenics (Z 314), International Relations (PS 417), Landscape Architecture (LA 379), Latin-American Relations (PS 418), International Trade (Ec 440), General Sociology (Soc 211), Business and Agricultural Statistics (BA 469), Regional Forestry (F 417, 418).

Pathology	Term hours		
	F	W	S
Elements of General Chemistry (Ch 101, 102, 103).....	3	3	3
Systematic Botany (Bot 313).....	4	---	4
Principles of Plant Pathology (Bot 351).....	4	---	---
Plant Pathological Technique (Bot 451).....	3	---	---
Microtechnique (Bot 472).....	---	3	---
Soil Conservation			
Range and Pasture Botany (Bot 314).....	3	---	---
Range Improvement and Maintenance (FC 319).....	---	---	3
Cover Crops and Soil-Erosion Prevention Plants (FC 320).....	---	---	2
Soil Conservation Engineering (AE 471).....	3	---	---
Soil Conservation (Sis 413).....	---	---	3

WOOD PRODUCTS

B.S. Degree

Junior Year

Identification of Woods (WP 334).....	---	4	---
Wood Utilization (WP 330).....	---	---	4
Wood Grading (WP 333).....	---	4	---
Accounting for Technical Students (BA 385, 386).....	3	3	---
Cost Accounting for Industrials (BA 494).....	---	---	3
Business Law (BA 256, 257).....	4	4	---
Transportation (Ec 435).....	---	---	4
Money and Banking (Ec 413).....	---	---	4
Timber Mechanics (WP 332).....	4	---	---
Extempore Speaking (Sp 111).....	3	---	---
Electives.....	3	3	3
	17	18	18

Senior Year

Forest Finance (F 411, 412).....	4	4	---
Forest Economics (F 413).....	---	---	4
Lumber Seasoning (WP 494).....	4	---	---
The Lumber Plant (WP 495).....	---	4	---
Lumber Merchandising (WP 496).....	---	---	4
Production Control (WP 312).....	---	---	4
International Trade (Ec 440).....	4	---	---
Seminar (F 407).....	1	1	1
Electives.....	3	7	4
	16	16	17

MINORS

Business Administration

Business Law (BA 256, 257).....	4	4	---
Accounting for Technical Students (BA 385, 386).....	3	3	---
Cost Accounting for Industrials (BA 494).....	---	---	3
Elements of Finance (BA 222).....	---	4	---
Investments (BA 463).....	---	---	3
Production Management (BA 413).....	4	---	---
Money and Banking (Ec 413).....	---	---	4
Thesis (BA 403).....	---	5	---
Business and Agricultural Statistics (BA 469).....	3	---	---

Pulp and Paper

Principles of Chemistry (Ch 201, 202, 203).....	4	4	4
Organic Chemistry (Ch 226, 227).....	5	5	---
Quantitative Analysis (Ch 231).....	5	---	---
Pulp and Paper Chemistry (Ch 460, 461, 462).....	3	3	3

¹Recommended Electives: General Advertising (SS 439), Steam, Air, and Gas Power (ME 345), Materials of Engineering (ME 316), Fuel and Lubricant Testing (ME 425), Differential and Integral Calculus (Mth 201, 202, 203), Business English (Eng 217), Merchandising and Selling (SS 436), Personnel Management (BA 414), Business and Agricultural Statistics (BA 469).

FIVE-YEAR UNDERGRADUATE AND GRADUATE CURRICULUM

B.S., M.F. Degrees

Freshman and Sophomore Years

See LOWER-DIVISION CURRICULUM, page 312.

Junior Year

	Term hours		
	F	W	S
Identification of Woods (WP 334)	---	4	---
Wood Utilization (WP 330)	---	---	4
Dendrology (F 353)	4	---	---
Logging Methods (LE 392)	---	3	---
Forest Pathology (Bot 315)	---	3	---
Forest Soils (Sls 214)	---	---	3
Geology (G 201)	3	---	---
Principles of Forest Entomology (Ent 321)	3	---	---
Accounting for Technical Students (BA 385)	---	---	3
Range and Pasture Botany (Bot 314)	3	---	---
Principles of Plant Ecology (Bot 341)	---	4	---
Extempore Speaking (Sp 111)	---	---	3
Electives	4	3	4
	17	17	17

Senior Year

Silviculture (F 341, 342, 343)	4	4	4
Forest Administration (F 311, 312, 313)	3	3	3
Fish and Game Management (FG 351, 352, 353)	3	3	3
Wood Properties, Seasoning, and Grading (WP 397)	---	4	---
Landscape Architecture (LA 279, 379)	3	---	3
Electives	4	3	4
	17	17	17

Graduate Year

Forest Management (F 421, 422, 423)	3	3	3
Forest Finance (F 411, 412)	4	4	---
Forest Economics (F 413)	---	---	4
Forest Management (F 521)	3	---	---
Silviculture (F 543)	---	---	3
Seminar (F 507)	1	1	1
Electives	4	7	4
	15	15	15

Logging Engineering

COURSES in logging engineering are designed to prepare men to deal with the woods problems peculiar to the lumber industry of the Pacific Northwest. Emphasis is placed upon the preparation of logging plans and the transportation of timber from the woods to the mills.

DESCRIPTION OF COURSES

- LE 123. Forest Engineering: Forest Surveying Instruments. Spring term, 3 hours.
Measurement of distance, direction, and elevation. Two recitations; 1 three-hour laboratory period.
- LE 224. Forest Engineering: Elements of Forest Mapping. Fall term, 5 hours.
Public land surveys. Mapping of definite area by approved methods. Drafting of field data. Free-hand lettering. Three recitations; 1 two-hour laboratory period; 1 four-hour field period.

- LE 225. **Forest Engineering: Forest Surveys.** Winter term, 5 hours.
Theory and use of engineer's transit and level. Survey of definite areas. Direct and indirect leveling. Theory of photographic surveying. Computing and plotting of field data. Three recitations; 1 two-hour laboratory period; 1 four-hour field period.
- LE 226. **Forest Engineering: Forest Surveys and Structures.** Spring term, 5 hours.
Theory and application of triangulation. Solar and polar observations. Forest improvements, including roads, trails, shelters, bridges, and communication systems. Three recitations; 1 two-hour laboratory period; 1 four-hour field period.

UPPER-DIVISION COURSES

- LE 370. **Field Work.** One to 6 hours.
Practical field work on some modern logging operation, performed by the student between the sophomore and junior years or between the junior and senior years. A satisfactory report based on approved outline must be submitted.
- LE 374. **Timber Transportation.** Fall term, 4 hours.
Survey of the problem; development of methods; small operations. Two lectures; 2 three-hour laboratory periods.
- LE 381. **Bridge Design.** Fall term, 3 hours.
Principles of the design of wood structures as applied to logging railroad practice. Stresses in simple trusses; details, specifications, and estimates for Howe truss. One recitation; 2 two-hour laboratory periods.
- LE 382. **Logging Equipment.** Winter term, 3 hours.
Rigging; types of logging locomotives, cars, and trucks; donkey engines, aerial equipment, skidders, loading and unloading devices; construction equipment, inclines, wire rope; fire prevention equipment; modern camp layouts. One lecture; 2 two-hour laboratory periods.
- LE 386. **Logging Machine Design.** Spring term, 3 hours.
Designing logging equipment, rigging, and tools; drawings of standard equipment constructed in camp shops. One lecture; 2 two-hour laboratory periods.
- LE 392. **Logging Methods.** Winter term, 3 hours.
Relation between logging and forest production; yarding, skidding, and loading logs; falling and bucking; relative merits of various methods. A nontechnical course. Three lectures.
- LE 471. **Logging Plans.** Fall term, 5 hours.
Control of area. Instrument control; surveying timbered area; preparation of topographic and relief maps; cruising. One recitation; 1 three-hour field period; 1 nine-hour field period.
- LE 472. **Logging Plans. (g)** Winter term, 5 hours.
Preparation of plans. Complete set of working plans for the area from data obtained in LE 471; plans showing logging-area limits, railroads, spurs, landings, machine settings, types of equipment to be em-

ployed, detailed cruise for each logging area; detailed costs per thousand and covering the entire area. Prerequisite: LE 471. Three recitations; 2 two-hour laboratory periods.

LE 473. **Logging Plans.** (g) Spring term, 5 hours.

Management control. Organization, planning, standardization of employment, wage payment, purchasing, stores, tool storage and issuing, plant layout, plant maintenance, production control. Prerequisite: LE 472. Three recitations; 2 two-hour laboratory periods.

LE 474. **Timber Transportation.** (g) Fall term, 4 hours.

Chute and flume construction; pole roads; motor trucks; railroads adapted to logging operations. Two lectures; 2 three-hour laboratory periods.

LE 475. **Timber Transportation.** Winter term, 4 hours.

Distinction between logging railroads and common-carrier railroads; grades; alignment; economic theory of location and construction. Prerequisite: LE 474. One lecture; 1 nine-hour field period.

LE 476. **Timber Transportation.** Spring term, 4 hours.

Structures and materials used in logging railroads, costs of surveys, construction, operation, and maintenance; bridge and tunnel construction. Prerequisite: LE 475. One lecture; 1 nine-hour field period.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

LE 501. **Research.** Terms and hours to be arranged.

LE 503. **Thesis.** Terms and hours to be arranged.

LE 505. **Reading and Conference.** Terms and hours to be arranged.

LE 507. **Seminar.** Terms and hours to be arranged.

Technical Forestry

BASIC training for the practice of forestry, particularly in the Northwest, is afforded in the courses in technical forestry. The scientific methods involved in measuring, tending, and utilizing the forest crop are stressed.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

F 111. **General Forestry.** Fall term, 4 hours.

Forest regions of the United States; the forests of the world, their distribution and importance; preliminary survey of the whole field of forestry. Origin and distribution of our public domain; development of forestry in the United States; forestry as a timber-production problem; forestry as a land problem; present status of forestry legislation. May be elected by students in other schools. Four lectures or recitations.

- F 112. **Forest Protection.** Winter term, 4 hours.
Fire suppression; fire preparedness; fire administration. Three lectures or recitations; 1 three-hour laboratory period.
- F 153. **Tree Identification.** Spring term, 4 hours.
Field characteristics and classification of principal timber trees of the Pacific Coast, their commercial range, local occurrence, size, growth, form; climate, soil, and moisture requirements; resistance; relative tolerance and reproduction. Two lectures; 1 two-hour laboratory period; 1 three-hour field period.
- F 211. **General Forestry.** Fall term, 3 hours.
Sustained yield; forest protection; lumbering; tree identification. Three recitations.
- F 212. **Forest Administration.** Winter term, 3 hours.
The administrative control of the National Forests; the policies of the United States Forest Service in regard to fire, trespass, timber, grazing, lands, research, public relations, and accounts. Three recitations.
- F 221. **Mensuration: Felled Timber and Its Products.** Fall term, 4 hours.
The cubic contents; scaling and grading logs; piece and cord measurements. Three recitations; 1 three-hour field or laboratory period.
- F 222. **Mensuration: Standing Timber.** Winter term, 4 hours.
The volume of individual trees; timber cruising; timber appraisals. Three recitations; 1 three-hour field period.
- F 223. **Mensuration: Timber Growth.** Spring term, 4 hours.
The growth of even-aged stands; growth of many-aged stands; growth of individual trees. Three recitations; 1 three-hour field period.

UPPER-DIVISION COURSES

- F 311. **Forest Administration: Policy.** Fall term, 3 hours.
Development of land policies in the United States; state and Federal forest policies; private forestry. Three recitations.
- F 312. **Forest Administration: Laws.** Winter term, 3 hours.
A critical survey of state forest laws; the Federal laws dealing with forest lands and their administrative interpretation. Three lectures.
- F 313. **Forest Administration: Control.** Spring term, 3 hours.
Personnel work, and financial control on public and private forest property. Three lectures.
- F 341. **Silviculture: Silvics.** Fall term, 4 hours.
The life history of trees; tolerance; soil requirements; climate; fire resistance; forest description; forest ecology and forest types. Three recitations; 1 three-hour laboratory period.
- F 342. **Silviculture: Systems of Cutting.** Winter term, 4 hours.
Marking trees for cutting; improvement of woodlands; protection as related to silviculture; natural and artificial regeneration. Three recitations; 1 three-hour laboratory period.

- F 343. **Silviculture: Seeding and Planting.** Spring term, 4 hours.
Collection and storage of forest tree seeds; nursery practice; field planting. Inspection of commercial and Forest Service nurseries. Three recitations; 1 three-hour laboratory period.
- F 345. **Silviculture.** Winter term, 3 hours.
Silvicultural practices requisite for insuring reproduction following logging; seed trees; selection cuttings; justifiable regeneration costs. For students in logging engineering. Three lectures or recitations.
- F 353. **Dendrology.** Fall term, 4 hours.
Classification and identification of forest trees, including study of forest ecology and taxonomy; silvical characteristics, and distribution of commercial species; life history and requirements of trees. Two recitations; 2 two-hour laboratory periods.
- F 370. **Field Work.** One to 6 hours.
Practical field work performed by the student between the sophomore and junior years or between the junior and senior years, in connection with some technical forestry work carried on by private interests, the State or by the Forest Service. A report based on an approved outline must be submitted.
- F 407. **Seminar.** Terms to be arranged, 1 hour each term.
Preparation and discussion of reports of special subjects; current forestry and lumbering literature; labor problems. Each student is required to prepare a thesis on some assigned subject. One two-hour conference period.
- F 411, 412. **Forest Finance.** (g) Fall and winter terms, 4 hours each term.
Investments and costs in forest production; value of forestry property for destructive lumbering and for continued timber production; stumpage values; comparison of forest values with agricultural values; timber bonds. Four lectures or recitations.
- F 413. **Forest Economics.** (g) Spring term, 4 hours.
Survey of the forest resources of the world. Forestry and community stability. The lumber industry and its problems. Forestry in the future economic life of the country. Four lectures or recitations.
- F 417, 418. **Regional Forestry.** Fall and winter terms, 2 hours each term.
Survey of the field of technical forestry. Of special interest to those who plan to enter the Federal or State Forest Service. Two recitations.
- F 421. **Forest Management: Recreation.** (g) Fall term, 3 hours.
Forest recreation, its importance and nature; planning the use of the forest for recreational purposes, dovetailing the recreational use with other forest uses. Three recitations.
- F 422. **Forest Management: Regulation.** (g) Winter term, 3 hours.
Determination of rotation; regulation of a forest. Three recitations.
- F 423. **Forest Management: Forest Plans.** (g) Spring term, 3 hours.
The selection of forest lands; forest organization and working plans. Three recitations.

GRADUATE COURSES

Courses numbered 400-499 and designated (G) or (G)
may be taken for graduate credit.

- F 501. **Research.** Terms and hours to be arranged.
- F 503. **Thesis.** Terms and hours to be arranged.
- F 505. **Reading and Conference.** Terms and hours to be arranged.
- F 507. **Seminar.** Terms and hours to be arranged.
- F 511. **Forest Economics.** One term, 3 hours.
The taxation of forest lands, the effects of taxation on lumbering and sustained yield. Prerequisite: F 411, 412, 413 or equivalent. Three lectures.
- F 512. **Forest Economics.** One term, 3 hours.
Forest fire damage appraisal, insurance of timberlands. Prerequisite: F 411, 412, 413, or equivalent. Three lectures.
- F 521. **Forest Management.** One term, 3 hours.
Forest fire plans, their preparation and execution. Prerequisite: F 421, 422, 423, or equivalent. Three lectures.
- F 541, 542, 543. **Silviculture.** Three terms, 3 hours each term.
Advanced approach in silvics in the treatment of stands. Research methods used in silviculture and sample-plot work. Prerequisite: F 221, 222, 223; F 341, 342, 343. One lecture; 1 four-hour laboratory period.

Wood Products

COURSES in wood products are designed to meet the needs of men who desire to prepare themselves for service in the wood-manufacturing industry. Especial attention is given to manufacturing conditions existing in the Pacific Northwest.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

- WP 312. **Production Control.** Spring term, 4 hours.
Discussion of production-control systems as applied to sawmills. Three lectures; 1 two-hour laboratory period.
- WP 330. **Wood Utilization.** Spring term, 4 hours.
Adaptation to commercial uses; chief wood-using industries and relative amounts of principal commercial species used annually; adaptation of wood to special purposes; substitutes for wood; minor uses of wood; by-products. Three lectures; 1 two-hour laboratory period.
- WP 331. **Commercial Woods.** Spring term, 3 hours.
Designed primarily to meet requirements of woodworkers and engineers. Identifying woods commonly used. Seasoning, gluing, and preservation of woods. Two lectures; 1 two-hour laboratory period.

- WP 332. **Timber Mechanics.** Fall term, 4 hours.
Mechanical properties of principal commercial timber; obtaining strength data; use of strength data. Two recitations; 2 two-hour laboratory periods.
- WP 333. **Wood Grading.** Winter term, 4 hours.
A study of basic grades and standard commercial grading rules. Two lectures; 2 two-hour laboratory periods.
- WP 334. **Identification of Woods.** Winter term, 4 hours.
Study of wood structure; identification of important commercial woods; physical and structural properties. Two lectures; 2 two-hour laboratory periods.
- WP 397. **Wood Properties, Seasoning, and Grading.** Winter term, 4 hours.
An abbreviated course for students not majoring in wood products. Covers mechanical and physical properties of wood, principles of lumber seasoning, and lumber grading. Three lectures; 1 two-hour laboratory period.
- WP 494. **Lumber Seasoning.** (g) Fall term, 4 hours.
Air seasoning. Fundamental principles underlying seasoning and kiln-drying of woods; kiln-drying methods and their merits; effect of kiln-drying upon wood structure; types of kilns; study of recording instruments used. Field trips required. Prerequisite: F 331. Two lectures; 2 two-hour laboratory periods.
- WP 495. **The Lumber Plant.** (g) Winter term, 4 hours.
Discussion of various types of modern mills; electrical versus steam mills; machinery and power of small and large plant; lumber-handling devices. Examination of up-to-date mills and reports on them. Three lectures; 1 two-hour laboratory period.
- WP 496. **Lumber Merchandising.** (g) Spring term, 4 hours.
Lumber salesmanship; selling agencies; trade associations; standardization of sizes and grades; trade-marking; advantages of wood construction. Prerequisite: WP 495. Four lectures.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G)
may be taken for graduate credit.

- WP 501. **Research.** Terms and hours to be arranged.
- WP 503. **Thesis.** Terms and hours to be arranged.
- WP 505. **Reading and Conference.** Terms and hours to be arranged.
- WP 507. **Seminar.** Terms and hours to be arranged.

School of Home Economics

Faculty

AVA BERTHA MILAM, M.A., Dean of the School of Home Economics.

JEAN CLARK ROSS, B.S., Secretary.

Clothing, Textiles, and Related Arts

ALMA CATHERINE FRITCHOFF, M.A., Professor of Clothing, Textiles, and Related Arts; Head of Department.

EDITH RHYNE, M.A., Associate Professor of Clothing, Textiles, and Related Arts.

ELIZABETH WILEY, M.A., Associate Professor of Clothing, Textiles, and Related Arts.

GERTRUDE STRICKLAND, B.S., Assistant Professor of Clothing, Textiles, and Related Arts.

BERNICE BAND, M.A., Assistant Professor of Clothing, Textiles, and Related Arts.

HELEN PEER ROBINSON, Instructor in Clothing, Textiles, and Related Arts.

Extension Methods

FRANK LLEWELLYN BALLARD, B.S., Professor of Extension Methods.

AZALEA LINFIELD SAGER, M.A., Professor and State Leader of Home Economics Extension.

Foods and Nutrition

JESSAMINE CHAPMAN WILLIAMS, M.A., Professor of Foods and Nutrition; Head of Department.

MARGARET LOUISE FINCKE, Ph.D., Associate Professor of Foods and Nutrition.

*AGNES KOLSHORN, M.A., Assistant Professor of Foods and Nutrition.

EVRA ALTA GARRISON, M.S., Assistant Professor of Foods and Nutrition.

LILLIAN CATHERINE TAYLOR, M.A., Assistant Professor of Foods and Nutrition.

VIVIAN MAE ROBERTS, M.S., Instructor in Foods and Nutrition.

CATHERINE HEDWIG STAINKEN, B.S., Instructor in Foods and Nutrition.

HELEN FEIKERT, B.S., Graduate Assistant in Foods and Nutrition.

Home Economics Education

FLORENCE BLAZIER, Ph.D., Professor of Home Economics Education; Head of Department

BERTHA KOHLHAGEN, B.S., State Supervisor and Teacher Trainer in Vocational Home Economics.

RUTH MORRIS FOREST, M.S., Assistant State Supervisor in Vocational Home Economics.

MERLE BONNEY DAVIS, B.S., Critic Teacher in Home Economics Education.

LOIS KNAPP CHRISTIAN, B.S., Critic Teacher in Home Economics Education.

ANN McCLEW, B.S., Critic Teacher in Home Economics Education.

*On leave of absence.

Home Economics Research

MAUD MATHES WILSON, A.M., Professor in Charge.

Household Administration

*SARA WATT PRENTISS, M.A., Professor of Child Development and Parent Education; Head of Department.

VERA HASKELL BRANDON, Ph.D., Professor of Child Development; Acting Head of Department.

C. WINIFRED HARLEY, Associate Professor of Household Administration.

ZELTA FEIKE RODENWOLD, M.S., Assistant Professor of Home Economics Extension; Director of Home Economics Radio Programs.

RUTH GILL HAMMOND, M.A., Assistant Professor of Household Administration.

ELEANOR MAY SPIKE, M.S., Assistant Professor of Household Administration; Director of Home Management Houses.

BUENA MARIS, A.B., Instructor in Household Administration.

DORRIS JACQUELINE BRIER, B.S., Instructor in Household Administration.

HELEN FIFER, B.S., Graduate Assistant in Household Administration.

CAROLYN GASKINS SULLIVAN, B.S., Graduate Assistant in Household Administration.

ELIZABETH ALICE CAMERON, B.S., Graduate Assistant in Household Administration.

Institution Economics

MELISSA HUNTER, M.A., Professor of Institution Economics; Head of Department; Director of Dormitories.

GEORGIA CHAPMAN BIBEE, B.S., Assistant Professor of Institution Economics; Supervisor of Memorial Union Dining Service.

JESSIE AUDREY HARPER, B.S., Graduate Assistant in Institution Economics.

Home Economics Extension†

AZALEA LINFIELD SAGER, M.A., Professor and State Leader of Home Economics Extension.

LUCY ADA CASE, M.A., Associate Professor of Foods and Nutrition; Extension Specialist in Nutrition.

MAUD MUELLER MORSE, M.A., Assistant Professor and Extension Specialist in Child Development and Parent Education.

IZOLA DOROTHY JENSEN, M.A. Assistant Professor and Extension Specialist in Community Social Organization.

JOAN PATTERSON, B.Arch., Instructor and Extension Specialist in Home Management.

EILEEN PERDUE BUXTON, B.S., Acting Specialist in Clothing and Textiles.

*On leave of absence.

†Extension work in home economics is a part of the Federal Cooperative Extension Service. The resident instruction and extension staffs cooperate closely in the upbuilding of Oregon home and family life.

General Statement

ALL problems of the home and family life fall within the field of home economics. The School of Home Economics seeks to serve, directly or indirectly, every Oregon home. Through resident teaching the School makes its direct contribution to the life of the commonwealth. Students are trained for the responsibilities of homemaking and parenthood, for education, administration and management, and for other work in home economics and allied fields. Through research and extension, closely coordinated with the resident teaching, effort is constantly directed toward the solution of home problems.

Training in homemaking, important in the education of every young woman, is fundamental in all the work of the School of Home Economics. A distinct curriculum, Curriculum A, provides especially for those whose main object in attending college is preparation for home life. Students in this curriculum may also prepare for teaching and other earning fields related to home economics. Courses in English, art, history, modern languages, science, and other departments of general training, supplement the technical courses in this curriculum, which aims to provide a liberal as well as a technical education. The true homemaker not only must be trained in the science, the art, and the economics of the household, but also must have a well-rounded personality, with intelligent interests, trained judgment, and cultivated tastes, enabling her to solve the problems of the changing modern home, with its complex social and civic relationships. Similar in objective to Curriculum A, Curriculum C is planned for students who enter the School of Home Economics at the beginning of the junior year following two years of general lower-division work. The student's four-year program is thus divided into two distinct parts, two years devoted to general studies and two years devoted largely to home economics.

In Curriculum B, the work is largely prescribed for the first two years. In the junior and senior years the student may specialize in some field, such as home-economics teaching, home-economics extension, hospital dietetics, institutional management, or commercial fields of clothing or foods. Each of these in turn offers a variety of possibilities. Teaching positions include home economics in secondary schools, colleges, and universities, and club work and adult extension from state colleges.

For students who are undecided which curriculum they wish to enter, or who do not plan to become candidates for a degree, programs of study are outlined covering one year or more of work and including those subjects of most value to the individual, rather than as preparation for advanced study.

For homemakers, special students, and students registered in other schools on the campus, the School offers service and special courses. Minors in home economics may be outlined for students in other schools.

Ninth Annual Home Interests Conference. The ninth annual Oregon Conference for the Study of Home Interests, cooperatively conducted at the State College by the School of Home Economics and the Home Economics Extension Service, will be held February 7-10, 1939. The State Home Economics Extension Council also will meet at this time.

Home Economics Research. Home economics research is concerned with all problems of the modern home. Funds available for home eco-

nomics research, including research in the Agricultural Experiment Station, are now being used for studies in the fields of nutrition and housing. The major project now under way in the field of housing is that of the standardization of dimensions of space units of the house and its equipment. Nutrition studies now under way deal with the Vitamin B content of frozen peas, the availability of phosphorus in wheat and oatmeal, and ascorbic acid metabolism of college students.

Training in methods of research is included in graduate courses offered in the departments of Foods and Nutrition; Clothing, Textiles, and Related Arts; Household Administration; Institution Economics; and Home Economics Education.

Home Economics Extension. The School of Home Economics cooperates with the Federal Cooperative Extension Service of the State College and with the United States Department of Agriculture in the upbuilding of Oregon home and family life. Members of the home economics faculty prepare correspondence courses in home economics subjects which form a part of the program of the divisions of Federal Cooperative Extension and General Extension. The resident-instruction staff also teach courses in home economics in the annual summer short course for 4-H Club members.

Special courses in home economics extension are described under the Department of Extension Methods.

Major Curricula. Four-year curricula leading to the bachelor's degree are offered in the School of Home Economics as follows:

CURRICULUM A, combining a general cultural education with training in the principles of homemaking. Students wishing to teach home economics, do commercial work in the clothing field, or enter home economics journalism, may register in this curriculum.....Pages 336-337

CURRICULUM B, preparing for homemaking and for home economics teaching, institutional management, extension work, and commercial fields, especially in foods or textiles. In the first two years the work is prescribed, giving the necessary foundation for any of the professional fields. In the last two years opportunity for specialization is afforded. Completion of this curriculum meets the requirements of the Federal Board for Vocational Education for the Smith-Hughes teacher.....Pages 337-338

A two-year upper-division curriculum leading to the bachelor's degree is offered in the School of Home Economics as follows:

CURRICULUM C, a general curriculum in home economics extending through the junior and senior years, based on a liberal-arts curriculum completed in lower division or junior college. Students must complete during the junior and senior years enough courses in home economics to meet the institutional requirements for a major in home economics...Pages 338-339

Requirements for Graduation. For the B.A. or B.S. degree in home economics a minimum of 192 term hours must be completed. The work should be distributed as suggested by the following curricula. At least 45 term hours in upper-division courses are required. Transfers from other institutions are required to complete at least 18 term hours in home economics at this institution. For the B.A. degree, 36 term hours in arts and letters must be completed, including requirements in a foreign language, preferably French or German. See pages 72-73.

Graduate Work. All departments of the School of Home Economics offer graduate work leading to the master's degree (M.A., M.S.). For the requirements for graduate work and advanced degrees see GRADUATE DIVISION.

Facilities. Modern facilities for carrying on all phases of home-economics work are provided in the Home Economics Building, the Home

Management Houses, the Nursery School, and the Memorial Union dining service.

The Foods and Nutrition Department has several food laboratories, including a nutrition laboratory, animal laboratories, and facilities for instruction in family cookery and table service.

The Department of Clothing, Textiles, and Related Arts has seven laboratories provided with modern equipment.

The Institution Economics Department is unusually well provided with space and equipment. The Memorial Union dining-room facilities afford opportunity for training in different types of food service including table d'hote, tea room, banquet and catering service. The central kitchen and cold storage rooms are equipped with modern labor-saving and power equipment. The halls of residence both for men and for women are available for study of housing problems.

The School of Home Economics operates three home management houses, Kent, Withycombe, and Dolan, and the Nursery School, in Covell House. These four houses are located on or near the campus.

The supervised teaching is carried on in the public schools of Corvallis, the plant and equipment of the high schools being used by the student-teacher group.

The Home Economics Extension Department, through which the School of Home Economics maintains direct relationship with the homemakers and the 4-H Club girls of the state, provides guidance to undergraduate and graduate students who wish to specialize in this field. The department supervises apprenticeship training in counties located near the State College.

Curricula in Home Economics¹

B.A., B.S. Degrees

Curriculum A

	Term hours		
	F	W	S
Color and Composition (AA 160, 161).....	3	3	or (3)
² Landscape Architecture (LA 279) or House Planning (AA 178).....	(3)	or (3)	or 3
³ Group requirement in Science group.....	3	3	3
English Composition (Eng 111, 112, 113).....	3	3	3
Introduction to Home Economics (HAd 101).....	1	---	---
History of Western Civilization (Hst 202, 203).....	---	3	3
Social Ethics (PE 131).....	---	---	---
⁴ Appreciation of Music (Mus 121).....	1	---	---
General Hygiene (PE 150).....	2	---	---
Physical Education.....	---	1	1
⁵ Electives.....	2	3	3
	15	16	16

¹See Suggested Elective Combinations, pages 339-341.

²Landscape Architecture (LA 279), 2 hours, and House Planning (AA 178), 2 hours, may be substituted for either of the three-hour courses listed.

³May be deferred to sophomore year.

⁴Mus 122, 123 are recommended electives.

⁵Students who have had no previous clothing or foods courses are required to take CT 111 in their freshman year as a prerequisite to CT 211, and FN 111 as a prerequisite to FN 211.

	Term hours		
	F	W	S
Sophomore Year			
Foods (FN 211, 212, 213).....	3	3	3
Textiles (CT 250).....	3	---	---
Clothing (CT 211, 212).....	---	3	3
History of Western Civilization (Hst 201).....	3	---	---
Literature.....	---	3	3
Outlines of Psychology (Psy 211).....	6	---	---
Dietetics (FN 225).....	---	3	---
Outlines of Economics (Ec 211).....	---	---	4
Physical Education.....	1	1	1
Electives.....	---	4	3
	16	17	17
Junior Year			
Literature.....	3	---	---
General Sociology.....	---	4	---
Food Purchasing (FN 411).....	---	---	3
House Furnishing (CT 331).....	3	---	---
Household Management (HAd 340).....	---	4	---
Political Science.....	---	---	3
Electives.....	10	8	10
	16	16	16
Senior Year			
Electives in home economics (upper division).....	7	---	---
Child Development (HAd 411, 412).....	3	3	---
Home Management House (HAd 350).....	---	---	5
Electives.....	6	13	11
	16	16	16

Curriculum B

Freshman Year			
Color and Composition (AA 160, 161).....	3	3 or (3)	
¹ Landscape Architecture (LA 279).....	(3) or (3)	3 or (3)	
History of Western Civilization (Hst 202, 203).....	---	3	3
² Elementary General Chemistry (Ch 101, 102), Elements of Organic Chemistry (Ch 121).....	3	3	4
English Composition (Eng 111, 112, 113).....	3	3	3
Social Ethics (PE 131).....	---	---	---
³ Appreciation of Music (Mus 121).....	1	---	---
Introduction to Home Economics (HAd 101).....	1	---	---
General Hygiene (PE 150).....	2	---	---
Physical Education.....	---	1	1
⁴ Electives.....	2	3	2
	15	16	16
Sophomore Year			
Foods (Preparation, Marketing, Meal Planning) (FN 220, 221, 222).....	3	3	3
Textiles (CT 250).....	3	---	---
Clothing (Selection) (CT 211), Clothing (Construction) (CT 212).....	---	3	3
Elements of Biochemistry (Ch 250).....	3	---	---
Elementary Human Physiology (Z 211).....	---	---	5
Outlines of Psychology (Psy 211).....	---	6	---
History of Western Civilization (Hst 201).....	3	---	---
Extempore Speaking (Sp 111) or Elementary Journalism (J 111).....	---	3	---
Physical Education.....	1	1	1
Electives.....	4	1	4
	17	17	16

¹Landscape Architecture (LA 279), 2 hours, and House Planning (AA 178), 2 hours, may be substituted for either of the three-hour courses listed.

²May be deferred to sophomore year.

³Mus 122, 123 are recommended electives.

⁴Students who have had no previous clothing courses are required to take CT 111 in their freshman year as a prerequisite to CT 211.

	Term hours		
	F	W	S
Junior Year			
Literature	3	3	3
Costume Design (CT 311)	3	—	—
Clothing (CT 312) or Applied Design (CT 335)	—	3	—
Outlines of Economics (Ec 211)	4	—	—
General Bacteriology (Bac 204)	—	—	3
Household Management (HAd 340)	—	—	4
Nutrition (FN 320, 321)	—	3	3
Electives	6	6	4
	16	15	17

Senior Year			
Child Development (HAd 411, 412)	3	3	—
Family Relationships (HAd 422)	2	—	—
Home Management House (HAd 350)	—	5	—
General Sociology (Soc 211)	—	—	4
House Furnishing (CT 331)	3	—	—
Political Science	—	—	3
Electives	8	7	9
	16	15	16

Curriculum C

A minimum of 45 term hours in home economics is required. Of the required 45 term hours 38 are prescribed; the remaining 7 elective term hours are to be chosen from the options listed.

During the freshman and sophomore years the student must have taken an approved program in arts and sciences leading to the Junior Certificate or equivalent. Courses in home economics need not have been taken, but students who find it possible to take a year (9 term hours) of foods or of clothing and textiles, or both, will be enabled to elect a wider range of advanced courses in home economics during their junior and senior years.

	Term hours		
	F	W	S
Junior Year			
Dietetics (FN 225)	3	—	—
Foods (FN 211, 212, 213) or (FN 220, 221, 222)	3	3	3
Textiles (CT 250), Clothing (CT 211, 212) or Clothing Selection (CT 217), Clothing Selection and Construction (CT 218, 219)	3	3	3
House Furnishing (CT 331 or CT 231)	(3)	or 3	or (3)
Outlines of Economics (Ec 211)	—	4	—
Outlines of Psychology (Psy 211)	6	—	—
Electives	1	3	10
	16	16	16

Senior Year			
Home Economics courses to be chosen from the options listed below	3	—	4
Household Management (HAd 340)	4	—	—
Child Development (HAd 411, 412)	3	3	—
Home Management House (HAd 350)	—	—	5
General Sociology (Soc 212)	—	3	—
Political Science	—	3	—
Electives	6	7	7
	16	16	16

¹Or HAd 320, 425.

Senior Options

From the following options 7 term hours must be chosen in order to complete the minimum of 45 required term hours in home economics.

	Term hours
Nutrition (FN 320, 321).....	6
Food Purchasing (FN 411).....	3
Nutrition in Disease (FN 420).....	3
Experimental Cookery (FN 435).....	3
Readings in Nutrition (FN 481).....	3
Child Development (HAd 413).....	3
Nursery School (HAd 425).....	3
Costume Design (CT 311).....	3
Clothing (CT 312).....	3
Applied Design (CT 335).....	3
Applied Design (CT 435).....	3
Advanced Textiles (CT 450).....	3
Dress Design (CT 411).....	3
Commercial Clothing (CT 412).....	3
House Furnishing (CT 431).....	3
Family Relationships (HAd 422).....	2
Problems of the Consumer-Buyer (HAd 442).....	2
Economic Problems of the Family (HAd 441).....	3
Household Equipment (HAd 330).....	3
House Planning in Relation to Function (HAd 443).....	2
Quantity Cookery and Catering (IEc 311).....	3
Institutional Organization and Administration (IEc 430).....	2
Institutional Equipment (IEc 420).....	3
Institutional Marketing (IEc 440).....	2
Institution Experience (IEc 450).....	4

Suggested Elective Combinations

Home economics students wishing to prepare for certain earning phases of home economics may elect any of the following groups of courses.

COMMERCIAL WORK IN CLOTHING, TEXTILES, AND RELATED ARTS

For students interested in commercial work in the fields of clothing, textiles, and related arts the following courses are suggested.

	Term hours
French	12
General Chemistry	9
Lower-Division Drawing	6
Clothing (CT 312).....	3
Dress Design (CT 411).....	3
Commercial Clothing (CT 412).....	3
House Furnishing (CT 431).....	3
Applied Design (CT 435).....	3
Merchandising and Selling (SS 436).....	3
Educational Psychology (Ed 312).....	3
Principles of Teaching (Ed 313).....	3
Journalism	3
Speech	3
Advanced Textiles (CT 450).....	3
Radio Speaking (Sp 234).....	3

COMMERCIAL WORK IN FOODS AND NUTRITION

For students in Curriculum B preparing for commercial positions, such as journalism, radio, or food demonstration work, the following courses are required:

	Term hours
¹ Extempore Speaking (Sp 111).....	3
¹ Elementary Journalism (J 111).....	3
Experimental Cookery (FN 435).....	3
Food Purchasing (FN 411).....	3
Food Management (FN 412).....	3
Household Equipment (HAd 330).....	3
Educational Psychology (Ed 312).....	3
¹ General Bacteriology (Bac 204, 205).....	6

¹One of these is required of all students in Curriculum B.

	Term hours		
	F	W	S
Voice and Diction (Sp 120)	3	---	---
Radio Speaking (Sp 234)	3	---	---
Nutrition of the Infant and Child (FN 421)	3	or 3	or 3
Quantity Cookery and Catering (IEc 311)	3	---	---
Economic Problems of the Family (HAd 441)	---	3	---
Principles of Teaching (Ed 313)	3	or 3	or 3
Merchandising and Selling (SS 436)	---	3	---

CHILD DEVELOPMENT AND NURSERY-SCHOOL WORK

For students specializing in child development, parent education, or nursery-school work, the following courses are required either in upper-division or graduate years:

	Term hours
Child Development (HAd 413)	3
¹ Family Relationships (HAd 422)	2
Parent Education (HAd 423)	2
Nursery School (HAd 425)	3
Clothing for Children (CT 320)	3
Nutrition of the Infant and Child (FN 421)	3
Educational Psychology (Ed 312)	3
Statistical Methods in Education (Ed 417)	3
Adult Education in Home Economics (HEd 415)	3
Adolescence: Growth and Development of the Individual (Ed 420)	3
Character Education (Ed 490)	3
Adult Education (Ed 497)	3
² Elementary Psychology Laboratory (Psy 204, 205, 206)	3
³ Reading and Conference (Ed 405)	3
Social Psychology (Soc 474)	3
Speech Defects (Sp 250)	3

HOME ECONOMICS TEACHING

For students preparing to teach home economics the following sequence is suggested. Additional electives should be taken to meet the requirements for certification. For state teacher's certificate, 6 hours of general psychology should be taken in the sophomore year as it is prerequisite to upper-division courses in education. Psy 211 meets this requirement. Psy 201, 202, 203 also meets the Social-Science group requirement.

Students wishing to qualify for a state teacher's certificate should elect in prescribed education courses 12 term hours in the junior year, at least 11 term hours in the senior year, and 6 term hours in the graduate year. These requirements for certification are not requirements for graduation in home economics. For those who wish to teach in Smith-Hughes or other subsidized departments Curriculum B is required including Sp 111 and CT 312.

	Term hours		
	F	W	S
Educational Psychology (Ed 312)	3	---	---
Secondary Education (Ed 311)	3	---	---
Principles of Teaching (Ed 313)	---	3	---
The Curriculum in Home Economics (HEd 411)	---	---	3
Oregon School Law and Oregon System of Education (Ed 316)	2	or 2	or 2
History of Oregon (Hst 377)	---	---	3
Organization and Administration of Homemaking Education (HEd 412)	3	or 3	or 3
Supervised Teaching (Ed 415) (hours to be arranged)	---	---	---

INSTITUTION ECONOMICS AND DIETETICS

For students in Curriculum B preparing for positions as dietitians in hospitals, dormitories, cafeterias, hotels, and tea rooms, the following courses are required.

	Term hours		
	F	W	S
⁴ General Bacteriology (Bac 204, 205)	3	3	---
Constructive Accounting (BA 111)	4	---	---
Educational Psychology (Ed 312)	3	---	---
Principles of Teaching (Ed 313)	---	3	---
Quantity Cookery and Catering (IEc 311)	3	---	---
Physiological Chemistry (Ch 330, 331)	---	2	3
Nutrition in Disease (FN 420)	---	---	3
Institutional Organization and Administration (IEc 430)	2	---	---
Institutional Equipment (IEc 420)	---	3	---
Institutional Marketing (IEc 440)	---	---	2
Institution Experience (IEc 450)	---	---	4

¹Required in Curriculum B.

²May be taken parallel with or following Psy 211.

³Confer with School of Education before registering.

⁴In place of Bac 230.

Suggested electives: Food Purchasing (FN 411), Experimental Cookery (FN 435), Basal Metabolism (FN 422), Nutrition of the Infant and Child (FN 421), Readings in Nutrition (FN 481), Personnel Management (BA 414), Family Relationships (HAD 422).

HOME ECONOMICS EXTENSION

For students preparing for positions in the field of home economics extension the following courses are suggested as electives.

	Term hours		
	F	W	S
Junior Year			
Educational Psychology (Ed 312).....		3	—
Problems of the Consumer-Buyer (HAD 442).....	3	—	—
Applied Design (CT 335).....	—	—	3
Principles of Teaching (Ed 313).....	—	—	3
Elementary Journalism (J 111).....	3	—	—
Public Information Methods (J 313).....	—	3	—
Community Drama (Sp 247).....	3	—	—
Speech Defects (Sp 250).....	—	—	3
Senior Year			
Extempore Speaking (Sp 111).....	3	—	—
Family Relationships (HAD 422).....	—	—	2
Extension Methods (EM 411, 412, 405).....	3	3	3
Food Purchasing (FN 411).....	3	—	or 3
House Planning in Relation to Function (HAD 443).....	—	—	3
Nursery School (HAD 425).....	3	or 3	or 3
Nutrition of the Infant and Child (FN 421).....	3	or 3	or 3
Household Equipment (HAD 330).....	—	3	or 3

SUGGESTED MINORS

Suggested outlines of minors in various fields, such as arts and sciences, physical education, journalism, speech and dramatics, languages, business administration and secretarial science, are supplied to students on request.

Clothing, Textiles, and Related Arts

OFFICES, classrooms, and laboratories of the Department of Clothing, Textiles, and Related Arts are located in the Home Economics Building. All necessary furnishings and equipment are available for thorough instruction in textiles, clothing, tailoring, costume design, house decoration, and applied design.

DESCRIPTION OF COURSES

REQUIRED

- Curriculum A: CT 211, 212, 250, 331.
 Curriculum B: CT 211, 212, 250, 311, 312 or 335, 331.
 Curriculum C: CT 211, 212, 250, 331 or 217, 218, 219, 231.

ELECTIVE

- Curriculum A: CT 311, 312, 320, 335, 411, 412, 431, 435, 450.
 Curriculum B: CT 320, 335, 411, 412, 431, 435, 450.
 Curriculum C: CT 311, 312, 320, 335, 411, 412, 431, 435, 450.

Students planning to register for clothing courses CT 111, 212, 312 should keep in mind, when planning their wardrobes for the college year, that these courses require a certain amount of clothing construction. Students in clothing and textiles courses who do not wish to make garments for themselves may be furnished material through orders given the department.

LOWER-DIVISION COURSES

CT 111. Elementary Clothing and Textiles. Any term, 3 hours.

Fundamental processes of hand and machine sewing; design and construction of simple garments and household articles. Required of

- all home economics students who have not had sufficient high-school work in clothing, or its equivalent in shop or home experience, to enter CT 211. Six periods laboratory work.
- CT 211. Clothing (Selection).** Any term, 3 hours.
A study of the artistic and economic factors in the selection of adult clothing. Wardrobe needs of the college girl are emphasized. Prerequisite: AA 160, 161. Two lectures; 1 two-hour laboratory period.
- CT 212. Clothing (Construction).** Winter or spring term, 3 hours.
A study of the techniques of construction suitable for cotton, wool, and silk fabrics and the use of commercial patterns and their simple alteration; the development of simple dress designs from basic patterns. The proper selection of color, design, and fabric is an important part of each project. Prerequisite: CT 111 (or its equivalent), CT 211. Three two-hour laboratory periods.
- CT 217. Clothing Selection.** Fall or winter term, 3 hours.
A brief course which aims to develop good taste in dress and to give an appreciation in selection of clothing from standpoint of beauty, health, and economy. Required in Curriculum C and elective for students other than those majoring in home economics. Three lectures.
- CT 218, 219. Clothing Selection and Construction.** Winter and spring terms, 3 hours each term.
Principles of selection and construction applied in the planning and construction of garments. Elective for other than home-economics students wishing to cover briefly the field of dress selection and construction. Prerequisite: CT 217. Three two-hour laboratory periods.
- CT 231. House Furnishing.** One term, 3 hours.
Brief course seeking to develop appreciation of beauty and suitability in home furnishings and some knowledge of the materials and processes involved. Elective for students other than those majoring in home economics. Two recitations; 1 two-hour laboratory period.
- CT 235. Applied Design.** One term, 3 hours.
A study of decorative art involving a consideration of line, form, and color as applied to problems in weaving, block print, batik, lampshade making, etc. Elective for students in other schools, and for home economics students in Curriculum C. One lecture; 2 two-hour laboratory periods.
- CT 250. Textiles.** Any term, 3 hours.
Study of standard fabrics from the standpoint of the consumer with the aim of developing good judgment in the buying and use of clothing and house-furnishing materials. Properties and uses of different textile fibers and fabrics studied. Two lectures; 1 two-hour laboratory period.

UPPER-DIVISION COURSES

- CT 311. Costume Design.** Any term, 3 hours.
Principles of art applied in the selection and designing of appropriate costumes. Brief study of historic costume and its relation to modern dress. Prerequisite: CT 212, 250. One lecture; 2 two-hour laboratory periods.

CT 312. **Clothing.** Any term, 3 hours.

(Advanced course.) This course aims to develop more independence, initiative, originality, and art in selecting, planning, designing, and constructing garments for different types of figures. Skill in handling various types of materials is an object. Prerequisite: CT 250; CT 311 prerequisite or parallel. Three two-hour laboratory periods.

CT 320. **Clothing for Children.** One term, 3 hours.

Study of the selection and construction of clothing for children at all ages, from the standpoint of health, beauty and cost. Prerequisite: CT 212, 250, 311. One lecture, 2 two-hour laboratory periods.

CT 331. **House Furnishing.** Any term, 3 hours.

A study of the points to be considered in selecting and furnishing a small home from the standpoint of comfort, beauty, and economy. Prerequisite: CT 212, 250. One recitation; 2 two-hour laboratory periods.

CT 335. **Applied Design.** Any term, 3 hours.

Decorative art involving careful consideration of line, form, and color, original designs executed in various media for clothing and house-furnishing accessories; weaving, block printing, batik, and stitching. Prerequisite: CT 212, 250. Three two-hour laboratory periods.

CT 401. **Research.** Terms and hours to be arranged.

CT 403. **Thesis.** Terms and hours to be arranged.

CT 405. **Reading and Conference.** Terms and hours to be arranged.

CT 407. **Seminar.** Terms and hours to be arranged.

CT 411. **Dress Design.** (G) One term, 3 hours.

Designing, modeling, and constructing afternoon and evening dresses; study of development of historical costume and its relation to modern fashions with aim of giving practical help and inspiration to students and teachers of dressmaking and costume design. Prerequisite: CT 311, 312, 335. One lecture; 2 two-hour laboratory periods.

CT 412. **Commercial Clothing.** (G) One term, 3 hours.

(For students who wish to enter commercial or specialty-shop work.) Training in selecting, designing, fitting, and constructing garments for different types of figures; organization of work from trade standpoint; emphasis on speed, economy, effectiveness, selling features, etc. Prerequisite: CT 311, 312, 335. One lecture; 2 two-hour laboratory periods.

CT 431. **House Furnishing.** (G) One term, 3 hours.

(Advanced course.) A study of historic periods of decoration with emphasis on their backgrounds; furniture and decorative textiles and their practical application to the home. Prerequisite: CT 331, 335. Two lectures; 1 two-hour laboratory period.

CT 435. **Applied Design.** (G) One term, 3 hours.

For students desiring more advanced work in applied design. Readings and reports. Prerequisite: CT 331, 335. One lecture; 2 two-hour laboratory periods.

CT 450. **Advanced Textiles.** (G) One term, 3 hours.

Aims to give a scientific background for those interested in doing advanced work in textiles. It includes a study of recent investigation and research in the textile field. Prerequisite: CT 331, 335, Ch 121 or 251. Two lectures; two hours laboratory.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

CT 501. **Research.** Terms and hours to be arranged.

CT 503. **Thesis.** Terms and hours to be arranged.

CT 505. **Reading and Conference.** Terms and hours to be arranged.

CT 507. **Seminar.** Terms and hours to be arranged.

Extension Methods

INSTRUCTION in this department is intended to supplement that of the subject-matter departments in the training of students for positions as home demonstration agents, county agents, 4-H club agents, extension specialists, and for similar types of work in which extension methods are commonly used.

The extension worker must be well trained not only in the subject matter of her field but also in the methods by which extension work is successfully carried on. She must be able to give or know how to obtain authoritative advice for her community or county on any problem that may arise related to her field of service. She must know and practice the technique of platform speaking and demonstration, how to conduct discussions, and how to support the extension program by effective publicity. Excellent opportunities for combining a major in agriculture or home economics with training in journalism, speech and dramatics, economics, sociology, and other departments, supplemented by work in extension methods, should materially assist in meeting the need for better training on the part of extension workers.

This department is a joint department within both the School of Agriculture and the School of Home Economics.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

EM 405. **Reading and Conference.** Any term, hours to be arranged.

Students carry on individual study in special fields of extension methods under guidance of instructor.

EM 411, 412. **Extension Methods.** (G) Two terms, 3 hours each term.

Intensive study of the history and present organization of extension work; training in the most successful methods employed by extension specialists, county agricultural agents, home demonstration agents, 4-H club leaders, and agricultural workers in commercial fields. For senior or graduate students only. Three lectures.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

Foods and Nutrition

LABORATORIES with modern equipment, five for foods instruction, accommodating twenty students each, are provided. Two dining rooms and small kitchens are used in meal service in the department and for occasions by the school. For work in nutrition one chemical laboratory, one basal-metabolism laboratory, and several laboratories for animal experimentation are provided.

DESCRIPTION OF COURSES

REQUIRED

Curriculum A: FN 211, 212, 213, 225, 411.

Curriculum B: FN 220, 221, 222, 320, 321.

Curriculum C: FN 211, 212, 213, 225 or 220, 221, 222, 225.

ELECTIVE

Curriculum A: FN 412.

Curriculum B: FN 411, 420, 421, 422, 423, 435, 481.

Curriculum C: 320, 321, 411, 412, 420, 421, 422, 423, 435, 481.

For students in education, pharmacy, etc.: FN 211, 212, 213, 218, 218, 225, 240, 250. If FN 211, 212, 213 or FN 220, 221, 222 are elected the full three terms must be completed.

LOWER-DIVISION COURSES

FN 211, 212, 213.* Foods. Three terms, 3 hours each term.

An introduction to the subject of foods; selection, preparation, and service. For students not electing chemistry. Prerequisite or parallel: one year of laboratory science. Two recitations; 2 two-hour laboratory periods.

FN 218. Food Preparation. Any term, 3 hours.

A course offered to women students who are not majoring in home economics. It includes certain basic principles of food preparation, menu making, and meal service. One recitation; 2 two-hour laboratory periods.

FN 220, 221, 222.* Foods. Three terms, 3 hours each term.

Study of foods in their scientific and economic aspects; selection, preparation, and service. Prerequisite: Ch 101, 102, 121. Two recitations; 2 two-hour laboratory periods.

FN 224. Food Selection. One term, 1 hour.

Planned for fraternity and sorority managers and for students who purchase and prepare their own meals. Deals with the selection of food at low cost for the protection and health of the individual and of large groups. Not open to students in home economics, but open to both men and women in other schools.

FN 225. Dietetics. Any term, 2 or 3 hours.

Nutritive value of foods from the standpoint of newer scientific investigations, and selection of an optimal diet for health. Present-day problems in nutrition and recent trends in American dietary habits. Three hours credit required in Curricula A and C; open to both men and women in other schools. Two or 3 lectures.

*Home practice in food preparation is required of students who have completed FN 213 and FN 222, the character and amount of practice being arranged with the instructors in charge.

FN 240. Food Selection and Preparation (For Men). Winter term, 2 hours.
A course for men who are planning and preparing their own meals or acting as managers of living groups. Open to men in all schools. One lecture; 1 three-hour laboratory period.

FN 250. Camp Cookery (For Men). Spring term, 2 hours.
Preparation of palatable and nutritious products from foods available in camps; outdoor food preparation involving the use of reflectors and improvised camping utensils. One lecture; 1 three-hour laboratory period.

UPPER-DIVISION COURSES

- FN 320. Nutrition.** Fall or winter term, 3 hours.
A scientific study of nutrition involving digestive and metabolic processes and products; methods of investigation which have established the quantitative basis in dietetics and the standards which have been adopted. Prerequisite: FN 222, Ch 251. Two lectures; 1 two-hour laboratory period.
- FN 321. Nutrition.** Winter or spring term, 3 hours.
A continuation of FN 320. The application of scientific principles of nutrition to the individual and family group. Projects in animal experimentation. Prerequisite: FN 320, Z 211. Two lectures; 1 two-hour laboratory period.
- FN 401. Research.** Terms and hours to be arranged.
- FN 403. Thesis.** Terms and hours to be arranged.
- FN 405. Reading and Conference.** Terms and hours to be arranged.
- FN 407. Seminar.** Terms and hours to be arranged.
- FN 411. Food Purchasing.** Any term, 3 hours.
Household purchasing; study of standards, grades, and qualities of food products as found on the market; factors governing cost; food laws; the ethics of food buying and selling. Prerequisite: FN 213 or 222; Ec 211. Two lectures; 2 two-hour laboratory periods.
- FN 412. Food Management. (g)** Winter or spring term, 3 hours.
Arrangement to give the upper-division student opportunity to check and improve the techniques in the phases of food study in which further help is needed. Includes complete responsibility in purchasing, menu making, meal management. Prerequisite: FN 213, 225, 411; or FN 222, 320. Six periods.
- FN 420. Nutrition in Disease. (G)** Spring term, 3 hours.
The dietary adjustments for abnormal conditions. A preliminary course for students who wish to become hospital dietitians or nutrition specialists and for students who desire to broaden their training in nutrition. Prerequisite: FN 321, Z 211.
- FN 421. Nutrition of the Infant and Child. (G)** One term, 3 hours.
The nutritional needs from prenatal life through adolescence, including maternal dietary requirements. Prerequisite: FN 321.

FN 422. Basal Metabolism. (G) One term, 3 hours.

The measurement of energy metabolism in the human body with special attention to the recent experimental studies in the field. Includes practice in the use of respiration apparatus and a special problem involving some factor which may influence metabolism. Prerequisite: FN 321.

FN 423. Animal Experimentation. (G) Any term, 3 hours.

A study of the quantitative methods used in nutrition research with the white rat and guinea pig as experimental animals. Reports of animal experiments carried on during the term are required, the object of which is to determine the ability of the student to organize and interpret data. Prerequisite: FN 321.

FN 435. Experimental Cookery. (G) Winter term, 3 hours.

Development of experimental methods and their application to investigations in cookery and the skills involved. Acquaintance with the literature in this field. Preparation of the student for independent investigations in foods. Prerequisite: Ch 121, FN 222.

FN 481. Readings in Nutrition. (G) One term, 3 hours.

Acquaints the student with research in nutrition as reported in scientific journals. A broad background of science is required to interpret recent advances in the chemistry of food and nutrition. Prerequisite: FN 321.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

FN 501. Research. Terms and hours to be arranged.

FN 503. Thesis. Terms and hours to be arranged.

FN 505. Reading and Conference. Terms and hours to be arranged.

FN 507. Seminar. Terms and hours to be arranged.

Home Economics Education

PROFESSIONAL training for prospective teachers of home economics is afforded by the Department of Home Economics Education. Any student having a scholarship recorded below average should confer with the Dean of the School of Home Economics before registering for teacher-training work.

This department is a joint department within both the School of Home Economics and the School of Education.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

Ed 332. Methods of Teaching Related Art. Fall term, 3 hours.

Selection and organization of subject matter in art in its application to vocational courses authorized under the Smith-Hughes act;

special methods in teaching related art. Prerequisite or parallel: Ed 313. Three recitations. Professor Blazier.

HEd 401. **Research.** Terms and hours to be arranged.

HEd 403. **Thesis.** Terms and hours to be arranged.

HEd 405. **Reading and Conference.** Terms and hours to be arranged.

HEd 407. **Seminar.** Terms and hours to be arranged.

HEd 411. **The Curriculum in Home Economics.** (G) Any term, 3 hours.
A study of the basic principles of curriculum construction applied to the organization of home economics courses in secondary schools. Prerequisite: Ed 313. Three recitations. Professor Blazier.

HEd 412. **Organization and Administration of Homemaking Education.** (G) Any term, 3 hours.
A study of typical organizations of homemaking departments both on the vocational and nonvocational basis with particular emphasis on equipment and management. Prerequisite: HEd 411.

HEd 413. **The Supervision of Home Projects.** (G) Spring term, 2 hours.
A study of the use of home projects in home-economics instruction with field work in supervision of home projects. Prerequisite: HEd 411. One recitation; 1 two-hour laboratory period. Professor Blazier.

HEd 415. **Adult Education in Home Economics.** (G) Winter term, hours to be arranged.
Study of problems in the adult-education program authorized under the Smith-Hughes Act. Field work in promoting, organizing, observing, and teaching adult classes. Prerequisite: HEd 411. Professor Blazier.

GRADUATE COURSES

Courses numbered 400-499 and designated (P) or (G) may be taken for graduate credit.

HEd 501. **Research.** Terms and hours to be arranged.

Problems in home-economics education. Professor Blazier.

HEd 503. **Thesis.** Terms and hours to be arranged.

HEd 505. **Reading and Conference.** Terms and hours to be arranged.

HEd 507. **Seminar.** Terms and hours to be arranged.

Household Administration

UNDER this department instruction is offered in household management, economic problems of the family, problems of the consumer-buyer, household equipment, housing, child development, nursery school, parent education, and family life. Offices, classrooms, and equipment laboratory are located in the Home Economics Building. Three well-equipped Home Management Houses and a Nursery School are located on or near the campus.

DESCRIPTION OF COURSES

REQUIRED

- Curriculum A: HAd 101, 340, 350, 411, 412.
 Curriculum B: HAd 101; 411, 412 or 320, 425; 340; 350; 422.
 Curriculum C: HAd 340, 350, 411, 412.

ELECTIVE

- Curriculum A: HAd 330, 401, 403, 405, 407, 413, 422, 423, 425, 441, 442, 443.
 Curriculum B: HAd 330, 401,, 403, 405, 407, 423, 425, 441, 442, 443.
 Curriculum C: HAd 330, 401, 403, 405, 407, 413, 422, 423, 425, 441, 442, 443.
 For students in secretarial science, education, pharmacy, etc.: HAd 222, HAd 225, HAd 101, and any other course for which prerequisites have been taken.

LOWER-DIVISION COURSES

- HAd 101. **Introduction to Home Economics.** Fall term, 1 or 3 hours.
 Designed to orient beginning students in the field of home economics and to assist them in adjusting themselves to college life. This course will be offered for 1 hour credit 1938-39; 1 recitation.
- HAd 222. **Family Relationships.** Any term, 2 or 3 hours.
 Designed to give a better understanding of the philosophy of family life. Special attention is given to present-day problems. Open to both men and women. No prerequisite. Two recitations.
- HAd 225. **Child Care and Training.** Spring term, 3 hours.
 Brief study of the growth, development, care and training of the young child. Observations in the nursery school. For lower-division students not in home-economics degree curricula, or students who have not had psychology. No prerequisites. Three recitations.

UPPER-DIVISION COURSES

- HAd 320. **Child Development.** Fall or winter term, 3 hours.
 Brief study of the growth and development of the young child. Observations in the nursery school. Prerequisite: Psy 203 or 211; Z 211. Three recitations.
- HAd 330. **Household Equipment.** Winter or spring term, 3 hours.
 Selection, operation, care, and arrangement of household equipment. Prerequisite: one term of foods. One recitation; 2 two-hour laboratory periods.
- HAd 340. **Household Management.** Any term, 4 hours.
 Problems arising in the management of a home. Special consideration given to the management of money and of time. Should precede HAd 350. Prerequisite: FN 213 or 222; Ec 211 (may parallel). Four recitations.
- HAd 350. **Home Management House.** Any term, 5 hours.
 Principles underlying management of a home are put into practice during a six weeks' residence in a house. Prerequisite: HAd 320 or 411, HAd 340.
- HAd 401. **Research.** Terms and hours to be arranged.
- HAd 403. **Thesis.** Terms and hours to be arranged.
- HAd 405. **Reading and Conference.** Terms and hours to be arranged.

- HAd 407. Seminar.** Terms and hours to be arranged.
- HAd 411, 412. Child Development.** (g) Fall and winter or winter and spring terms, 3 hours each term.
Study of the growth and development of the normal preschool child; observations in the nursery school. Prerequisite: Psy 203 or 211; FN 225. Three recitations, 1 one-hour observation period first term; 3 recitations, 1 three-hour observation period second term.
- HAd 413. Child Development.** (G) Spring term, 3 hours.
Study of growth and development in middle and late childhood and early adolescence. Prerequisite: HAd 411, 412. Three recitations.
- HAd 422. Family Relationships.** (G) Fall or spring term, 2 hours.
An analysis of factors entering into adjustments within the modern family group. Prerequisite or parallel: HAd 320, or HAd 411, 412; HAd 340. Two recitations.
- HAd 423. Parent Education.** (G) Winter term, 2 hours.
Methods and content in parent education; observation of a discussion group. Prerequisite: HAd 320 or HAd 411; HAd 340. Two recitations; 1 laboratory period.
- HAd 425. Nursery School.** (G) Any term, 3 hours.
Observation and practice with a group of normal preschool children; special studies. Prerequisite: HAd 320 or HAd 411, 412. Two three-hour laboratory periods; 1 recitation.
- HAd 441. Economic Problems of the Family.** (G) Winter term, 3 hours.
Study of those economic problems most directly touching the welfare of the family in modern industrial society; discussion of family income, its size, sources, adequacy, distribution; the problem of income apportionment and household expenditure; household production; economic contribution of women in homemaking. Prerequisite: Ec 211, HAd 340 (latter may be taken parallel). Three recitations.
- HAd 442. Problems of the Consumer-Buyer.** (G) Fall or spring term, 3 hours.
The problems met by the household buyer in her efforts to make an intelligent selection of goods on the modern market; a critical analysis of the different types of retail marketing agencies that serve her; methods of improving consumer-buying. Prerequisite: Ec 211, HAd 340. Three recitations.
- HAd 443. House Planning in Relation to Function.** (G) Spring term, 2 hours.
Study of the private dwelling from the standpoint of family needs and interests; information required in making plans; information now available; characteristics of the "ideal" whole-family house; variations among households in needs and interests; evaluation of common practices in planning low-cost one-family dwellings. Prerequisite: HAd 320 or HAd 411, 412; HAd 340. Two lectures.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G)
may be taken for graduate credit.

- HAd 501. Research. Terms and hours to be arranged.
HAd 503. Thesis. Terms and hours to be arranged.
HAd 505. Reading and Conference. Terms and hours to be arranged.
HAd 507. Seminar. Terms and hours to be arranged.

Institution Economics

COURSES in institution economics are planned to meet the needs of students who desire to prepare for positions in the field of institutional management. Two halls of residence for women and five for men, together with the banquet rooms and tea rooms in the Memorial Union, are used as laboratories. The facilities are adequate for thorough training in this field.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

- IEc 311. **Quantity Cookery and Catering.** Fall term, 3 hours.
Application of principles of cookery to the preparation of food in large quantity; standardization of formulas, dietetic value, cost; use of modern equipment; menu planning. Experience in the preparation and service of foods for special functions. Prerequisite: FN 213 or 222. One lecture; 2 two-hour laboratory periods.
- IEc 320. **Cafeteria Management.** One term, 3 hours.
This course is offered to meet the needs of the student who plans to teach and manage a school cafeteria. The work includes menu study, buying, cafeteria plans, accounting, management, and practice in quantity cookery. At present offered in summer session only. Prerequisite: FN 213 or 222.
- IEc 401. Research. Terms and hours to be arranged.
IEc 403. Thesis. Terms and hours to be arranged.
IEc 405. Reading and Conference. Terms and hours to be arranged.
IEc 407. Seminar. Terms and hours to be arranged.
IEc 420. **Institutional Equipment.** (g) Winter term, 3 hours.
Study of equipment for bedrooms, living rooms, dining rooms, and kitchens in different types of institutions; design, materials; construction, cost, and arrangement. Prerequisite: HAd 340. Three lectures.
- IEc 430. **Institutional Organization and Administration.** (g) Fall term, 2 hours.
Study of the principles of organization and administration as applied to various types of institutions; discussion of employment problems and training, labor laws, office records. Prerequisite: HAd 340. Two lectures.
- IEc 440. **Institutional Marketing.** (g) Spring term, 2 hours.
Institutional marketing from the standpoint of food purchasing, including production and distribution of food commodities, marketing

costs, factors influencing prices, marketing of special foods such as meats, vegetables, fruits, eggs. Prerequisite: HAd 340. Two lectures.

IEc 450. Institution Experience. (G) Spring term, 4 hours.

Designed to give practical experience in organization and administration of an institution. Practice work is done in the various halls of residence, the Memorial Union Dining Service, and office of the Director of Dormitories. Prerequisite: IEc 311, 420, 430, 440. One lecture; 3 two-hour laboratory periods.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

IEc 501. Research. Terms and hours to be arranged.

IEc 503. Thesis. Terms and hours to be arranged.

IEc 505. Reading and Conference. Terms and hours to be arranged.

IEc 507. Seminar. Terms and hours to be arranged.

HOME ECONOMICS AT THE UNIVERSITY

By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in home economics was confined to the School of Home Economics at the State College and lower-division work (instruction in the freshman and sophomore years) was assigned to both the State College and the University.

The lower-division work in home economics is essentially the same at both institutions. While it is recommended that students intending to major in home economics enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the University, and transfer to the State College for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met. Students wishing to complete at the University the first two years of Curriculum B (technical curriculum) should have their programs carefully planned by the head of the Department of Home Economics.

At both institutions, the lower-division program is intended not only to lay the foundation for specialization in home economics, but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the University offers upper-division service courses in home economics for students in other fields.

The following lower-division and service courses in home economics are available at the University.

CLOTHING, TEXTILES, AND RELATED ARTS

LOWER-DIVISION COURSES

CT 111, 112, 113. Clothing Construction. Three terms, 2 hours each term.
CT 114, 115, 116. Clothing Selection. Three terms, 1 hour each term.
CT 125. Textiles. Fall or winter term, 2 hours.

UPPER-DIVISION SERVICE COURSE

CT 331. Home Planning and Furnishing. Spring term, 3 hours.

FOODS and NUTRITION

LOWER-DIVISION COURSES

FN 211, 212, 213. Foods. Three terms, 3 hours each term.

FN 225. Principles of Dietetics. Any term, 2 hours.

FN 250. Camp Cookery. Spring term, 1 hour.

HOUSEHOLD ADMINISTRATION

LOWER-DIVISION COURSES

HAd 222. Family Relationships. Any term, 2 hours.

HAd 240. Family and Personal Budgets. Any term, 1 hour.

UPPER-DIVISION SERVICE COURSES

HAd 325. Child Care and Training. Any term, 3 hours.

HAd 339. Household Management. Any term, 3 hours.

School of Pharmacy

Faculty

ADOLPH ZIEFLE, M.S., Phar.D., Dean of the School of Pharmacy; Professor of Pharmacy.

MYRTLE BURNAP WOODBURY, B.S., Secretary to the Dean.

Practical Pharmacy

FRANCOIS ARCHIBALD GILFILLAN, Ph.D., Professor of Pharmacy; Head of Department.

Pharmaceutical Analysis

LEWIS CLEMENCE BRITT, Ph.D., Assistant Professor of Pharmaceutical Analysis; In Charge of Department; Director of the Drug Laboratory of the Oregon State Board of Pharmacy.

Pharmacology and Pharmacognosy

ERNST THEODORE STUHR, M.S., Associate Professor of Pharmacology and Pharmacognosy; In Charge of Department.

General Statement

IN 1898, on petition of the druggists of Oregon for more thorough theoretical and practical instruction in pharmacy and related branches than could be provided in the average drug store, pharmacy was first established as a separate department of the State College. From its inception the department grew steadily, and in 1917 it was raised to the rank of a school. The School is an integral part of the State College organization, and as a consequence has shared in the support accorded by the State of Oregon and the national government. As a result of this support, together with the fact that it is a part of a great educational institution, the School is equipped to offer standard curricula and to maintain a high degree of excellence in its work.

The School of Pharmacy is a member of the American Association of Colleges of Pharmacy, organized to promote pharmaceutical instruction in the United States. Institutions holding membership must maintain certain minimum requirements for entrance and graduation. The influence of the Association has been so great that many states either by law or by ruling of the state board of pharmacy recognize its standards. Diplomas, as well as the work of students in this School, are recognized by all state boards of pharmacy requiring attendance in a school of pharmacy as a prerequisite for examination and registration.

Requirements of the Pharmaceutical Profession. Public sentiment demands high requirements for the practice of pharmacy through the enactment of stringent State and Federal laws. Pharmacists must now have a

scientific training such as cannot be obtained by merely working in a drug store. The minimum college requirement of the Oregon State Board of Pharmacy is completion of a Class A four-year curriculum in pharmacy as a prerequisite for examination and registration.

Pharmacy as a Profession for Women. No field of work offers more desirable opportunities for women than pharmacy. The work is clean, pleasant, and agreeable. Women are peculiarly adapted to it. The technical work of manufacturing and dispensing drugs involves the traits of neatness and accuracy that, generally speaking, are more predominant in women than in men. More than seventy-five per cent of all drugs and druggists' sundries are purchased by women, and it is natural that those patrons should prefer to deal with women.

Drug-Store Experience. The State Board of Pharmacy requires one year of drug-store experience (2,400 hours) before registration can be granted. Students are not required to have had such experience to register in or be graduated from the School of Pharmacy. Such experience is very desirable, however, and students are urged to acquire one or preferably two years of experience before taking up the courses in pharmacy. The State Board of Pharmacy does not allow credit for drug-store experience while the student is in attendance at a school or college of pharmacy.

Oregon Law Relating to the Practice of Pharmacy. The Oregon State Pharmacy Law is enforced by the Oregon State Board of Pharmacy. This Board recognizes two classes of pharmacists: registered pharmacists and registered assistant pharmacists. No examination for assistant pharmacists will be held after July 1, 1939. The state law outlines the scope and duties of each class of pharmacists with regard to the dispensing of prescriptions, the sale of poisons, and other professional services. A registered pharmacist may operate and manage a drug store, compound medicinal substances, and sell poisons, and it is his duty to train apprentices in the professional phases of pharmacy. A registered assistant pharmacist cannot operate or manage a drug store although he may be left in charge during the temporary absence of the registered pharmacist. His duties are to assist the registered pharmacist, and under proper supervision he may dispense prescriptions, sell poisons, and perform other professional services in a drug store.

A resumé of the Oregon State Pharmacy Law passed in 1921 and amended in 1935 is as follows:

To qualify as REGISTERED PHARMACIST, a candidate must meet the following requirements:

- (1) He must be an American citizen and at least twenty-one years of age.
- (2) He must be a graduate of a school or college of pharmacy accredited by the Oregon State Board of Pharmacy and the American Association of Colleges of Pharmacy.
- (3) He must take the registered pharmacist's examination, make a weighted average of seventy-five per cent, and not fall below sixty per cent in any one subject. His grade in the examination in compounding prescriptions and practical work must be at least seventy-five per cent. Only those applicants who have on file in the office of the Board of Pharmacy at least 2,400 hours of practical drug-store work are permitted to take the practical examination.

- (4) He must have completed one year of practical drug-store experience under the supervision of a registered pharmacist comprising a minimum of at least 2,400 hours of work per calendar year. In no case will more than 2,400 hours of practical experience be credited for any calendar year. In no case may drug-store experience be counted that the candidate may have had before his sixteenth birthday. No credit is allowed for drug-store experience gained while in attendance at a school or college of pharmacy. Blanks are provided by the State Board of Pharmacy for the registration of practical experience. All such experience must be certified to on an affidavit by a registered pharmacist.

To qualify as REGISTERED ASSISTANT PHARMACIST, a candidate must meet the following requirements:

- (1) He must be an American citizen and at least twenty-one years of age.
- (2) He must have completed three years of practical experience in a drug store where prescriptions of physicians are compounded and dispensed, under the supervision of a registered pharmacist. Each year of such experience must comprise at least 2,400 hours of work, but in no case will more than 2,400 hours be credited for any calendar year. In no case may drug-store experience be counted that the candidate may have had before his sixteenth birthday. No credit is allowed for drug-store experience gained while attending a school or college of pharmacy.
- (3) He must pass the assistant pharmacist's examination given by the State Board of Pharmacy.*

Eligibility for Examination. All graduates of the School of Pharmacy who are American citizens and twenty-one years of age are eligible to take the examinations of the Oregon State Board of Pharmacy. Those graduates who pass in all subjects and meet all other requirements receive the certificate of registered pharmacist. Graduates who have not completed at least 2,400 hours of drug-store work are not permitted to take the practical examination until this requirement has been fulfilled. These graduates have no standing whatsoever as registered pharmacists or registered assistant pharmacists until they can fulfill all requirements.

Preparation for Examinations of State Boards of Pharmacy. Before they can practice pharmacy, all graduates in pharmacy are required to pass the examination of a state board of pharmacy. During the third term of each academic year, the faculty organizes review classes for senior students for the purpose of giving trial state-board examinations, studying typical state-board questions, studying specimens of drugs and chemicals for examination in identification, giving oral examinations, and using all other means to aid the students in the various subjects in which they will be examined. Because of this service graduates of the School of Pharmacy have made an outstanding record in the examinations of the Oregon State Board of Pharmacy.

*No examination for assistant pharmacists will be held after July 1, 1939.

Reciprocity. Since the Oregon State Board of Pharmacy is a member of the National Association of State Boards of Pharmacy, graduates who are registered by this Board are privileged to reciprocate without further examination with all states except California and New York, which do not reciprocate with any other state.

O. S. P. A. Educational Fund. Oregon druggists assembled at the thirty-sixth annual convention of the Oregon State Pharmaceutical Association held in the Pharmacy Building July, 1925, established an Educational Fund. The chief purpose of the fund is to assist worthy students of the School of Pharmacy who have a reasonable amount of means to complete their course. A fund adequate for the needs of the School of Pharmacy is assured. The operation of the fund is under the direction of a Board of Trustees elected from membership in the state association. As a basis for granting loans students are required to submit on the application form a budget, references, the name of a guarantor, and other information regarding their assets and liabilities. The average loan per student per year is \$100. Only in exceptional cases are loans granted during the first term.

Correspondence. Inquiries regarding the School of Pharmacy may be addressed to the Dean. Students desiring to enter will be provided by the State College Registrar with proper blanks for filing credentials.

Major Curricula

UNDERGRADUATE and graduate work offered by the School of Pharmacy prepares students for all fields of the pharmacy profession. Both the bachelor's and master's degrees are offered.

The Bachelor's Degree. Four-year curricula leading to the degree of Bachelor of Science in Pharmacy are offered by the School of Pharmacy. During the freshman and sophomore years all students pursue substantially the same curriculum. In the junior and senior years the curricula are differentiated into Practical Pharmacy and Professional Pharmacy. The distinction between these two fields of study is one of emphasis, as service in the field of either curriculum is both practical and professional. A total of 192 term hours must be completed in order to receive a degree in either curriculum.

A. PRACTICAL PHARMACY CURRICULUM. This curriculum is designed to provide for thorough training in pharmacy, chemistry, biology, accounting, business law, and related subjects, so that the graduate will be prepared not only to pass the examinations of state boards of pharmacy but to serve efficiently in all branches of practical drug-store work. Since the commercial phases of pharmacy are rapidly becoming a dominant feature of the modern drug store, a series of lectures and demonstrations in the model drug store is given each year to the members of the senior class by a group of twenty nonresident lecturers representing all phases of the drug business.

The following are some of the fields open to thoroughly trained and experienced pharmacists: preparation and dispensing of medicines; service as dispensers and clinical technicians in hospitals, managers and proprietors of drug stores, chemists and department managers for laboratories that manufacture drugs and chemicals; public-health work

where the graduate is expected to advise the public in health and sanitation, and a variety of other positions demanding a knowledge of pharmacy and related subjects.

- B. PROFESSIONAL PHARMACY CURRICULUM.** Students wishing to prepare for positions demanding more intensive training in scientific and cultural subjects than is provided for in the practical pharmacy curriculum, together with basic training in pharmacy and related subjects, may prepare through this curriculum for the following positions: research and manufacturing chemists with wholesale drug firms; traveling representatives with drug firms who call on physicians and pharmacists in the interest of newly developed drugs and other substances; inspectors for state and Federal bureaus; pharmacists and specialists with the United States government in the departments of public health, veteran's administration, the Navy, the Army, internal revenue department, Federal pure-food and drug laboratories, chemists with state boards of health and state food and drug laboratories, and a variety of other positions. Graduates of this curriculum are eligible to take the examinations of any state board of pharmacy. If they qualify as registered pharmacists, they are licensed to dispense prescriptions and to operate a drug store.

Options in the election of courses are permitted according to the student's interests and needs. Prior to registration for each term the Dean outlines for each student the courses he should elect to fulfill his objective, together with delinquencies.

Since the State College is listed as an approved institution by the American Medical Association, a student by completing the professional pharmacy curriculum can qualify in the period of four years for admission to a Class A medical school and the degree of Bachelor of Science in Pharmacy. All Class A dental schools require one year of college pre-dental work for admission, including one year's credit in English composition, zoology, physics, general inorganic chemistry, and qualitative analysis, to which may be added elective courses such as drawing, shop work, modern language, and other courses recommended by dental schools. If a student is interested in any specific medical school or dental school, he should study current catalogs and other requirements. Upon request the Dean will furnish all information necessary to outline the student's program.

Advanced standing is granted to students transferring from other institutions of collegiate rank. Application for advanced standing is made on official transcript submitted to the Registrar. Upon receipt of the advanced-standing report, the Dean makes a study of the student's case and outlines the program to be followed to be graduated in pharmacy, or to qualify for any other objective.

Beginning January 1, 1938, all transfer students who have not been registered in an accredited school or college of pharmacy, regardless of the amount of credit presented, must be registered in pharmacy for three collegiate years to qualify for graduation and examination by a state board of pharmacy. This requirement is incorporated in the by-laws of the American Association of Colleges of Pharmacy and is effective in all accredited schools and colleges of pharmacy.

Graduate Work. Graduate work leading to the degree of Master of Science (M.S. in Phar.) is offered in the School of Pharmacy. Candidates for the master's degree must hold a bachelor's degree in pharmacy from the State College or its equivalent from another accredited institution. In

addition, candidates must have attained a creditable scholastic average in their undergraduate work and must have determined upon a definite objective to be attained through the advanced work. Institutional requirements for the degree of Master of Science will be found under GRADUATE DIVISION.

In all cases, a minimum of one entire academic year of three terms in residence is necessary when full time is devoted to the fulfillment of the requirements for the degree. If a candidate devotes part time to instructional work, for which compensation is received, a period longer than three terms is required. Fulfillment of the requirements of the major is based primarily on original work completed along some line of experimental investigation. A thesis must be prepared, incorporating the results of the investigation. An oral examination, given by the instructors in the department in which the candidate majored, is required.

Facilities

MODERN facilities for the work of the School of Pharmacy are afforded in the Pharmacy Building. These include special laboratories, a model drug store, State Board of Pharmacy Drug Laboratory, a complete sign-card and window-trimming department, museum, library, and study room. The laboratories and lecture rooms are equipped with all apparatus necessary for practical pharmaceutical instruction. Students have individual desks supplied with the materials necessary for the specific course.

Model Drug Store. Donations from wholesale and jobbing firms, from manufacturers of drug-store fixtures, and from other sources have made it possible for the School of Pharmacy to equip a model drug store in the Pharmacy Building. The fixtures consist of Stedman's rubberoid flooring, 32 feet of mahogany English wall cases, 18 feet of plate-glass marble-base show-cases, a 10-foot wrapping counter, a 10-foot mahogany prescription case, 25 feet of cross partition, an intercommunicating telephone, and similar displays. These fixtures, together with a complete stock, are used for instruction in salesmanship, show-case and window trimming, inventory, the keeping of poison and narcotic records, taking copies of prescriptions over a telephone, systematizing a drug stock, and store management. As the stock and fixtures were donated for instructional purposes, nothing is actually sold or dispensed.

State Drug Laboratory. For the purpose of determining the purity and regulating the sale of medicinal substances in the State of Oregon, the Oregon State Board of Pharmacy, in October, 1927, established in the Pharmacy Building a State Drug Laboratory, which is under the supervision of trained chemists.

The purpose of the laboratory is to enforce Section 20 of the Oregon laws as amended in 1935 fixing the responsibility for the purity of drugs upon the pharmacist. Realizing that druggists are not equipped to assay pharmaceutical preparations, the Board of Pharmacy established the laboratory primarily to assist them to dispense pure drugs. By means of the laboratory it is also the object of the Board to prevent dishonest practice and gross adulteration of medicinal substances sold by individuals other than pharmacists, and to make it a legal necessity that all drugs sold in the state shall be true to label.

The funds required to equip and maintain the laboratory are furnished by the Oregon State Board of Pharmacy. The room, permanent laboratory

furniture, and other requisites are furnished by the State College. The director of the laboratory is also a member of the faculty of the School of Pharmacy.

Four-Year Curricula in Pharmacy

B.S. Degree

Practical Pharmacy

Professional Pharmacy

LOWER-DIVISION CURRICULUM

	Term hours		
	F	W	S
Freshman Year			
English Composition (Eng 111, 112, 113).....	3	3	3
General Chemistry (Ch 204, 205, 206).....	5	5	5
History or elective.....	3	3	3
¹ Theoretical Pharmacy (Phr 111, 112).....	3	3	---
² Pharmaceutical Processes (Phr 113).....	---	---	3
³ Physical Education.....	1	1	1
Military Science.....	1	1	1
	16	16	16
Sophomore Year			
Organic Chemistry (Ch 226, 227).....	5	5	---
⁴ Inorganic Pharmacy (Phr 311).....	---	---	5
German or French (or elective).....	4	4	4
General Zoology (Z 201, 202, 203).....	3	3	3
⁴ Sign Card Writing (Phr 211, 212).....	2	2	---
Physical Education.....	1	1	1
Military Science.....	1	1	1
Elective.....	---	---	2
	16	16	16

PRACTICAL PHARMACY

Junior Year

(See Lower-Division Curriculum above.)

Accounting for Technical Students (BA 386).....	---	---	3
Business Law (BA 256) or Military Science.....	---	4	---
General Bacteriology (Bac 204).....	3	---	---
Pathogenic Bacteriology (Bac 332).....	---	3	---
Immunity and Serum Therapy (Bac 333).....	---	---	3
Practical Pharmacognosy (PhP 331, 332, 333).....	3	3	3
Quantitative Drug Analysis (PhA 361, 362).....	3	3	---
Natural Products and Drug Principles (PhA 321).....	---	---	3
Drug Assaying (PhA 327).....	---	---	3
Pharmaceutical Calculations (Phr 313).....	3	---	---
Microscopy of Drugs (PhP 438) or Military Science, or elective.....	---	---	3
Galenic Pharmacy (Phr 317).....	---	5	---
Military Science or approved elective.....	3	---	---
	15	18	18

Senior Year

Practical Pharmacology (PhP 491, 492).....	3	3	---
Experimental Pharmacology (PhP 493).....	---	---	3
Proprietary Remedies (Phr 450).....	---	3	---
Organic Pharmacy (Phr 440).....	3	---	---
U. S. Pharmacopoeia and National Formulary (Phr 441, 442).....	---	3	3
Drug-Store Practices (Phr 447, 448, 449) or Military Science.....	3	3	3
Manufacturing Pharmacy (Phr 444).....	3	---	---
Prescription Lectures (Phr 454).....	3	---	---
Prescription Incompatibilities (Phr 455).....	---	3	---
Prescription Compounding (Phr 456).....	---	---	3
Approved elective.....	---	---	3
	15	15	15

¹Students expecting to major in the professional curriculum take German (Ger 1, 2, 3, or equivalent), in place of Phr 111, 112, 113.

²General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education. Women take Social Ethics (PE 131) one term.

³Students expecting to major in the professional curriculum take Ch 232 instead of Phr 311.

⁴Students expecting to major in the professional curriculum take General Physics (Ph 201, 202, 203) in place of Phr 211, 212, and omit the spring term elective.

PROFESSIONAL PHARMACY

Junior Year

(See Lower-Division Curriculum.)

	Term hours		
	F	W	S
Vertebrate Zoology (Z 204, 205, 206).....	4	4	4
Theoretical Pharmacy (Phr 120).....	4	---	---
Inorganic Pharmacy (Phr 311).....	---	---	5
Practical Pharmacognosy (PhP 331, 332).....	3	3	---
Pharmaceutical Calculations (Phr 313).....	3	---	---
Galenical Pharmacy (Phr 317).....	---	5	---
Essay Writing (Eng 211).....	---	3	---
Elementary Physical Chemistry (Ch 340).....	---	---	3
Military Science or nonscience elective.....	3	3	3
	17	18	15

Senior Year

Elementary Psychology (Psy 201, 202).....	---	3	3
Organic Pharmacy (Phr 440).....	3	---	---
U. S. Pharmacopeia and National Formulary (Phr 441, 442).....	---	3	3
Practical Pharmacology (PhP 491, 492).....	3	3	---
Prescription Lectures (Phr 454).....	3	---	---
Prescription Compounding (Phr 456).....	---	---	3
Literature or Public Speaking or Military Science.....	3	3	3
Natural Products and Drug Principles (PhA 321).....	---	---	3
Approved electives.....	3	4	---
	15	16	15

Practical Pharmacy

IN THE Department of Practical Pharmacy are offered elementary, basic, and advanced courses in theoretical pharmacy, pharmaceutical processes, and commercial pharmacy. Most of the work is of upper-division and graduate character.

DESCRIPTION OF COURSES

LOWER-DIVISION COURSES

Phr 101, 102, 103. Elementary Pharmacy. Three terms, 1 hour each term.

A general introductory study of the field of pharmacy and related professions embracing history, pharmaceutical literature, codes of ethics, the scope of the different branches of the healing arts and other topics of interest to beginning students in pharmacy. One lecture. Professor Ziefle.

Phr 111, 112. Theoretical Pharmacy. Fall and winter terms, 3 hours each term.

A systematic study of the official standards, processes, and apparatus used in pharmacy. The laboratory work is designed to illustrate each topic taken up in lecture. Two lectures; 1 recitation; 1 three-hour laboratory period. Professor Ziefle.

Phr 113. Pharmaceutical Processes. Spring term, 3 hours.

The fundamental manipulation used in the manufacture of simple galenical preparations. Prerequisite: Phr 112 or 120. Two lectures; 1 recitation; 1 three-hour laboratory period. Professor Gilfillan.

Phr 120. Theoretical Pharmacy. Any term, 4 hours.

An abbreviated lecture course identical with Phr 111, 112, except that no laboratory work is offered. Admission to this course is restrict-

ed to students transferring from other institutions having advanced-standing credit for one year of general chemistry and other science courses. This course is designed to complete Theoretical Pharmacy in one term. Five lectures. Associate Professor Stuhr.

Phr 211, 212. Sign Card Writing. Fall and winter terms, 2 hours each term.

The printing of labels, price tags, and simple display signs; preparation of display standards and backgrounds; and other practical display work. Students are required to furnish brushes and pens. Three two-hour laboratory periods. Assistant Professor Britt.

Phr 220. Household Preparations. Any term, 3 hours.

Study of the more common medicinal remedies, technical preparations, toilet requisites, and druggists' sundries used in the home. In the laboratory students prepare representative samples of each class of preparations and study the mode of application and specific use. Elective without prerequisites. Two lectures; 1 three-hour laboratory period. Assistant Professor Britt.

UPPER-DIVISION COURSES

Phr 311. Inorganic Pharmacy. Spring term, 5 hours.

Inorganic chemicals and their preparations used in medicine. In the laboratory students make representative samples of certain types of chemicals, as well as tests for impurities, such as arsenic, lead, and antimony. Prerequisite: Ch 205. Three lectures; 2 three-hour laboratory periods. Professor Gilfillan.

Phr 312. Pharmaceutical Calculations. Fall term, 1 hour.

Required to precede Phr 313 except for students exempted by a qualifying examination. Prerequisite: Phr 111, Ch 204. Three lectures. Professor Gilfillan.

Phr 313. Pharmaceutical Calculations. Fall or winter term, 3 hours.

Study of weights and measures used in pharmacy; percentage solution; alligations; specific gravity; thermometers; etc. Prerequisite: Phr 312 unless exempted by a qualifying examination. Three lectures. Professor Gilfillan.

Phr 317. Galenical Pharmacy. Winter term, 5 hours.

A study of the various types of galenical preparations as outlined in the U. S. Pharmacopoeia and National Formulary. Laboratory work in the preparation of simple galenicals, such as water, pills, emulsions, suppositories, ointments, troches. Prerequisite: PhP 331, Ch 226. Three lectures; 2 three-hour laboratory periods. Professor Gilfillan.

Phr 440. Organic Pharmacy. Fall term, 3 hours.

Organic chemicals and their preparations used in medicine, with particular reference to the correlation between chemical constitution and physiological action. Prerequisite: Phr 317, PhP 333, Ch 227. Three lectures. Professor Gilfillan.

Phr 441, 442. U. S. Pharmacopoeia and National Formulary. Winter and spring terms, 3 hours each term.

All drugs in United States Pharmacopoeia and National Formulary, as well as all important unofficial drugs and preparations in the dispensaries, studied with emphasis on composition, uses, methods of

manufacture, reasons for each step in process of manufacture, and all other important data. Prerequisite: Phr 440. Three lectures. Professor Gilfillan.

Phr 444. Manufacturing Pharmacy. Fall term, 3 hours.

This course deals with the manufacture of the more complex pharmaceuticals involving chemical reactions in their preparation. Prerequisite: Phr 317, Ch 227. Three three-hour laboratory periods. Associate Professor Stuhr.

Phr 447, 448, 449. Drug-Store Practices. Three terms, 3 hours each term.

The stock and equipment of the model drug store are used for instruction in practical drug-store work, including preliminary problems of establishing a drug store, store arrangement, salesmanship, show-case and window trimming, inventory, keeping narcotic and poison records, taking copies of prescriptions over the telephone, and other phases of drug-store work. Since all stock and sundries in the model drug store were donated for instructional purposes, nothing is actually sold or dispensed. Prerequisite: Phr 313. Two lectures; 1 three-hour laboratory period. Professor Zieffle.

Phr 450. Proprietary Remedies. Winter term, 3 hours.

A brief descriptive survey of the more important preparations of various pharmaceutical manufacturers; a consideration of their composition, use, and therapeutic value. The text, *New and Nonofficial Remedies*, is supplemented by current literature and laboratory reports. Prerequisite: Phr 440. Three lectures. Professor Gilfillan.

Phr 454. Prescription Lectures. Fall term, 3 hours.

The theory of procedures in prescription compounding and the proper management of the prescription department. Prerequisite: Phr 317, PhP 333, Ch 227. Two lectures; 1 three-hour laboratory period. Associate Professor Stuhr.

Phr 455. Prescription Incompatibilities. Winter term, 3 hours.

Several hundred incompatibilities in prescriptions studied from the point of view of the cause of the incompatibility and the best method of overcoming it. Prerequisite: Phr 454. Two lectures; 1 three-hour laboratory period. Associate Professor Stuhr.

Phr 456. Prescription Compounding. Spring term, 3 hours.

In this course the students apply the principles learned in Phr 454 and 455 to the actual compounding of prescriptions. More than one hundred prescriptions representing the general types met with in actual practice are compounded. Prerequisite: Phr 455. One lecture; 2 three-hour laboratory periods. Associate Professor Stuhr.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G)
may be taken for graduate credit.

Phr 501. Research. Terms and hours to be arranged.

Phr 503. Thesis. Terms and hours to be arranged.

Phr 505. Reading and Conference. Terms and hours to be arranged.

Phr 507. Seminar. Terms and hours to be arranged.

Instruction and practice in the method of attack of a scientific problem, the use of pharmaceutical literature, and the preparation of written reports on scientific investigations.

Pharmaceutical Analysis

ALL courses in drug analysis, qualitative and quantitative, are offered through the department of Pharmaceutical Analysis. All the work is of upper-division or graduate character. The Department of Pharmaceutical Analysis is under the supervision of the Director of the Drug Laboratory of the Oregon State Board of Pharmacy.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

PhA 321. **Natural Products and Drug Principles.** Spring term, 3 hours.

A combined lecture and laboratory course on the composition and identification of natural products, alkaloids, synthetic drugs, and newer remedies. Prerequisite: Ch 226. One lecture; 2 three-hour laboratory periods. Assistant Professor Britt.

PhA 327. **Drug Assaying.** Spring term, 3 hours.

The quantitative determination of the purity of the more common official and unofficial drugs. Prerequisite: Ch 227. One lecture; 2 three-hour laboratory periods. Assistant Professor Britt.

PhA 361, 362, 363. **Quantitative Drug Analysis.** Three terms, 3 hours each term.

Advanced methods in drug assaying. Students showing proficiency in this course are permitted to do special work in the State Drug Laboratory. Prerequisite: Phr 311; Ch 227. One lecture; 2 three-hour laboratory periods. Assistant Professor Britt.

PhA 441. **Toxicology.** (G) Any term, 3 hours.

Detection of the common inorganic and organic poisons, with emphasis on alkaloids and synthetics. Prerequisite: PhP 333, PhA 321, Ch 227. One lecture; 2 three-hour laboratory periods. Assistant Professor Britt.

GRADUATE COURSES

Courses numbered 400-499 and designated (G) or (G) may be taken for graduate credit.

PhA 501. **Research.** Terms and hours to be arranged.

PhA 503. **Thesis.** Terms and hours to be arranged.

PhA 505. **Reading and Conference.** Terms and hours to be arranged.

PhA 507. **Seminar.** Terms and hours to be arranged.

Conducted jointly with Phr 507 and PhP 507. See Phr 507.

Pharmacology and Pharmacognosy

CCOURSES in the culture and identification of medicinal plants, together with all courses dealing with the physiological action of drugs and their therapeutic value, are included in the Department of Pharmacology and Pharmacognosy. All the work is of upper-division or graduate character.

DESCRIPTION OF COURSES

UPPER-DIVISION COURSES

PhP 331, 332, 333. **Practical Pharmacognosy.** Three terms, 3 hours each term.

A comprehensive study of the official botanical, animal, and synthetic drugs, and their macroscopic identification. Prerequisite: Phr 113, Ch 227. Three lectures. Associate Professor Stuhr.

PhP 438. **Microscopy of Drugs.** Spring term, 3 hours.

Microscopic structure and characteristics of drugs; methods of identifying powdered drugs and of detecting adulterations. Prerequisite: PhP 332. One lecture; 2 three-hour laboratory periods. Associate Professor Stuhr.

PhP 491, 492. **Practical Pharmacology.** Fall and winter terms, 3 hours each term.

Physiological action and medicinal uses of drugs on the human organism, including toxicological aspects of poisonous drugs. Prerequisite: Phr 317, PhP 333. Three lectures. Associate Professor Stuhr.

PhP 493. **Experimental Pharmacology.** Spring term, 3 hours.

A continuation of PhP 491, 492, but with the introduction of laboratory work and demonstration. Biological tests are made of some of the more important drugs of the U.S.P. and N. F. Prerequisite: PhP 492. Two lectures; 1 three-hour laboratory period. Associate Professor Stuhr.

PhP 494. **Pharmacological Standardization.** (G) Any term, 3 hours.

Biological assaying, employing the methods of the U. S. P., together with certain unofficial but well-recognized procedures. Prerequisite: PhP 493, Ch 227, Bac 333, Z 203. One lecture; 2 three-hour laboratory periods. Associate Professor Stuhr.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) or (G) may be taken for graduate credit.

PhP 501. **Research.** Terms and hours to be arranged.

PhP 503. **Thesis.** Terms and hours to be arranged.

PhP 505. **Reading and Conference.** Terms and hours to be arranged.

PhP 507. **Seminar.** Terms and hours to be arranged.

Conducted jointly with Phr 507 and PhA 507. See Phr 507.

Secretarial Science

Faculty

VICTOR PIERPONT MORRIS, Ph.D., Dean and Director of Business Administration, Oregon State System of Higher Education; In Charge of Secretarial Science.

HERBERT TOWNSEND VANCE, M.S., Professor of Secretarial Science; Head of Department.

BERTHA WHILLOCK STUTZ, M.S., Associate Professor of Secretarial Science.

MINNIE DEMOTTE FRICK, B.S., Associate Professor of Secretarial Science.

CHARLES THEODORE YERIAN, M.S., Assistant Professor of Secretarial Science.

*LILLY NORDGREN EDWARDS, M.A., Instructor in Secretarial Science.

JOHN WALTER ERICKSON, B.S., Instructor in Secretarial Science.

LOUISE JACKMAN ORNER, B.S., Instructor in Secretarial Science.

DON ESSIG, M.A., Instructor in Secretarial Science.

General Statement

THE Secretarial Science four-year curriculum is planned to meet the needs of the students who wish to prepare themselves for responsible secretarial positions or for such positions as office manager, assistant to public officials, and research assistant. Students may major in secretarial science and minor in some other field.

A four-year degree curriculum in secretarial training had been offered at the State College from 1916 to 1932, though instruction in secretarial subjects had been offered for many years before that time. In the 1932 allocations of major curricula in the State System of Higher Education, secretarial science was assigned to the State College with the provision that it should be under the control of the Dean and Director of Business Administration. In May 1933, the work in secretarial science was organized by authority of the State Board of Higher Education into a four-year curriculum leading to the degree of Bachelor of Secretarial Science.

For the degree of Bachelor of Secretarial Science students must satisfy all the general requirements and in addition must follow a prescribed curriculum including the first two years of shorthand and typing, Office Procedure (SS 311, 312), one year of accounting, Business English, Elements of Organization and Production (BA 221), Elements of Finance (BA 222), Elements of Marketing (BA 223), one year of Business Law, and one year of Principles of Economics.

*On leave of absence.

Commercial Education. In conjunction with the Department of Secretarial Science, the School of Education is able to meet the demand for well-prepared teachers of commercial branches in secondary schools. In the selection of their collegiate courses in both secretarial science and education, students should advise with the School of Education. The twenty-three term hours in education required for a certificate to teach in accredited high schools must be earned during the junior and senior years.

Facilities. The classrooms and laboratories for the instruction in secretarial science are located in Commerce Hall. Special facilities comprise the latest office appliances and fixtures, including the standard types of typewriters, duplicators, mimeographs, dictaphones, mimeoscopes, filing cabinets, adding machines, bookkeeping machines, and accounting machines. All appliances and equipment are kept in constant repair. Students are taught how to keep in repair the appliances they use.

Curriculum in Secretarial Science

B.S.S. Degree

	Term hours		
	F	W	S
Freshman Year			
Stenography (SS 111, 112, 113)	3	3	3
Typing (SS 121, 122, 123)	2	2	2
English Composition (Eng 111, 112, 113)	3	3	3
¹ Physical Education	1	1	1
Military Science	1	1	1
Group requirement in science	3	3	3
Electives:			
Suggested—			
² Home Economics	}	3	3
Mental Hygiene			
History			
Music			
Methods of Study			
Language			
Literature			
Speech			
	16	16	16
Sophomore Year			
Applied Stenography (SS 211, 212, 213)	3	3	3
Elements of Organization and Production (BA 221)	4	—	—
Elements of Finance (BA 222)	—	4	—
Elements of Marketing (BA 223)	—	—	4
Principles of Economics (Ec 201, 202, 203)	3	3	3
Constructive Accounting (BA 111, 112, 113)	4	4	4
Physical Education	1	1	1
Military Science	1	1	1
	16	16	16

¹General Hygiene (PE 150), 2 term hours, is taken one term in place of physical education. Women take Social Ethics (PE 131), one term.

²Preferred sequence: CT 217, FN 218, HAd 225 or 320. Other sequences: (a) CT 217, 218, 231 or 250. (b) FN 211, 212, 213 or FN 220, 221, 222, 225. (c) HAd 411, 412, 413 or 422, 340.

	Term hours		
	F	W	S
Junior Year			
Office Procedure (SS 311, 312).....	5	5	5
Office Organization and Management (SS 313).....	4	4	4
Business Law (BA 256, 257, 258).....	4	4	4
Federal and State Tax Forms (BA 214).....	3	3	3
Electives:			
Suggested—			
Retail Accounting.....	}	}	}
Principles of Cost Accounting.....			
Analysis of Financial Statements.....			
Statistics.....			
Modern Governments.....			
Sociology.....			
Art.....			
History.....			
Music.....			
Literature.....			
Advanced Military Science.....			
Speech.....			
Psychology.....			
	7	4	7
	16	16	16

Senior Year			
Secretarial Science (SS 411).....	3		
Secretarial Science (SS 412).....		3 or (3)	
Seminar in Secretarial Science (SS 407).....	1	1	
Business English (Eng 217).....	3		
Merchandising and Selling (SS 436).....		3	
General Advertising (SS 439).....			3
International Trade (Ec 440).....	4		
Money and Banking (Ec 413).....			4
Investments (BA 463).....			3

Electives:

Suggested—

Public Finance.....	}	}	}
Science.....			
Advanced Military Science.....			
Speech.....			
	5	9	6
	16	16	16

Description of Courses

COURSES IN SECRETARIAL SCIENCE

LOWER-DIVISION COURSES

SS 111, 112, 113. Stenography. Three terms, 3 hours each term.

Theory of Gregg shorthand; practical applications of theory principles in sentence dictation. Typing (SS 121, 122, 123) must be taken concurrently with this course unless the student has had the equivalent. Students who have had at least one year of Gregg shorthand are not permitted to take course SS 111 for credit. Four recitations.

SS 121, 122, 123. Typing. Three terms, 2 hours each term.

Theory and practice of touch typing; rhythm drills, dictation exercises; writing paragraphs; punctuation and mechanical arrangement of business correspondence, legal forms, tabulating, manifold, speed practice. Students who have had at least one year of typing are not permitted to take SS 121 for credit. Five periods laboratory work; 1 hour home assignment.

- SS 211, 212, 213. **Applied Stenography.** Three terms, 3 hours each term. Advanced principles and phrases of Gregg shorthand; dictation and transcripts covering vocabularies of representative businesses, such as law, banking, insurance, railway, and manufacturing; advanced dictation, legal forms, newspaper and magazine articles. Prerequisite: SS 113, 123 or equivalent. Three recitations; 3 one-hour laboratory periods; 5 hours home work.

UPPER-DIVISION COURSES

- SS 311, 312. **Office Procedure.** Fall and winter terms, 5 hours each term. Training in the most efficient stenographic methods and office practice, filing, advanced dictation, transcripts, reports, and practical use of modern office appliances. Prerequisite: SS 213 or equivalent. Three lectures; 3 two-hour laboratory periods. Associate Professor Stutz.
- SS 313. **Office Organization and Management.** Spring term, 5 hours. Principles and practices of scientific secretarial office management, covering organization, arrangement, and operation, with special consideration of the employment and training of secretarial office workers. Office efficiency problems and business ethics. Prerequisite: SS 312. Professor Vance.
- SS 407. **Seminar.** Three terms, 1 hour each term. Research and survey course in the organization and practice of a modern office in which the student is especially interested and prepared. One period. Professor Vance.
- SS 411. **Secretarial Science.** Fall term, 3 hours. A study of the duties of the secretary in business and the professions; relation of the private secretary to the employer; office organization and management. Lectures, investigation, assigned reading. Study and application of actual problems in college offices. Prerequisite: SS 313 or equivalent. Three lectures. Professor Vance.
- SS 412. **Secretarial Science.** Any term, 3 hours. Continuation of SS 411. Nine hours laboratory. Professor Vance.
- SS 436. **Merchandising and Selling.** (g) Winter term, 3 hours. This course deals with retail organizations, practices, policies, and problems. It emphasizes stock control systems, buying, methods of sales promotion such as retail display and advertising, plant operation, personnel, methods of wage payment, credit, finance, receiving and marketing, mark-ups, mark-downs, turn-overs, pricing, style changes, trends in retailing, expense classification and distribution. Professor Vance.
- SS 439. **General Advertising.** (g) Spring term, 3 hours. Theory and Practice. The economic and social implications of advertising. The advertising agency. "The Campaign," including methods of research and coordination of advertising with marketing and merchandising processes. Selection of media. Retail and mail order advertising. The mechanics of advertising, including typography, print-

ing, engraving, and book making. Practice in production of layouts and copywriting. Professor Vance.

GRADUATE COURSES

Courses numbered 400-499 and designated (g) may be taken for graduate credit.
For graduate courses in commercial education, see below.

COURSES IN COMMERCIAL EDUCATION

UPPER-DIVISION COURSES

- Ed 329. **Methods in Commercial Subjects.** Winter term, 3 hours.
Principles of education as used in the development of skills and precision involved in the learning of such activities as are found in stenography, typing, and accounting. Lectures covering aims, materials, standards, methods of presentation, organization of courses, and arrangement of curricula. Prerequisite: BA 111, 112, 113; SS 311, 312; Ed 311, 312, 313. Three lectures. Associate Professor Stutz.
- CEd 401. **Research.** Terms and hours to be arranged.
- CEd 403. **Thesis.** Terms and hours to be arranged.
- CEd 405. **Reading and Conference.** Terms and hours to be arranged.
- CEd 407. **Seminar.** Terms and hours to be arranged.

GRADUATE COURSES

- CEd 501. **Research.** Terms and hours to be arranged.
Problems in commercial education. Associate Professor Stutz.
- CEd 503. **Thesis.** Terms and hours to be arranged.
- CEd 505. **Reading and Conference.** Terms and hours to be arranged
- CEd 507. **Seminar.** Terms and hours to be arranged.

Military Science and Tactics

Faculty

(Personnel detailed from United States Army)

- COLONEL FREDERICK COLEMAN TEST, Infantry; Commandant; Professor of Military Science and Tactics.
- LIEUTENANT COLONEL HUGH BROADUS KEEN, Infantry; Associate Professor of Military Science and Tactics; Director of Infantry Unit.
- LIEUTENANT COLONEL WILLIAM SPENCE, Field Artillery; Associate Professor of Military Science and Tactics; Director of Field Artillery Unit.
- MAJOR AUBREY HOODENPYL BOND, Corps of Engineers; Associate Professor of Military Science and Tactics; Director of Engineer Unit.
- MAJOR PAUL WHITTEN MAPES, Infantry; Assistant Professor of Military Science and Tactics (Infantry Unit).
- CAPTAIN EDWARD JAMES ROXBURY, Field Artillery; Assistant Professor of Military Science and Tactics.
- CAPTAIN HAROLD ARTHUR DOHERTY, Field Artillery; Assistant Professor of Military Science and Tactics (Field Artillery Unit).
- CAPTAIN ROBERT AUGUSTUS ELLSWORTH, Field Artillery; Assistant Professor of Military Science and Tactics (Field Artillery Unit).
- FIRST LIEUTENANT LOUIS RUSSELL WIRAK, Corps of Engineers; Assistant Professor of Military Science and Tactics.
- STAFF SERGEANT CLARENCE CALVIN WOODBURY (Captain, Infantry, Officers' Reserve Corps); Instructor in Military Science and Tactics (Infantry Unit).
- STAFF SERGEANT JOHN CARSON WOODBURY; Assistant to Professor of Military Science and Tactics (Sergeant-Major).
- STAFF SERGEANT LAURENCE EDWIN DARLINGTON (Captain, Quartermaster, Officers' Reserve Corps), M.S.; Instructor in Military Science and Tactics (Engineer Unit).
- SERGEANT JOHN EARL CRAWFORD; Instructor in Military Science and Tactics (Infantry Unit and Rifle Marksmanship).
- SERGEANT EDWARD HURSHAL COMBS; Instructor in Military Science and Tactics (Field Artillery Unit).
- SERGEANT JAMES DEMITH; Instructor in Military Science and Tactics (Field Artillery Unit).
- SERGEANT FRANK SYLVESTER SHERMAN; Instructor in Military Science and Tactics (Field Artillery Unit).

General Statement

FOR many years the State College Cadet Corps has held a reputation for excellence. Instruction in military tactics was started about 1872 in conformity with a requirement of the Federal Land-Grant Act of 1862, under which the State College was established as the land-grant institution of Oregon.

For the academic year 1916-17, the State College was classified by the United States War Department as a "Distinguished College," the highest rating for such an institution. Conditions and methods of rating have varied since 1917, but the Cadet Corps has maintained its position of prestige. During the World War the number of graduates who served with distinction in our armed forces gave proof of the high quality of their preparation for public service and of the value to the nation of such military instruction.

Reserve Officers' Training Corps. The State College qualified under the provisions of the Act of Congress passed in 1916 which gave a greater measure of Federal aid and recognition to military training at this institution. The College agreed to meet prescribed standards of training in order that its graduates might receive commissions as reserve officers in the Army who would be available for service in event of a national emergency. The Corps of Cadets at Oregon State now comprises units of the Reserve Officers' Training Corps—Infantry, Field Artillery, Engineers, and Band.

Requirements. Military instruction is required in the freshman and sophomore years of all students who are citizens of the United States, under twenty-six years of age, and physically qualified except as stated below. Exemptions from military training are granted for the following reasons: physical unfitness; age twenty-six or over; service of six months or more in the Army, Navy, or Marine Corps; noncitizenship; married and living with wife in Corvallis or vicinity; completion of four Citizen Civilian Military Training Camps; conscientious objection on account of *religious belief*, in which case the student is required to make application to the Commandant in writing accompanied by a letter from parents and pastor of his church showing that he is a member of the church in good standing and that objection is based on religious belief. Transfer students who have eighty or more hours of credit accepted at Oregon State College may be exempt, and in other exceptional cases exemption may be granted on the basis of individual handling by the Commandant.

Basic Course. The first two years of military instruction requiring three hours a week constitute what is known as the Basic Course of the Reserve Officers' Training Corps. During that period, the student does not receive any emoluments other than the use of a uniform provided by the War Department. Uniforms must be returned by the students at the end of each year or upon withdrawal from college. The prescribed text books, shoes, and a leather belt of the approved type must be provided by the student. From this group the corporals are selected for the Cadet Corps.

Advanced Course. This is an elective course of five hours a week covering the third and fourth years of military instruction in the Reserve Officers' Training Corps. These students are appointed the officers and sergeants of the Cadet Corps. Upon completion of requirements for this course, these students receive commissions as second lieutenants in the Officers' Reserve Corps, Army of the United States, for that branch in which they have specialized—Infantry, Field Artillery, or Engineer Corps. Under present War Department allotments, about two hundred and two students are permitted to take the advanced course. The students for the course are selected by the Professor of Military Science and Tactics from

those applicants whose military efficiency, academic standing and physical condition are such as to warrant further training.

Advanced course students enter into a contract to continue the course to completion, unless excused by competent authority, and to attend a six-weeks period of instruction at camp, at government expense, the summer following their first year of advanced instruction. In return the student receives allowances toward subsistence which average about \$7.50 a month during the period from date of entrance into the course to the date of completion, except for the period of the camp, when he receives \$21 per month and his food, uniform, and medical attention. He also receives an officer's uniform which he uses during the course and which becomes his property upon completion of the third year. At the end of the fourth year he receives \$7 to cover the cost of maintenance of his uniform during the year. During the two-year course he receives from the United States a total of about \$200 cash, a tailor-made uniform, and all expenses during the six-weeks summer camp.

Academic Credits. For the basic course, one hour of academic credit is allowed for each term; for the advanced course the credit is three hours for each term.

Military Sports. Supplementary to normal instruction in marksmanship and equitation, the Military Department supervises the college rifle teams.

Description of Courses

COURSES IN INFANTRY

LOWER-DIVISION COURSES

MS 111, 112, 113. First-Year Basic Course. Three terms, 1 hour each term.

Freshman year. This course aims to instruct the student in basic Infantry subjects; to inculcate obedience, decorum, cheerfulness, esprit, and other elements of good discipline with the corresponding physical development; and to lay a sound foundation for the further pursuit of military studies. Subjects include orientation; National Defense Act and R. O. T. C.; obligations of citizenship; military history and military policy; military discipline, courtesies and customs of the service; military sanitation and first aid, military organizations; map reading; leadership; and rifle marksmanship. Three periods.

MS 211, 212, 213. Second-Year Basic Course. Three terms, 1 hour each term.

Sophomore year. This course aims to give students further training in the basic Infantry subjects; to inculcate leadership; to build on the knowledge they have already acquired and to prepare them to take up the Advanced Course. Subjects include leadership; automatic rifle; combat training; musketry; scouting and patrolling; combat principles; and characteristics of infantry weapons. Three periods.

UPPER-DIVISION COURSES

MS 311, 312, 313. First-Year Advanced Course. Three terms, 3 hours each term.

Junior year. Aims to give further training in basic Infantry subjects and in leadership, as the ground work for the duties of Junior officers of Infantry; to develop tactical judgment; to prepare the student for practical training while attending R. O. T. C. summer camp. Subjects include aerial photograph reading; instructional methods; machine guns; howitzer; pistol; estimate of the situation and combat orders; marches; security; development for combat; offensive and defensive combat; field fortification; company administration; care and operation of motor vehicles; and defense against chemical warfare. Five periods.

MS 411, 412, 413. Second-Year Advanced Course. Three terms, 3 hours each term.

Senior year. This course aims to complete the preparation of the student for commission as a second lieutenant of Infantry in the Officers' Reserve Corps of the United States Army. Subjects include leadership; military law; military history and policy of the United States; Officers' Reserve Corps Regulations; tanks; mechanization; signal communications; combat intelligence; combat training; anti-aircraft defense; and emergency procurement of property and funds. Five periods.

COURSES IN FIELD ARTILLERY

LOWER-DIVISION COURSES

MS 121, 122, 123. First-Year Basic Course. Three terms, 1 hour each term.

Freshman year. The object of this course is to create a foundation of essential information upon which to base the military training of the student. Subjects consist of: military fundamentals; orientation; National Defense Act and R. O. T. C.; obligations of citizenship; military history and policy; military discipline; courtesies and customs of the service; map reading; military organization; leadership; elementary gunnery; duties of cannoneers and the firing battery; Field Artillery ammunition and matériel. Rifle marksmanship to students so electing. Three periods.

MS 221, 222, 223. Second-Year Basic Course. Three terms, 1 hour each term.

Sophomore year. The object of this course is to further the student's knowledge of the basic field artillery subjects. Leadership; fire control instruments; battery communications; duties of battery commander's detail; automotive vehicle construction and operation. Three periods.

UPPER-DIVISION COURSES

MS 321, 322, 323. First-Year Advanced Course. Three terms, 3 hours each term.

Junior year. Advanced course in military fundamentals, covering the following subjects: administration; defense against chemicals; aerial photograph reading; reconnaissance and occupation of posi-

tion; duties of battery officers; use of battery commander's detail; signal communications; liaison with the Infantry; elementary ballistics and dispersion; preparation of fire; conduct of fire; pistol marksmanship; military motor vehicles; leadership. Five periods.

MS 421, 422, 423. Second-Year Advanced Course. Three terms, 3 hours each term.

Senior year. To develop qualities of leadership in the student and to train him in the methods of instructing and handling men. Command and instruction of student organizations; tactics; military law and administration; military history. Five periods.

COURSES IN MILITARY ENGINEERING

LOWER-DIVISION COURSES

MS 131, 132, 133. First-Year Basic Course. Three terms, 1 hour each term.

Freshman year. Designed to impart essential military knowledge combined with development of individual initiative and self-reliance. Military fundamentals; military organization; military discipline, courtesies and customs of the service; National Defense Act; military history and policy; obligations of citizenship; leadership; rifle marksmanship; map reading; floating bridges. Three periods.

MS 231, 232, 233. Second-Year Basic Course. Three terms, 1 hour each term.

Sophomore year. Introduction to application of engineering science to military purposes. Leadership; map and aerial photograph reading; military sketching; map making; rigging; weapons and musketry; scouting and patrolling; and floating bridges. Three periods.

UPPER-DIVISION COURSES

MS 331, 332, 333. First-Year Advanced Course. Three terms, 3 hours each term.

Junior year. Designed to develop application of sound principles, ingenuity, and improvisation to the solution of practical problems. Leadership; advanced Engineer training—military roads, their location and construction, maintenance and repair; military bridging—general, floating; military explosives and demolitions; field fortifications—trenches, emplacements, obstacles and protected shelters; combat principles of Infantry; combat principles of Engineers; defense against chemical warfare. Five periods.

MS 431, 432, 433. Second-Year Advanced Course. Three terms, 3 hours each term.

Senior year. Management and handling of men; administration; duties of Engineers; construction in war; fixed and floating bridges; combat training; organization of the ground; mobilization training; military law; military history and policy; leadership. Five periods.

Division of Physical Education

Faculty

CLAIR VAN NORMAN LANGTON, Dr.P.H., Director of the Division of Physical Education.

ELIZABETH HEATH, B.S., Secretary to the Director.

Physical Education for Women

EVA M SEEN, Ed.D., Professor of Physical Education for Women; Head of Department.

HENRIETTA MORRIS, Sc.D., Associate Professor of Hygiene.

LAURA CORNELIA MCALLESTER, B.S., Assistant Professor of Physical Education for Women.

BETTY LYND THOMPSON, M.A., Assistant Professor of Physical Education for Women.

NATALIE REICHART, M.A., Assistant Professor of Physical Education for Women.

JEANNETTE ALICE BRAUNS, B.S., Instructor in Physical Education for Women.

THYRZA ELIZABETH IVERSON, M.S., Instructor in Physical Education for Women.

FLORENCE LOUISE HUPPRICH, M.A., Instructor in Physical Education for Women.

Physical Education for Men

CLAIR VAN NORMAN LANGTON, Dr.P.H., Professor and Director of Physical Education; Professor of Hygiene.

PERCY PHILIP LOCEY, M.A., Director of Intercollegiate Athletics.

RALPH ORVAL COLEMAN, M.A., Professor of Physical Education; Director of Intramural Sports; Head Coach of Baseball.

RAYMOND GEORGE NEBELUNG, Dr.P.H., Associate Professor of Hygiene.

DELMER ISAAC ALLMAN, Dr.P.H., Associate Professor of Hygiene.

OTTO CHRISTIAN MAUTHE, Assistant Professor of Physical Education.

GRANT ALEXANDER SWAN, B.S., Assistant Professor of Physical Education; Head Coach of Track.

*JACK ERNEST HEWITT, M.A., Assistant Professor of Physical Education.

ALONZO L STINER, B.S., Head Coach of Football; Instructor in Physical Education.

AMORY TINGLE GILL, B.S., Head Coach of Basketball; Instructor in Physical Education.

JAMES VICTOR DIXON, B.S., Instructor in Physical Education; Assistant Coach of Football.

EDWARD ALMERON STEVENS, LL.B., Instructor in Physical Education; Coach of Rowing.

HOWARD WILLIAM RAABE, B.S., Instructor in Physical Education.

HAROLD WILLIAM MOE, B.S., Assistant Coach of Football; Instructor in Physical Education.

WILLIAM WARD MCKALIP, B.S., Instructor in Physical Education; Freshman Coach.

*On leave of absence.

General Statement

ALL instruction and related activities in the field of physical education and hygiene are administered by the Division of Physical Education. Close cooperation is maintained with the Student Health Service and other student welfare agencies of the institution.

Lower-division and service courses in physical education are offered at the State College. By action of the State Board of Higher Education on March 7, 1932, all major work in the Oregon State System of Higher Education leading to baccalaureate and advanced degrees in physical education was confined to the School of Physical Education at the University, and lower-division work (instruction in the freshman and sophomore years) was assigned to both the University and the State College.

The lower-division work in physical education is essentially the same at both institutions. While it is recommended that students intending to major in physical education enter the institution at which major work is offered at the beginning of their freshman year, they may, if they wish, spend their freshman and sophomore years at the State College, and transfer to the University for their major work at the beginning of the junior year, without loss of credit and with fundamental requirements for upper-division standing fully met.

At both institutions, the lower-division program is intended not only to lay the foundation for specialization in physical education, but also to serve the needs of students majoring in other fields. In addition to the lower-division work, the State College offers upper-division service courses in physical education for students in other fields.

As stated on pages 156-157, the dean of the major school at the University serves in an advisory relation to the work in physical education at the State College to the end that the instruction shall bear a proper relation to the work of the major school.

Students who plan to minor in physical education at the State College or major at the University should confer with advisers in the office of the Department of Physical Education for Women or for Men, respectively.

Intramural Sports. Intramural sports are conducted by both Physical Education departments. The department for women has charge of all women's athletics and offers for the students a wide program of intramural sports and mixed recreation. The department for men carries on extensive organized sports programs which are separate and apart from intercollegiate athletics.

The function of the program of intramural sports is to give every student the moral, social, physical, and educational values of competitive sports. Competition is organized between living organizations, clubs, individuals, classes, and institutional departments. The program of sports provides for both individual and team endeavor. "Athletics for all" is the purpose of intramural sports promotion.

Athletic Organizations. Athletic organizations for men include the Minor "O" and Varsity "O" associations and the honor societies, Sigma Alpha and Sigma Delta Psi. The Woman's Athletic Association sponsors a program of competitive and recreational activities for women. The Orange "O" letter, the senior plaque, and election to Parthenia are honor awards.

Student Health Service. The Student Health Service provides medical examinations for all entering students and advises with the Physical Education departments in the assignment of students to activities in accord with their physical needs. The following activity classification is made, based upon the medical examinations:

- a. Unlimited activity.
- b. Unlimited activity with observation.
- c. Restricted activity.
- d. Corrective gymnastics.
- e. No activity.

Fees. The fees paid by every student cover the use of pool and showers, locker, swimming suit, towels, bandages, and consumable supplies. Every student has a basket or locker in the gymnasium for his or her exclusive use and is urged to use the gymnasium facilities to the utmost.

Students enrolled in freshman and sophomore physical-education courses, and students enrolled in other physical-education courses requiring the use of a gymnasium uniform, pay an additional fee of \$2.00 a term. This fee entitles the student to a complete gymnasium uniform (except shoes) and to regular laundry service for the uniform.

Prerequisites for a Major. Students taking the first two years toward a major in physical education with the intention of transferring to the University should take all prerequisite subjects and the freshman and sophomore technical subjects. On transfer to the University these courses are accepted and adjustments made so that requirements for a degree in physical education can be completed in the junior and senior years. Prerequisite courses are as follows:

	Term hours
General Zoology	9
Elementary General Chemistry	12
English Composition	9
Elementary Human Physiology	6
Elements of Psychology	9
Sociology	9
Survey (elected from Language and Literature or Social Science group)....	12

Minor Norm in Physical Education. Students preparing for part-time teaching positions in physical education should take as a minor norm a minimum of 24 term hours of professional courses, of which at least 12 term hours must be activities suitable for high-school situations.

On completion of the minor norm (see pages 260-261), the student may be recommended for a part-time teaching position in physical education in the high schools of the state.

Required Courses. Courses PE 114, 115, 116, PE 131, PE 214, 215, 216 for women, and PE 151, 152, 153, PE 251, 252, 253 for men, are required of all undergraduates. PE 150 (General Hygiene) is required of both men and women. For the Junior Certificate students are required to complete the following:

Freshman Year

Physical Education, 1 term hour each term for two terms.
General Hygiene, 2 term hours for one term.

Sophomore Year

Physical Education, 1 term hour each term for three terms.

Required activity courses are regularly scheduled classes planned as instructional hours leading to a knowledge and appreciation of the tech-

nique involved and not merely opportunity for recreation or exercise. Ample opportunity for exercise and recreation is provided, and all of the facilities of the department are at the student's disposal outside the regular class hours.

The physical-activity courses for students taking a minor in physical education (PE 124-126, 224-226 for women; PE 174-176, 274-276 for men) may be considered as fulfilling the physical-education requirement for that year.

Elective Courses. Courses PE 314, 315, 316, PE 414, 415, 416 for women, and PE 351, 352, 353, PE 451, 452, 453 for men, may be taken to the amount of one hour per term for juniors and seniors and a total of not more than six term hours in addition to the regular physical-education requirement.

Description of Courses

SERVICE COURSES FOR WOMEN

LOWER-DIVISION COURSES

PE 150. General Hygiene. Any term, 2 hours.

The principles and practices of health promotion, individual and physiological hygiene, disease prevention and control, community hygiene and public health. Lectures, recitations, and demonstrations concerning phases of health that should be understood by all college students. Required of all freshmen. Two periods. (In the spring term one section of this course is offered for students in nursing education only, leading to 3 hours credit; 3 periods.)

PE 250. Advanced Hygiene. Any term, 3 hours.

Continuation of PE 150. Lectures and discussions on what the average person wants to know about personal health, exercise, weight control, prevention of infection, social hygiene, diet and dietary dangers, stimulants, injurious popular remedies and fads, sunlight, air and ventilation, the glands and health, choosing a doctor, and life-extension problems. Three periods.

PE 114, 115, 116. Freshman Physical Education. Three terms, 1 hour each term.

Two terms required of all freshman women. In fulfilling this requirement the student is permitted to elect courses offered in team sports, such as basketball, volleyball, baseball, field hockey, soccer, and field ball; and in individual sports, such as archery, badminton, tennis, swimming, fencing, golf, and riding; dancing; tumbling; and mechanics of posture. All freshman students are required to take one term of General Hygiene and two terms of Elementary Physical Education. Three periods.

PE 131. Social Ethics. One term, no credit.

The purpose of this course is threefold. It brings new students into early contact with their dean of women. It gives the dean of women the opportunity of instructing new students in the fundamental principles of conduct both on the campus and elsewhere. It brings

students a vision of woman's position and responsibility in the economic, social, and spiritual life of today. Required of all freshman women. One period.

PE 214, 215, 216. **Sophomore Physical Education.** Three terms, 1 hour each term.

Continuation of PE 114, 115, 116. Required of all sophomore women. Three periods.

UPPER-DIVISION COURSES

*PE 314, 315, 316. **Junior Physical Education.** Three terms, 1 hour each term.

A continuation of PE 214, 215, 216. Elective for juniors. Three periods.

*PE 414, 415, 416. **Senior Physical Education.** Three terms, 1 hour each term.

A continuation of PE 314, 315, 316. Elective for seniors. Three periods.

SERVICE COURSES FOR MEN

LOWER-DIVISION COURSES

PE 150. **General Hygiene.** Any term, 2 hours.

The principles and practices of health promotion, individual and physiological hygiene, disease prevention and control, community hygiene and public health. Lectures, recitations, and demonstrations concerning phases of health that should be understood by all college students. Required of all freshmen. Two periods.

PE 250. **Advanced Hygiene.** Any term, 3 hours.

Continuation of PE 150. Lectures and discussions on what the average person wants to know about personal health, exercise, weight control, prevention of infection, social hygiene, diet and dietary dangers, stimulants, injurious popular remedies and fads, sunlight, air and ventilation, the glands and health, choosing a doctor, and life-extension problems. Three periods.

PE 151, 152, 153. **Elementary Physical Education.** Three terms, 1 hour each term.

Physical activities taught not only for the acquisition of skill, but from the standpoint of their adaptation in the social life of the student. The time set aside is for instruction. It is hoped that the student will use the open hours provided and also the intramural sports for practice in these various activities. All freshman students are expected to take one term of General Hygiene and two terms of Elementary Physical Education. Two periods.

PE 251, 252, 253. **Advanced Physical Education.** Three terms, 1 hour each term.

Required of sophomores. Two periods.

*Elective physical-education courses for juniors and seniors may be taken to the amount of one term hour per term and a total of not more than six term hours in addition to the physical-education requirement.

UPPER-DIVISION COURSES

- *PE 351, 352, 353. **Physical Activities.** Three terms, 1 hour each term.
A continuation of PE 251, 252, 253. Elective for juniors. Two periods.
- *PE 451, 452, 453. **Physical Activities.** Three terms, 1 hour each term.
A continuation of PE 351, 352, 353. Elective for seniors. Two periods.

PROFESSIONAL COURSES

LOWER-DIVISION COURSES

- PE 121, 122, 123. **Introduction to Physical Education.** Three terms, 2 hours each term.
Required in the freshman year for all students taking a minor. Introduces the student to the modern developments of physical education in relation to general education. The first term deals with the general aims and objectives, the second term with the history of physical education, and the third term with the practical considerations, program, physical plant, and personnel. Two periods.
- PE 124, 125, 126. **Physical Education Laboratory.** Three terms, 2 hours each term.
Required of all women taking a minor. Deals with intensive instruction in all the various activities which go to make up the physical education program. Six periods.
- PE 174. **Technique of Gymnastics.** Fall term, 2 hours.
Required in the freshman year for all men taking a minor. A laboratory course in the technique and skills of gymnasium work, including practice in the various forms of marching (military, gymnastic, calisthenic), mass athletics (games, relays, contests, track, and field), tumbling, and apparatus work for school purposes. Six periods.
- PE 175. **Technique of Football, Track, and Field.** Winter term, 2 hours.
Required in the freshman year for all men taking a minor. A laboratory course in the techniques and skills of football, track, and field activities, including actual practice in the fundamentals of these sports. Six periods.
- PE 176. **Technique of Minor Sports.** Spring term, 2 hours.
Required in the freshman year for all men taking a minor. A laboratory course in the techniques and skills of speedball, soccer, volleyball, handball, tennis, and golf, including actual practice in the fundamentals of these sports. Six periods.
- PE 221. **Community Hygiene.** Fall term, 2 hours.
The general principles of hygiene as applied to community problems. A study of the protection of the health of the community. Problems of contagious diseases and their prevention. Modern organizations for the promotion of healthful living. Two periods.
- PE 222. **Applied Anatomy.** Spring term, 3 hours.
A study of the mechanisms of bodily movements. Three periods.

*Elective physical-education courses for juniors and seniors may be taken to the amount of one term hour per term and a total of not more than six term hours in addition to the physical-education requirement.

- PE 224, 225, 226. **Physical Education Laboratory.** Three terms, 2 hours each term.
Required of all women taking a minor. A continuation of PE 124, 125, 126. Six periods.
- PE 240. **Play and Games.** Fall or winter term, 1 hour.
Study and practice of games for family recreation, parties, picnics, clubs, and community centers. May be substituted for physical-education activity service courses. Three periods.
- PE 274. **Technique of Baseball and Basketball.** Fall term, 2 hours.
Required in the sophomore year for all men taking a minor. A laboratory course in the techniques and skills of baseball and basketball, including actual practice in the fundamentals of these two sports. Six periods.
- PE 275. **Technique of Boxing and Wrestling.** Winter term, 2 hours.
Required in the sophomore year for all men taking a minor. A laboratory course in the techniques and skills of boxing and wrestling, including actual practice in the fundamentals of these two sports. Six periods.
- PE 276. **Technique of Swimming.** Spring term, 2 hours.
Required in the sophomore year for all men taking a minor. A laboratory course in the techniques and skills of swimming, life saving, diving, and water polo, including actual practice in the fundamentals of aquatics. Six periods.

UPPER-DIVISION COURSES

- PE 343, 344, 345. **Physical Education Technique (Women).** Three terms, 3 hours each term.
Required during the junior year for all women taking a minor. Technique of teaching dancing and sports; study of problems of directed teaching. Prerequisite: skill and knowledge standard in activities as determined by the department. Five periods.
- PE 346. **Coaching of Basketball (Men).** Fall term, 2 hours.
The coaching and training of basketball teams beginning with fundamentals, passing, dribbling, and pivoting with emphasis on the psychology of the game; various methods of defense and offense. Two periods.
- PE 347. **Coaching of Football (Men).** Winter term, 2 hours.
Fundamentals of football, theory and practice, details of each position on the team, training and managing, complete technique of developing offensive and defensive tactics, a comparison of the various systems in American intercollegiate football. Two periods.
- PE 348. **Coaching of Baseball (Men).** Spring term, 2 hours.
The technique of batting, pitching, baseball strategy, and how to play various positions; promoting the game; making schedules; points of inside baseball; care and construction of the field; baseball management. Two periods.
- PE 349. **Coaching of Track and Field (Men).** Spring term, 2 hours.
How to train for various track and field events; their form and

technique; conduct of athletic meets; construction, use, and assembling of all equipment used by the participants on the field; development of certain types of individuals for certain events. Two periods.

PE 350. Organization and Administration of Intramural Sports. Winter term, 2 hours.

Study of the organization and administration of an intramural program for high schools and colleges. The course will include aims and objectives, steps in organizing a program, units of competition, program of sports, methods of competition, scoring plans, and special administrative problems. Two periods.

Ed 351. Health Education. Fall term, 3 hours.

The fundamental philosophy and principles of health education, with emphasis on organization and administration of health instruction. Provision is also made for students interested in adult health education. Three periods.

Ed 352. Health Education. Winter term, 3 hours.

Continuation of Ed 351. Emphasis is placed on the subject matter of health instruction and its use in secondary school and in adult health education. Prerequisite: Ed 351. Three periods.

PE 358. First Aid. Any term, 2 hours.

The emergency treatment of all classes of injuries (until the doctor comes). A standard course in first aid with emphasis on the practical use of the knowledge as applied to everyday life in varying occupations. Standard and advanced certificates may be obtained. Open as a service course to all departments. Two periods.

PE 359. Athletic Training and Conditioning (Men). Winter term, 2 hours.

A study, from both practical and theoretical aspects, of massage, bandaging, treatment of sprains, bruises, strains, and wounds; diet and conditioning of athletes. Lectures, demonstrations, and practice. Two periods.

Ed 421, 422, 423. School Health Problems. (g) Three terms, 2 hours each term.

The various factors in the maintenance of the health of school children are studied. Fall term: Prevention and control of communicable diseases in relation to the school child. Winter term: School sanitation; proper construction and care of school equipment. Spring term: The factors affecting the health of the school child; the health of the teacher; the hygiene of carrying out various phases of instruction. Two periods.

PE 421. Principles of Physical Education. (g) Fall term, 3 hours.

General philosophy and principles of physical education and its relation to general education. Three periods.

PE 422. Tests and Measurements in Physical Education. (g) Winter term, 3 hours.

Survey of the field; special study of typical tests, methods of scoring, principles of test building. Should be preceded by or taken simultaneously with Ed 416 whenever possible. Three periods.

- PE 423. **Organization and Administration.** (g) Spring term, 3 hours.
A study of administrative problems applied to high-school situations, including organization of departments, organization of instructional and recreational programs, supervision of both teaching and physical plant and routine administration. Three periods.
- PE 435. **Nature, Function, and Organization of Play.** Winter term, 3 hours.
Nature and function of play; adaptation of activities; program making. Playground instruction, management, and supervision. Three periods.

GRADUATE SERVICE COURSES

Courses numbered 400-499 and designated (g) may be taken for credit toward a graduate minor.

Graduate Division

GEORGE REBEC, Ph.D., Dean and Director of the Graduate Division, Oregon State System of Higher Education.

WILLIBALD WENIGER, Ph.D., Assistant Dean of the Graduate Division, In charge at the State College.

HOWARD RICE TAYLOR, Ph.D., Assistant Dean of the Graduate Division, In charge at the University.

CLARA LYNN FITCH, Secretary of the Graduate Division.

GEORGENA SAMSON, B.S., Secretary at State College.

MABEL MCDUFFEE, M.A., Graduate Assistant.

Graduate Council

State College Council

GEORGE REBEC, Ph.D., Chairman

WILLIBALD WENIGER, Ph.D.,
Vice Chairman, Science.

PHILIP MARTIN BRANDT, A.M.,
Agriculture.

JAMES RALPH JEWELL, Ph.D., LL.D.;
VICE CARL WALTER SALSER, Ed.M.;
Education.

SAMUEL HERMAN GRAF, M.E., M.S.,
Engineering and Industrial Arts.

EARL GEORGE MASON, M.F.,
Forestry.

FLORENCE BLAZIER, Ph.D.,
Home Economics.

FRANCOIS ARCHIBALD GILFILLAN,
Ph.D., Pharmacy.

University Council

GEORGE REBEC, Ph.D., Chairman

HOWARD RICE TAYLOR, Ph.D.,
Vice Chairman.

RAY PRESTON BOWEN, Ph.D.,
Arts and Letters.

ERIC WILLIAM ALLEN, A.B.,
Social Science and Journalism.

PERCY PAGET ADAMS, B.A., B.S.,
Architecture and Allied Arts and
Music.

VICTOR PIERPONT MORRIS, Ph.D.,
Business Administration.

FRED LEA STETSON, M.A.,
Education and Physical Educa-
tion.

OLOF LARSELL, Ph.D.,
Medicine.

Graduate Committees

State College Graduate Committees

Science: WILLIBALD WENIGER, Ph.D., Chairman; WILLIAM EDMUND MILNE, Ph.D.; DON CARLOS MOTE, Ph.D.

Agriculture: PHILIP MARTIN BRANDT, A.M., Chairman; WILLIAM HENRY DREESEN, Ph.D.; WILLIS PIERRE DURUZ, Ph.D.

- Education*: JAMES RALPH JEWELL, Ph.D., LL.D., Chairman; CARL WALTER SALSER, Ed.M.; OTHNIEL ROBERT CHAMBERS, Ph.D.; RILEY JENKINS CLINTON, Ed.D.
- Engineering and Industrial Arts*: SAMUEL HERMAN GRAF, M.E., M.S., Chairman; FRED ORVILLE McMILLAN, M.S.; CHARLES ARTHUR MOCKMORE, C.E., Ph.D.
- Forestry*: EARL GEORGE MASON, M.F., Chairman; RICHARD SENG KEARNS, M.S.; THURMAN JAMES STARKER, B.S.
- Home Economics*: FLORENCE BLAZIER, Ph.D., Chairman; VERA HASKELL BRANDON, Ph.D.; JESSAMINE CHAPMAN WILLIAMS, M.A.
- Pharmacy*: FRANCOIS ARCHIBALD GILFILLAN, Ph.D., Chairman; LEWIS CLEMENCE BRITT, Ph.D.; ERNST THEODORE STUHR, M.S.

University Graduate Committees

- Arts and Letters (including Philosophy)*: RAY PRESTON BOWEN, Ph.D., Chairman; FREDERICK M COMBELLACK, Ph.D.; EDWARD CHRISTIAN ALAN LESCH, Ph.D.
- Social Science and Journalism*: ERIC WILLIAM ALLEN, A.B., Chairman; ROBERT CARLTON CLARK, Ph.D.; JAMES HENRY GILBERT, Ph.D.
- Architecture and Allied Arts and Music*: PERCY PAGET ADAMS, B.A., B.S., Chairman; EYLER BROWN, M.Arch.; JOHN JACOB LANDSBURY, Mus.D.
- Business Administration*: VICTOR PIERPONT MORRIS, Ph.D., Chairman; ORIN KAY BURRELL, M.A.; CARDINAL LYLE KELLY, M.A., C.P.A.
- Education and Physical Education*: FRED LEA STETSON, M.A., Chairman; RALPH WALDO LEIGHTON, Ph.D.; FLORENCE DELIA ALDEN, M.A.

Medical School Graduate Committee

- OLOF LARSELL, Ph.D., Chairman; GEORGE EMANUEL BURGET, Ph.D.; FRANK RAYMOND MENNE, M.D.

General Statement

IN the disciplines of undergraduate education the primary aim is to prepare the student for cultured living and intelligent citizenship, and in techniques leading to a professional career. In graduate study the dominant objective is the development of the scholar, capable of original thinking and of creative achievement in the advancement and extension of knowledge. Hence, a graduate degree indicates more than the mere completion of a prescribed amount of advanced study; it indicates rather that the student has shown both promise and performance in the field of independent scholarship.

Graduate study is defined to include all study beyond the bachelor's degree in other than strictly professional curricula. By professional curricula are meant clearly defined and sharply specialized curricula, such as those in law and medicine, leading to professional degrees. A student who has received a bachelor's degree at an accredited college or university will be admitted to the State College or the University as a graduate student.

Such admission, however, does not in itself admit him to candidacy for a degree. Candidacy for an advanced degree is granted only after the student has demonstrated, by passing a preliminary examination, the thoroughness of his previous preparation and his ability to do work of graduate character.

At the State College, the first advanced degree (A.M.) was conferred in 1876, but not until 1910 was graduate study placed under the supervision of a special standing committee of the faculty.

Advanced degrees were conferred occasionally at the University from the earliest days. In 1897 definite requirements of residence work were established for the master's degree. Graduate instruction was placed under the administrative control of the Graduate School in 1899-1900.

In 1933 all graduate work in the State System was coordinated under the Graduate Division.

Organization

THE Graduate Division has jurisdiction over all graduate study in the State System leading to other than strictly professional degrees. The administration of the Graduate Division is in the hands of the graduate dean and the graduate councils at the State College and the University. The Graduate Council at each institution consists of one representative from each major school or college offering graduate work. The Dean of the Graduate Division is chairman of both institutional councils. The two councils meet separately and in joint session. In joint session the councils formulate policies for the Graduate Division as a whole. Meeting separately, the State College and University councils have jurisdiction over graduate work within their respective institutions.

In each of the major schools or colleges, a graduate committee, appointed by the president in consultation with the dean of the Graduate Division, has supervision over standards of graduate performance and study programs (both general departmental plans for graduate work and the programs of individual students). The actual formulation of departmental programs, and the working out and direction of the programs of individual students remain with the department. No school or college committee has authority to waive or supersede the general rules or requirements of the Graduate Division.

Institutional Allocation of Graduate Work

ON the basis of the 1932 allocations of curricula in the Oregon State System of Higher Education, all graduate study leading to advanced degrees has been allocated by curricula or major subjects as follows:

At the State College—

The biological sciences, the physical sciences (including mathematics), and the professional and technical fields of agriculture, education, engineering, forestry, home economics, and pharmacy.

At the University—

Arts and letters, the social sciences (including psychology), and the professional fields of architecture and allied arts, business administration, education, journalism, law, music, and physical education.

In certain fields graduate work may be carried on at the University of Oregon Medical School in Portland or at the Portland Extension Center, leading to degrees through the Graduate Division at the State College or the University.

Students may be enrolled for major work on one campus and for minor work on the other.

General Regulations

TWO classes of graduate students are recognized: (1) those wishing to become candidates for an advanced degree, and (2) those wishing merely to take work beyond the requirements for the bachelor's degree. Students of the first class make out a program in conformity with the rules stated below. Students of the second class register for the courses they desire, with the understanding that the institution is under no implied obligation to accept credits earned as work toward a degree. Whether a student is adequately prepared to enter a particular course is determined by the instructor in charge and the head of the department.

Admission. A graduate of any accredited college or university is admitted to the Graduate Division by the registrar of the institution which he wishes to enter, upon filing an application for admission and an official transcript of the credits upon which his bachelor's degree is based. Such admission, however, does not of itself entitle a student to become a candidate for a degree.

Preparation Required for Graduate Study. Preparation for the graduate major must be an undergraduate major in the same subject, or a fair equivalent. Preparation for the graduate minor must be at least one year sequence of upper-division work in addition to foundational courses in the subject. Graduate credit may not be earned in courses for which the student does not show the proper preparation by previous record or qualifying examination.

Maximum Load. The maximum course load allowed graduate students is 16 hours per term (10 for assistants and fellows, 12 for half-time assistants), 9 term hours during each summer session.

Credit Requirements. For a master's degree (M.A. or M.S.) the student must complete a minimum of 45 term hours of graduate work constituting a coherent program and based upon adequate preparation. This work is normally divided into a major and a minor, 30 term hours for the major and 15 for the minor.

No definite credit requirement is set for the degree of Doctor of Philosophy, since it is granted primarily for attainments and proved ability. It is not the policy of the Graduate Division to accept as a candidate for the Ph.D. degree any student whose academic training, both undergraduate

and graduate, has been exclusively at the institution from which the degree is sought. The candidate chooses a major and, subject to the approval of his major professor, one or two minor lines of study (always two at the State College). If the major department offers several distinct lines of study, one minor may lie in that department; in case only one minor is chosen, it must lie in some other than the major department. With the assistance of his advisory committee, the student outlines a program devoting approximately sixty per cent of his time to the major, including thesis, and approximately forty per cent to the minor or minors.

Approval of Program. The program of a student working for an advanced degree must be approved by the graduate committee of the school or college and by the institutional graduate council within the first term of the candidate's registration for the degree.

Grade Requirement. A grade-point average of 3.00 (a B average) is required for every graduate degree. Grades below C are not accepted for graduate credit.

Residence. For the master's degree, at least three terms (or five six-week summer sessions) of work must be completed in residence. For the doctor's degree, two years of full-time work in residence beyond the master's degree are required, of which one year (usually the last) must be spent on the campus of the institution from which the degree is to be received.

Transferred Credit. Credit not to exceed one-third of the work for the degree may be transferred for work done at another accredited institution, provided (1) that the work fits into a logical curriculum for the degree, (2) that the transfer is approved by the major department and by the Graduate Council, and (3) that grades of A or B have been earned. But such transferred credit, though it may lighten the schedule of the student, may not shorten his period of residence. The Graduate Council does not grant credit for work at another institution until after one term of work has been completed in residence.

Time Limit. All work counted toward the master's degree, including the thesis and the final examination, must be completed within a period of five years.

Graduate Courses. All courses numbered in the 500's carry graduate credit, as do those in the 400's which have been approved by the Graduate Council. Approved courses in the 400's are designated in the catalogs by (*G*) or (*g*) following the course title. Courses designated (*G*) may form a part of either a major or a minor; courses designated (*g*) may be taken toward a minor only. Graduate students taking courses in the 400's are expected to do work of a higher order and broader scope than the work of undergraduate students in the same courses.

Language Requirements. For the Doctor of Philosophy degree, a reading knowledge of French and German must be demonstrated by a formal examination in each language. These examinations should be taken as early as possible after the beginning of graduate work, and must be passed before the preliminary examination can be taken.

For the Master of Arts degree, the student must show, by examination, or by adequate undergraduate courses, a reading knowledge of one relevant foreign language, preferably French or German.

For the Master of Science degree, and for advanced professional degrees there is no foreign-language requirement.

Course Requirements for M.A. and M.S. Degrees. For the Master of Arts (Departmental) and Master of Science degrees at least one year sequence in the 500-599 series, normally of seminar or research nature, and for approximately 3 hours of credit per term, is required. Each candidate must also take at least 6 term hours of graduate work from each of at least three members of the graduate faculty.

Special Requirements for Degree of M.A. (General Studies). In addition to the regular Master of Arts (Departmental) degree, the State College and the University offer the degree of Master of Arts (General Studies) in fields in which graduate work is allocated to the institution. This degree is granted for achievement in cultural scholarship, not for specialized work in one of the traditional fields of learning. The student pursues a program of study selected from the offerings of several departments. The requirements are flexible, but the program must be integrated and organic. A special committee supervises all work toward the M.A. (General Studies).

The credit requirement for this degree is 45 term hours, including a thesis or essay. The thesis or essay shall be the equivalent, in point of performance, of 9 term hours of course work.

The committee may, on recommendation of the student's adviser, waive the foreign-language requirement.

If adequate offerings are available in the fields in which he wishes to work, a student may complete all the requirements for the M.A. (General Studies) at the Portland Center.

Special Requirements for the Ed.M. and Ed.D. Degrees. The requirements for the degrees of Master of Education and Doctor of Education are in general similar to those for the degrees of Master of Science and Doctor of Philosophy, respectively, except that the applied or professional aspects of the fields selected are stressed.

Special Requirements for the Master of Forestry Degree. While the general requirements for the professional degree of Master of Forestry are the same as those for the Master of Science, the program of study is designed, not primarily for the research worker, but for the administrator. The thesis for the M.F. degree must be an original study showing the application of professional knowledge to the accomplishment of a specific practical objective.

Requirements for Engineer Degrees. For the degrees of Chemical Engineer, Civil Engineer, Electrical Engineer, Forest Engineer, and Mechanical Engineer, the candidate must hold the degree of B.S. or M.S. in the corresponding field of engineering from the State College, must have had at least five years of successful professional practice following graduation, and must present a satisfactory thesis. Before January 1 of the academic year in which the degree is desired, the candidate submits to the head of the department in which his major interest lies a complete statement of his professional experience since receiving the bachelor's degree. If the statement is approved, after it has been examined by the head of the department, the school graduate committee, and the Graduate Council, the candidate is instructed to prepare and submit his thesis. The thesis must

be of high order and is subject to the same scrutiny and regulations as other graduate theses. Upon acceptance of the thesis the candidate is recommended for the degree in the usual manner. The candidate registers for the degree with the State College Registrar, either in person or by mail, not later than March 1, and pays the thesis examination fee of \$10.00. After his thesis has been accepted he pays the usual graduation fee of \$6.50.

Preliminary Examinations. A student working toward the master's degree is given a preliminary examination to ascertain whether he is fitted, both by temperament and by basic training, to pursue work on the graduate level in his chosen field. The preliminary examination should be taken as soon as possible after the major and minor fields have been chosen, so that there will be time to correct deficiencies. Normally the preliminary examination should be taken before November 1. Graduates of the State College who have maintained a grade-point average of at least 3.25 throughout their undergraduate work may be exempted from taking this examination.

For the doctor's degree, the preliminary examination tests the student's scholarly attainments; it consists of a group of comprehensive examinations in his major and minor fields. It must be passed not less than one academic year before the degree is expected.

Thesis. Every candidate for an advanced degree must file in the State College office of the Graduate Division three copies of an accepted thesis, and five copies of an abstract of the thesis, not later than two weeks before the date of his final examination. Normally 9 term hours of credit are earned on the thesis toward the Master of Arts and the Master of Science degrees, and 15 or more term hours toward the Doctor of Philosophy degree. The thesis for the Doctor of Philosophy degree must show distinct evidence of independent research on the part of the candidate. Every thesis for an advanced degree must have the approval of the major professor and the graduate committee of the school or college in which the candidate is majoring, before being filed with the Graduate Division.

The three copies of the thesis shall be filed unbound. Two copies are bound at the expense of the State College after the examination, and deposited in the Library. The third copy is the property of the major department. One of the Library copies is available for general circulation.

Full information concerning the prescribed style for theses may be obtained on request at the State College office of the Graduate Division.

Final Examinations. A final oral examination of not less than two hours is required of every candidate for the master's degree; when deemed desirable a written examination may also be required. For the master's degree, the examining committee consists of at least four members of the faculty, two in the student's major field, one in the minor field, and one, designated by the council, not directly connected with the candidate's studies.

For the doctor's degree the final oral examination is public, and usually of three hours duration. The candidate is expected to defend his thesis and to show a satisfactory knowledge of his chosen fields. The examining committee consists of the candidate's advisory committee, any additional members judged desirable, and at least one member not directly connected with the candidate's work.

All examination committees are nominated by the major professor subject to the approval of the Dean of the Graduate Division, who is ex officio a member of all examining committees.

Fees. Graduate students registered for seven term hours of work or more pay a fee of \$25.00 a term. Graduate students do not pay the non-resident fee or the building fee. Graduate students registered for six term hours or less pay the regular part-time fee of \$3.00 a term hour. Payment of the graduate fee entitles the student to Student Health Service and gymnasium privileges.

Scholarships, Assistantships, and Fellowships

A VARYING number of graduate and research assistantships, scholarships, and fellowships are awarded annually to graduates of accredited universities and colleges who have superior records in their undergraduate work. All persons holding these positions are expected to register in the Graduate Division, and to take work toward an advanced degree. Assistants, scholars, and fellows pay the same fees as other graduate students. Applications for these positions should be made before March 31. Application blanks are furnished on request by the Graduate Division.

Assistants, scholars, and fellows receive their stipends in nine monthly installments. The first installment is paid on November 1.

Graduate Assistantships. A graduate assistant renders services amounting to not more than 18 hours a week—reading papers, handling laboratory and quiz sections, and so forth. He is permitted to enroll for a maximum of 10 term hours of course work. A graduate assistant commonly completes the work for a master's degree in two years. He may, however, complete the work in one year, plus an additional full summer quarter. The stipend is \$540 a year. The position is tenable for two years only.

A part-time graduate assistant receives \$270 a year. His maximum course load is 12 term hours.

Research Assistantships. A research assistant aids a faculty member in carrying on a research project. Compensation and enrollment limitations are the same as for a graduate assistant.

Graduate and Research Scholarships. Scholarships are awarded to students whose promise is considered exceptional. Ordinarily award of a scholarship is based on the students record during a previous year of study and service at the State College. Required services and enrollment limitations are the same as for assistants. The stipend is \$640 a year.

Graduate and Research Fellowships. A fellow is normally a person proceeding toward the doctorate, with at least one year of markedly superior work toward that degree completed. The graduate fellow gives instructional assistance in his department. The duties of a research fellow are similar to the duties of a research assistant; a fellow is, however, expected to assume greater responsibility in connection with his research project. Fellows are allowed to enroll for a maximum of 10 term hours of course work. The stipend is \$750 a year.

State Scholarships. A limited number of scholarships covering tuition and laboratory and course fees are available to graduate students of the institutions of the Oregon State System of Higher Education. For regulations see page 88.

Graduate Work at the State College

GRADUATE work at the State College is carried on under the auspices of the Graduate Division and under the direction of the Graduate Council of the State College and the Dean of the Graduate Division. Correspondence relating to graduate work in fields allocated to the State College should be addressed to the Graduate Division, Oregon State College, Corvallis, Oregon, or to the department concerned.

Degrees. Graduate degrees are offered at the State College as follows:

Doctor of Philosophy: Botany, Chemistry, Entomology, Geology, Mathematics, Physics, Zoology, Agriculture.

Doctor of Education: Education.

Master of Arts (Departmental): Bacteriology, Botany, Chemistry, Entomology, Geology, Mathematics, Physics, Zoology, Education, Home Economics.

Master of Arts (General Studies).

Master of Science: Bacteriology, Botany, Chemistry, Entomology, Geology, Mathematics, Physics, Zoology, Agriculture, Education, Engineering, Forestry, Home Economics, Pharmacy.

Master of Education: Education.

Master of Forestry: Logging Engineering, Technical Forestry, Wood Products.

Engineer: Chemical Engineering (Ch.E.); Civil Engineering (C.E.); Electrical Engineering (E.E.); Forestry, including Logging Engineering, Technical Forestry, and Wood Products (F.E.); Mechanical Engineering (M.E.).

Departments. The departments or subjects in which graduate work may be taken leading to advanced degrees at the State College are as follows:

BIOLOGICAL SCIENCE:

Anatomy*, Bacteriology*, Botany, Entomology, Pathology*, Physiology*, Zoology.

PHYSICAL SCIENCE:

Biochemistry*, Chemistry, Geology, Mathematics, Physics.

AGRICULTURE:

Division of Agricultural Economics (Agricultural Economics, Farm Management); Division of Animal Industries (Animal Husbandry, Dairy Husbandry, Poultry Husbandry, Veterinary Medicine); Division of Plant Industries (Farm Crops, Soils and Soil Science, Horticulture, Horticultural Products, Landscape Maintenance); Agricultural Education, Agricultural Engineering, Extension Methods.

EDUCATION :

General, Agricultural, Home Economics, Industrial, Secretarial; Educational and Vocational Guidance.

ENGINEERING AND INDUSTRIAL ARTS :

Chemical Engineering and Industrial Chemistry; Civil and Highway Engineering; Electrical, Power, and Communication Engineering; Mechanical and Aeronautical Engineering; Industrial Arts Education and Industrial Administration.

FORESTRY :

Technical Forestry, Logging Engineering, Wood Products.

HOME ECONOMICS :

Clothing, Textiles, and Related Arts; Foods and Nutrition; Home Economics Education; Household Administration (including Child Development and Parent Education); Institution Economics.

PHARMACY :

Practical Pharmacy, Pharmaceutical Analysis, Pharmacology*, and Pharmacognosy.

Graduate students who are not preparing for a medical career may (with the approval of the Medical School) pursue at the University of Oregon Medical School certain phases of graduate work in the fields starred; these students, on the completion of the requirements, receive degrees from the State College.

Facilities. The facilities for pursuing graduate work are described under the several departments. In addition to well-equipped laboratories, the Agricultural Experiment Station, with ten branch experiment stations in different parts of the state, and the Engineering Experiment Station, afford special opportunities in certain fields. No graduate student is permitted to undertake a thesis problem unless adequate facilities are available in the chosen field.

Graduate Work at the University

GRADUATE work at the University is carried on under the auspices of the Graduate Division and under the direction of the Graduate Council of the University and the Dean of the Graduate Division. Correspondence relating to graduate work in fields allocated to the University should be addressed to the Graduate Division, University of Oregon, Eugene, Oregon, or to the department concerned.

Degrees. Graduate degrees are offered at the University as follows:

Doctor of Philosophy: Economics, Education, English, German, History, Psychology, Romance Languages, Sociology.

Doctor of Education: Education.

Master of Arts (Departmental): English, German, Classics, Romance Languages, Anthropology, Economics, Geography, History, Philosophy, Political Science, Psychology, Sociology, Art, Architecture, Landscape Architecture, Business Ad-

ministration, Music, Education, Journalism, Physical Education.

Master of Arts (General Studies).

Master of Science: English, Anthropology, Economics, Geography, History, Philosophy, Political Science, Psychology, Sociology, Art, Architecture, Landscape Architecture, Business Administration, Music, Education, Journalism, Physical Education.

Master of Fine Arts: Art and Architecture, Landscape Architecture, Music.

Master of Architecture: Architecture.

Master of Business Administration: Business Administration.

Master of Education: Education.

Master of Landscape Architecture: Landscape Architecture.

Departments. The departments or subjects in which graduate work may be taken leading to advanced degrees at the University are as follows:

ARTS AND LETTERS :

English, German, Classics, Romance Languages, Philosophy.

SOCIAL SCIENCE :

Anthropology, Economics, Geography, History, Philosophy, Political Science, Psychology, Sociology.

ARCHITECTURE AND ALLIED ARTS :

Architectural Design, Interior Design, Landscape Architecture, Drawing and Painting, Sculpture, Normal Art.

BUSINESS ADMINISTRATION.

EDUCATION.

JOURNALISM.

MUSIC.

PHYSICAL EDUCATION.

Graduate Work in Portland

IN certain fields, graduate study may be pursued in Portland at the University of Oregon Medical School or at the Portland Extension Center. Students seeking advanced degrees for such study register in the Graduate Division. Graduate work carried on at the Medical School or at the Portland Center is an integral part of the work of the Graduate Division and is subject to the rules and regulations of the Graduate Division.

At the Medical School. Graduate work may be taken at the University of Oregon Medical School toward the M.A., M.S., and Ph.D. degrees, in the departments of Anatomy, Bacteriology and Hygiene, Biochemistry, Pathology, Pharmacology, and Physiology. Graduate degrees earned at the Medical School by students preparing for a medical career or by stu-

dents who have the M.D. degree are conferred by the University. (For graduate work at the Medical School by nonmedical students, see page 394.)

At the Portland Center. If adequate offerings are available in the fields in which he wishes to work, a student may complete all the requirements for the M.A. (General Studies) at the Portland Center. In a number of fields, one-third of the work for the M.A. (Departmental) or the M.S. degree may be earned in Portland. Graduate work beyond the master's degree is not offered at the Portland Center. Students receive their degrees from the State College or the University according to the major subject, in harmony with the 1932 allocations of curricula and degrees.

The Dean of the Graduate Division will be in Portland during the first two week ends of each term. Graduate students may arrange conference appointments through the Portland Center office.

Part IV

Research

Research

ADVANCEMENT of human knowledge and technical and technological service to the commonwealth are recognized functions of institutions of higher learning. Research in the Oregon State System of Higher Education is encouraged and assisted through the interinstitutional General Research Council and through special institutional research agencies. At the State College special research is carried on through the Agricultural Experiment Station and through the Engineering Experiment Station. At the University research of direct practical value in relation to the educational, economic, and social problems of the present day is fostered and supervised by the Institutional Research Council and by the Commonwealth Service Council.

The General Research Council

General Council

- EARL LEROY PACKARD, Ph.D., Dean and Director of Science; Chairman.
GEORGE REBEC, Ph.D., Dean of the Graduate Division; Vice Chairman.
WILLIAM F. ALLEN, Ph.D., Professor of Anatomy.
CHANDLER BAKER BEALL, Ph.D., Professor of Romance Languages.
RALPH RUSKIN HUESTIS, Ph.D., Professor of Zoology.
OLOF LARSELL, Ph.D., Sc.D., Professor of Anatomy.
RALPH WALDO LEIGHTON, Ph.D., Executive Secretary of Research; Acting Dean and Director of Physical Education.
FRED ORVILLE MCMILLAN, M.S., Professor of Electrical Engineering.
WILLIAM EDMUND MILNE, Ph.D., Professor of Mathematics.
WILLIAM ALFRED SCHOENFELD, M.B.A., Dean and Director of Agriculture.
HOWARD RICE TAYLOR, Ph.D., Professor of Psychology.
WILLIBALD WENIGER, Ph.D., Professor of Physics.
LOUIS AUBREY WOOD, Ph.D., Professor of Economics.

Natural Science Divisional Council

- WILLIAM EDMUND MILNE, Ph.D., Professor of Mathematics; Chairman.
WALTER BENO BOLLEN, Ph.D., Associate Professor of Bacteriology.
NATHAN FASTEN, Ph.D., Professor of Zoology.
FRANCOIS ARCHIBALD GILFILLAN, Ph.D., Professor of Pharmacy.
SAMUEL HERMAN GRAF, M.E., M.S., Professor of Mechanical Engineering.
EDWIN THOMAS HODGE, Ph.D., Professor of Economic Geology.
ADOLF HENRY KUNZ, Ph.D., Associate Professor of Chemistry.
EARL GEORGE MASON, M.F., Professor of Forestry.
DON CARLOS MOTE, Ph.D., Professor of Entomology.
ETHEL IDA SANBORN, Ph.D., Associate Professor of Botany.

WILLIBALD WENIGER, Ph.D., Professor of Physics.
 EDWARD STAUNTON WEST, Ph.D., Professor of Biochemistry.
 JESSAMINE CHAPMAN WILLIAMS, M.A., Professor of Foods and Nutrition.
 ROGER JOHN WILLIAMS, Ph.D., D.Sc., Professor of Chemistry.
 HARRY BARCLAY YOCOM, Ph.D., Professor of Zoology.

Language, Literature, Art Divisional Council

CHANDLER BAKER BEALL, Ph.D., Professor of Romance Languages; Chairman.
 LOUIS ARTAU, Assistant Professor of Music.
 FREDERICK MALCOLM COMBELLACK, Ph.D., Instructor in Latin and Greek.
 JOHN LEO FAIRBANKS, Professor of Art and Architecture.
 ROBERT DEWEY HORN, Ph.D., Associate Professor of English.
 JOHN M KIERZEK, Ph.D., Professor of English.
 EDWARD CHRISTIAN ALAN LESCH, Ph.D., Associate Professor of English.
 FREDERICH GEORG GOTTLLOB SCHMIDT, Ph.D., Professor of Germanic Languages
 and Literatures.

Medical Science Divisional Council

WILLIAM F. ALLEN, Ph.D., Professor of Anatomy; Chairman.
 NOBLE WILEY JONES, M.D., Clinical Professor of Medicine.
 OLOF LARSELL, Ph.D., Sc.D., Professor of Anatomy.
 FRANK R. MENNE, M.D., Professor of Pathology.
 FRANK R. MOUNT, M.D., Assistant Clinical Professor of Medicine.
 HARRY JOHNSON SEARS, Ph.D., Professor of Bacteriology.
 EDWARD STAUNTON WEST, Ph.D., Professor of Biochemistry.

Social Science Divisional Council

LOUIS AUBREY WOOD, Ph.D., Professor of Economics; Chairman.
 ERIC WILLIAM ALLEN, A.B., Dean and Director of Journalism.
 GLENN ALMER BAKKUM, Ph.D., Professor of Sociology.
 JAMES DUFF BARNETT, Ph.D., Professor of Political Science.
 VERA HASKELL BRANDON, Ph.D., Professor of Household Administration.
 ROBERT CARLTON CLARK, Ph.D., Professor of History.
 LUTHER SHEELEIGH CRESSMAN, Ph.D., Professor of Anthropology.
 HAROLD RANDOLPH CROSLAND, Ph.D., Associate Professor of Psychology.
 JOSEPH WALDO ELLISON, Ph.D., Professor of History.
 JAMES RALPH JEWELL, Ph.D., LL.D., Dean of Education; Director of High
 School Teacher Training.
 WAYNE LYMAN MORSE, LL.B., J.D., Dean and Director of Law.
 MILTON NELS NELSON, Ph.D., Professor of Agricultural Economics.
 HARVEY GATES TOWNSEND, Ph.D., Professor of Philosophy.

THE interinstitutional General Research Council, established by the State Board of Higher Education in 1932, encourages and assists the research of staff members of the several institutions of the State System whose work falls outside the organized programs of the agricultural and the engineer-

ing experiment stations at the State College, and the special service and research councils at the University.

Under the general council are four divisional councils. The general council is concerned with general policies affecting the research interests of staff members, and is authorized to make grants-in-aid or otherwise assist approved research projects initiated by staff members. The divisional councils encourage research in their several fields, and examine and evaluate the technical aspects, merit, and feasibility of projects for which assistance is requested. Projects receiving the recommendation of the divisional councils are submitted to the general council for approval.

The general council is the budgetary group, and the chairman is the budgetary officer. The council prepares annually and submits to the Chancellor a budget for the support of general research. From this budget grants are made by the general council to individuals or groups of individuals of the rank of instructor or higher, for research projects that have met the approval and received the recommendation of the appropriate divisional council. Research scholarships carrying a stipend of \$540 a year are available for major research projects requiring the technical assistance of a graduate student. Formal applications for grants-in-aid or for research assistance are made to the chairman of the general council or to the appropriate divisional council.

Agricultural Experiment Station

WILLIAM ALFRED SCHOENFELD, M.B.A., Director of the Agricultural Experiment Station.

RALPH STEPHEN BESSE, M.S., Vice Director of the Agricultural Experiment Station.

ESTHER MCKINNEY, Accountant, Agricultural Experiment Station.

MARGARET HURST, Secretary, Agricultural Experiment Station.

DIVISION OF AGRICULTURAL ECONOMICS

ERMINE LAWRENCE POTTER, M.S., Agricultural Economist; In Charge, Division of Agricultural Economics.

Agricultural Economics

WILLIAM HENRY DREESEN, Ph.D., Agricultural Economist.

LEA ROY ALDWELL, B.S., Research Fellow in Agricultural Economics.

Farm Management

ARNOLD STEWART BURRIER, M.S., Economist in Charge.

GUSTAV WESLEY KUHLMAN, M.S., Associate Economist.

WILLIAM WINFIELD GORTON, M.S., Research Assistant (Farm Management).

HERMAN LAMOTTE THOMAS, M.S., Associate Agricultural Economist (Soil Conservation), United States Department of Agriculture.

JAMES CECIL MOORE, M.S., Land Planning Specialist, Farm Security Administration, United States Department of Agriculture.

DIVISION OF ANIMAL INDUSTRIES

PHILIP MARTIN BRANDT, A.M., Dairy Husbandman; In Charge, Division of Animal Industries.

Animal Husbandry

- RAY GEORGE JOHNSON, B.S., Animal Husbandman.
 ORAN MILTON NELSON, M.S., Animal Husbandman.
 BENJAMIN WILLIAM RODENWOLD, M.S., Assistant Animal Husbandman.
 ALFRED WEAVER OLIVER, M.S., Assistant Animal Husbandman.

Dairy Husbandry

- GUSTAV HANS WILSTER, Ph.D., Dairy Husbandman.
 IDWAL RALPH JONES, Ph.D., Associate Dairy Husbandman.
 HAROLD PLYMPTON EWALT, B.S., Research Assistant (Dairy Husbandry).
 ARLESS SPIELMAN, B.S., Research Fellow (Dairy Husbandry).

Fish and Game Management

- RONALD EUGENE DIMICK, M.S., Wildlife Conservationist in Charge.
 FRANCIS PRIDAY GRIFFITHS, Ph.D., Assistant Conservationist
 ARTHUR SKOGMAN EINARSEN, B.S., Associate Biologist, United States Bureau
 of Biological Survey.

Poultry Husbandry

- HUBERT ELMER COSBY, Poultry Husbandman in Charge.
 FRANK LESTER KNOWLTON, M.S., Poultry Husbandman.
 WILBUR TARLETON COONEY, B.S., Research Assistant (Poultry Husbandry).

Veterinary Medicine

- BENNETT THOMAS SIMMS, D.V.M., Veterinarian in Charge.
 JAMES NIVEN SHAW, D.V.M., Associate Veterinarian.
 OTTO HERBERT MUTH, D.V.M., M.S., Associate Veterinarian.
 FONSOE MARION BOLIN, D.V.M., Associate Veterinarian, Agricultural Experiment
 Station; Cooperative Agent, Bureau of Animal Industry, United
 States Department of Agriculture.
 ROBERT DOUGHERTY, D.V.M., B.S., Assistant Veterinarian, Agricultural Ex-
 periment Station; Cooperative Agent, Bureau of Animal Industry, United
 States Department of Agriculture.
 ARNOLD S. ROSENWALD, B.S., D.V.M., Assistant Poultry Pathologist.
 OWEN LESTER SEARCY, B.S., Technician in Veterinary Medicine; Cooperative
 Agent, Bureau of Animal Industry, United States Department of Agri-
 culture.
 ROLAND SCOTT, D.V.M., Research Assistant (Veterinary Medicine).
 MARION ROBBINS, B.S., Technician in Poultry Pathology.

DIVISION OF PLANT INDUSTRIES

- GEORGE ROBERT HYSLOP, B.S., Agronomist; In Charge, Division of Plant Indus-
 tries.

Farm Crops

- HARRY AUGUST SCHOTH, M.S., Agronomist, Division of Forage Crops and Dis-
 eases, Bureau of Plant Industry, United States Department of Agriculture.
 DONALD DAVID HILL, Ph.D., Associate Agronomist.
 ROBERT ESTES FORE, Ph.D., Assistant Agronomist.
 ELTON NELSON, B.S., Agent, Division of Fiber Plant Investigations, Bureau of
 Plant Industry, United States Department of Agriculture.

- GRACE COLE FLEISCHMAN, A.B., Assistant Botanist, Division of Seed Investigations, Bureau of Plant Industry, United States Department of Agriculture.
HENRY HARDY RAMPTON, M.S., Assistant Agronomist, Division of Forage Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
LINDEN ELI HARRIS, M.S., Assistant Agronomist.
HAROLD ETHAN FINNELL, M.S., Assistant Agronomist.
ALVIN EUGENE GROSS, M.S., Research Assistant (Farm Crops).

Horticulture

- WALTER SHELDON BROWN, M.S., D.Sc., Horticulturist.
HENRY HARTMAN, M.S., Horticulturist (Pomology).
ARTHUR GEORGE BRISTOW BOUQUET, M.S., Horticulturist (Vegetable Crops).
ERNEST HERMAN WIEGAND, B.S.A., Horticulturist (Food Products Industries).
CARL EPHRAIM SCHUSTER, M.S., Horticulturist, Division of Fruits and Vegetable Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
WILLIS PIERRE DURUZ, Ph.D., Horticulturist (Plant Propagation).
GEORGE FORDYCE WALDO, M.S., Assistant Pomologist, Division of Fruits and Vegetable Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
THOMAS ONSDORFF, M.S., Assistant Horticulturist (Horticultural Products).
ELMER HANSEN, M.S., Assistant Horticulturist (Pomology).

Soil Science

- WILBUR LOUIS POWERS, Ph.D., Soil Scientist in Charge.
CHARLES VLADIS RUZEK, M.S., Soil Scientist (Fertility).
MORTIMER REED LEWIS, C.E., Irrigation and Drainage Engineer, Division of Irrigation, Bureau of Agricultural Engineering, United States Department of Agriculture.
ROSCOE ELMO STEPHENSON, Ph.D., Associate Soil Scientist.
EDWARD FRITCHOFF TORGERSON, B.S., Associate Soil Scientist (Soil Survey).
JAMES CLEMENT LEWIS, B.S., Research Fellow in Soils.

OTHER DEPARTMENTS

Agricultural Chemistry

- J SHIRLEY JONES, M.S.A., Chemist in Charge.
REGINALD HEBER ROBINSON, M.S., Chemist (Insecticides and Fungicides).
JOSEPH ROY HAAG, Ph.D., Chemist (Animal Nutrition).
DELOSS EVERETT BULLIS, M.S., Associate Chemist (Food Products Industries).
MILES BRAYTON HATCH, M.S., Assistant Chemist.
LEMUEL DARY WRIGHT, B.S., Assistant Chemist.

Agricultural Engineering

- FREDERICK EARL PRICE, B.S., Agricultural Engineer in Charge.
HERBERT REEVES SINNARD, M.S., Associate Agricultural Engineer (Farm Structures).
CLARENCE IVAN BRANTON, B.S., Assistant Agricultural Engineer.

Bacteriology

- GODFREY VERNON COPSON, M.S., Bacteriologist in Charge.
JOSEPH ELLSWORTH SIMMONS, M.S., Associate Bacteriologist.
WALTER BENO BOLLEN, Ph.D., Associate Bacteriologist.
NOEL HARDEN GROSS, M.S., Research Assistant (Bacteriology).

Entomology

- DON CARLOS MOTE, Ph.D., Entomologist in Charge.
JOSEPH CONRAD CHAMBERLIN, Ph.D., Associate Entomologist, Division of Truck Crops and Garden Insects, Bureau of Entomology and Plant Quarantine, United States Department of Agriculture.
ARTHUR ERICK BONN, B.S., Junior Entomologist, Division of Truck Crops and Garden Insects, Bureau of Entomology and Plant Quarantine, United States Department of Agriculture.
BENJAMIN GARRISON THOMPSON, M.S., Assistant Entomologist.
SIDNEY CARROLL JONES, M.S., Assistant Entomologist.
KENNETH WIESNER GRAY, M.S., Assistant Entomologist.
WILLIAM DONALD EDWARDS, M.S., Assistant Entomologist.
JOE SCHUH, M.S., Research Assistant (Entomology).
HUGH ENGLE MORRISON, M.S., Assistant Entomologist.
GEORGE RAY FERGUSON, B.S., Research Assistant (Entomology).

Home Economics

- MAUD MATHES WILSON, A.M., Home Economist.

Plant Pathology

- CHARLES ELMER OWENS, Ph.D., Plant Pathologist in Charge.
SANFORD MYRON ZELLER, Ph.D., Plant Pathologist.
FRANK PADEN MCWHORTER, Ph.D., Plant Pathologist.
BLISS F. DANA, M.S., Plant Pathologist, Division of Fruits and Vegetable Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
FLOYD DOUGLAS BAILEY, M.S., Associate Plant Pathologist, Insecticide Control Division, Food and Drug Administration, United States Department of Agriculture.
PAUL WILLIAM MILLER, Ph.D., Associate Pathologist, Division of Fruits and Vegetable Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
GODFREY RICHARD HOERNER, M.S., Agent, Division of Drugs and Related Plants, Bureau of Plant Industry, United States Department of Agriculture.
RUDOLPH FERDINAND GRAH, B.S., Agent, Division of Drugs and Related Plants, Bureau of Plant Industry, United States Department of Agriculture.
RODERICK SPRAGUE, Ph.D., Associate Pathologist, Division of Cereal Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
JOHN MILBRATH, M.S., Research Assistant (Plant Pathology).
JOHN HADLEY PRYOR, B.S., Research Assistant (Plant Pathology).

Publications and News Service

- CHARLES DAVID BYRNE, M.S., Director of Information.
EDWIN THOMAS REED, B.S., A.B., Editor of Publications.
DELMER MORRISON GOODE, B.A., Editor of Publications.
JOHN COLE BURTNER, B.S., Associate in News Service.

BRANCH STATIONS

- DAVID EDMUND STEPHENS, B.S., Superintendent, Sherman Branch Experiment Station, Moro; Senior Agronomist, Division of Cereal Crops and Diseases and Division of Dry Land Agriculture, Bureau of Plant Industry, United States Department of Agriculture.
- LEROY CHILDS, A.B., Superintendent, Hood River Branch Experiment Station, Hood River.
- FRANK CHARLES REIMER, M.S., Superintendent, Southern Oregon Branch Experiment Station, Talent.
- DALE EVERETTE RICHARDS, B.S., Superintendent, Eastern Oregon Branch Experiment Station, Union.
- HAROLD KARL DEAN, B.S., Superintendent, Umatilla Branch Experiment Station, Hermiston; Division of Western Irrigation Agriculture, Bureau of Plant Industry, United States Department of Agriculture.
- OBIL SHATTUCK, M.S., Superintendent, Harney Branch Experiment Station, Burns.
- HERBERT BADOLLET HOWELL, B.S., Superintendent, John Jacob Astor Branch Experiment Station, Astoria.
- RAY GEORGE JOHNSON, B.S., Acting Superintendent, Squaw Butte Range Branch Experiment Station.
- GEORGE ADAMSON MITCHELL, B.S., Assistant Superintendent, Pendleton Branch Experiment Station, Pendleton; Assistant Agronomist, Division of Dry Land Agriculture, Bureau of Plant Industry, United States Department of Agriculture.
- GORDON GEORGE BROWN, A.B., B.S., Horticulturist, Hood River Branch Experiment Station, Hood River.
- ARCH WORK, B.S., Superintendent, Medford Branch Experiment Station, Medford; Associate Irrigation Engineer, Division of Irrigation, Bureau of Agricultural Engineering, United States Department of Agriculture.
- ELLIOTT STANFORD DEGMAN, Ph.D., Associate Pomologist, Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
- LOUIS GUSTAV GENTNER, M.S., Associate Entomologist, Southern Oregon Branch Experiment Station, Talent.
- JAMES FOSTER MARTIN, M.S., Junior Agronomist, Division of Cereal Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.
- MERRILL MAHONRI OVESON, M.S., Assistant to Superintendent, Sherman Branch Experiment Station, Moro; Division of Dry Land Agriculture, Bureau of Plant Industry, United States Department of Agriculture.
- ROBERT BILLINGS WEBB, M.S., Junior Agronomist, Sherman Branch Experiment Station, Moro; Division of Dry Land Agriculture, Bureau of Plant Industry, United States Department of Agriculture.

ROY EMERY HUTCHINSON, M.S., Assistant to Superintendent, Harney Branch Experiment Station, Burns.

JAMES DOUGLAS HAND, B.S., Assistant to Superintendent, Eastern Oregon Branch Experiment Station, Union.

ROBERT BRUCE ALLYN, B.S., Junior Irrigation Engineer, Division of Irrigation, Bureau of Agricultural Engineering, United States Department of Agriculture.

OREGON State Agricultural Experiment Station was organized July 2, 1888, in accordance with the Act of Congress of 1887 known as the Hatch Act. The Experiment Station includes the central station at Corvallis and ten branch stations advantageously located in such a way as to cover the varying agricultural conditions of Oregon.

The Central Station. At the central station about 1,355 acres of land are used by State College and Station workers engaged in the scientific investigation of problems presented by the different branches of agriculture. The Station includes the following departments: Agricultural Economics; Agricultural Engineering; Animal Husbandry; Bacteriology; Chemistry; Dairy Husbandry; Entomology; Farm Crops; Farm Management; Fish and Game Management; Home Economics; Horticulture; Plant Pathology; Poultry Husbandry; Soils; and Veterinary Medicine.

The scientific investigations of the station staff strongly support the instruction given in the classroom and through the Extension Service. Aside from the original investigations of economic significance to agriculture, the work affords daily object lessons in modern farm methods. To the students in the various fields of study the value of the investigative work can hardly be overestimated. To the state, from the point of view of economic progress, its value has been greater, in the estimation of many people, than the entire cost of the State College to the commonwealth. The work of the Experiment Station is fundamental in the agricultural development of the state. Oregon's soil and climatic conditions present many problems that are unique and that must be solved before the state can develop its great potential agricultural wealth.

The Branch Stations. The ten branch stations located at Astoria, Burns, Hermiston, Hood River, Medford, Moro, Squaw Butte, Talent, Union, and Pendleton conduct experiments on the major agricultural problems of their respective agricultural sections of the state.

The John Jacob Astor Branch Experiment Station. The major problems under investigation at this station are dairying, improvement of farm crops, soil fertility, soil management for Coast conditions, and the drainage, improvement, and cultivation of tide-lands.

The Harney Branch Experiment Station at Burns is conducting experiments in both dry-farming and irrigation agriculture.

The Umatilla Branch Experiment Station at Hermiston is studying problems of agriculture under irrigation on the Umatilla Reclamation Project and similar lands of the Columbia River Basin.

The Hood River Branch Experiment Station deals with orchard pests and horticultural problems of this important orcharding section.

The Sherman Branch Experiment Station at Moro is conducting investigations on the major problems of dry-land farming in the Columbia Basin.

The Southern Oregon Branch Experiment Station at Talent is centering attention almost wholly upon problems involved in fruit production in this important fruit-growing region.

The Eastern Oregon Branch Experiment Station at Union is equipped with land and buildings for experiments with both livestock and farm crops.

The Medford Branch Experiment Station is conducted jointly by the United States Department of Agriculture, Bureaus of Plant Industry and of Agricultural Engineering, and the Oregon Agricultural Experiment Station. The major investigations deal primarily with problems affecting pear production.

The Pendleton Branch Experiment Station is equipped with 160 acres of land in an important wheat-growing belt for the purpose of establishing and maintaining crop rotation investigations and other problems.

The Squaw Butte Range Branch Experiment Station, comprising 16,000 acres of intermountain arid range lands, is conducted jointly with the National Grazing Service, United States Department of the Interior, to ascertain steps to be taken to rehabilitate this type of range so as to increase its livestock carrying capacity on a sustained grass-yield basis.

Engineering Experiment Station

RICHARD HAROLD DEARBORN, A.B., E.E., Director of the Engineering Experiment Station.

SAMUEL HERMAN GRAF, M.E., M.S., Director of Engineering Research.

ARTHUR LEMUEL ALBERT, M.S., Communication Engineering.

GEORGE WALTER GLEESON, M.S., Chemical Engineering.

BURDETTE GLENN, M.S., Highway Engineering.

JAMES RINALDO GRIFFITH, C.E., Structural Engineering.

FRED ORVILLE McMILLAN, M.S., Electrical Engineering.

WALLACE HOPE MARTIN, M.E., M.S., Mechanical Engineering.

FRED MERRYFIELD, M.S., Sanitary Engineering.

CHARLES ARTHUR MOCKMORE, C.E., Ph.D., Civil and Hydraulic Engineering.

WILLIAM HOWARD PAUL, M.S., Automotive Engineering.

BENJAMIN FRANKLIN RUFFNER, Aero. E., M.S., Aeronautical Engineering.

EUGENE CARL STARR, B.S., Electrical Engineering.

ROBERT EDWARD SUMMERS, M.S., Mechanical Engineering.

CHARLES EDWIN THOMAS, M.M.E., Engineering Materials.

Technical Counselors

R. H. BALDOCK, State Highway Engineer, Salem.

R. G. DIECK, Consulting Civil Engineer, Portland.

CLAIR VAN NORMAN LANGTON, Dr.P.H., Technical Counselor in Sanitary Engineering.

PAUL B. MCKEE, President, Portland Gas & Coke Company, Portland.

JAMES H. POLHEMUS, Executive Vice President, Portland General Electric Co., Portland.

THOMAS M. ROBINS, Colonel, Corps of Engineers, Division Engineer, North Pacific Division, Portland.

J. C. STEVENS, Consulting Civil and Hydraulic Engineer, Portland.

CHARLES E. STRICKLIN, State Engineer, Salem.

BY act of the Board of Regents of the State College on May 4, 1927, the Engineering Experiment Station was established at Corvallis to serve the state in a manner broadly outlined by the following policy:

- (1) To serve the industries, utilities, professional engineers, public departments, and engineering teachers by making investigations of significance and interest to them.
- (2) To stimulate and elevate engineering education by developing the research spirit in faculty and students.
- (3) To publish and distribute through bulletins, circulars, and technical articles in periodicals the results of such studies, surveys, tests, investigations, and researches as will be of greatest benefit to the people of Oregon, and particularly to the state's industries, utilities, and professional engineers.

The Engineering Experiment Station is an integral part of the School of Engineering. All staff members and laboratory facilities of the Engineering School are available for the investigational work of the Station to the extent of the sums allocated or contributed for their operation and support. Much of the work of the Station has been made possible by the assistance of industries and state and national associations.

The dean of engineering is director of the station, and the heads of the various major departments function as a council ex-officiis. The director of research acts as chairman of the council, technical adviser upon investigation work, and as engineering editor of publications. The active staff is composed of members of the instructional staff who may be interested in various specific research projects, and of research fellows who are pursuing graduate study and are assigned to part-time work in the Station. Experts who are especially qualified by training and experience to advise upon the investigations in certain fields have been appointed to the staff as special technical counselors. Some technical assistants have been supported by manufacturers and industrial associations interested in working out specific problems.

Part V
Extension

Extension

THROUGH extension services the benefits of all the state institutions of higher education are brought to the people of the state in their own communities. All divisions of the State System of Higher Education seek through every means possible, so far as resources and facilities permit, to serve the entire state. All extension activities of the several institutions are administered through two coordinated extension services: the General Extension Division and the Federal Cooperative Extension Service. The latter includes all extension activities carried on jointly with the Federal Government.

General Extension Division

Administration

ALFRED POWERS, B.A., Dean and Director of General Extension and Summer Sessions; Professor of Journalism.

DAN ELBERT CLARK, Ph.D., Assistant Director of General Extension and Summer Sessions; Professor of History.

WILLIAM GILBERT BEATTIE, B.A., Assistant Director of Portland Summer Session; Head of Department of Social Welfare; Associate Professor of Education.

MARY E KENT, B.A., Office Manager, General Extension; Assistant Professor of Extension Teaching.

LOUIS BERELSON, Ph.D., Secretary and Administrative Assistant, Summer Sessions.

SHIRLEY F. WRIGHT, Stenographer, General Extension; Secretary, Eugene Summer Sessions.

ELSIE ISTOFF, Mimeograph Clerk, General Extension.

Correspondence Study

MOZELLE HAIR, B.A., Head, Correspondence Study; Assistant Professor of Sociology.

HELEN OVERMAN BRANDT, B.S., Record Clerk, Correspondence Study.

HELEN K KILPATRICK, Record Clerk, Correspondence Study.

Portland Extension Center

ALFRED POWERS, B.A., Dean and Director of General Extension.

MABLE HOLMES PARSONS, M.A., Professor of English.

ALEXANDER GOLDENWEISER, Ph.D., Professor of Thought and Culture.

BERNARD HINSHAW, B.A., Associate Professor of Art.

PHILIP W. JANNEY, B.A., C.P.A., Assistant Professor of Business Administration.

PERCY M. COLLIER, B.A., LL.B., Assistant Professor of English.

MARGARET M SHARP, Secretary and Administrative Assistant, Portland Extension Center.

MAURICE CHURCHILL, Stenographer, Portland Extension Center.

LUCIA MORRIS, Clerk, Portland Extension Center and Summer Session.

Radio Station KOAC

LUKE LEE ROBERTS, Manager; Assistant Professor of Radio Speech.

BURTON SEYMOUR HUTTON, B.S., Director of Agricultural Programs.

ZELTA FEIKE RODENWOLD, M.S., Director of Women's Programs; Assistant Professor of Home Economics Extension.

JAMES MADISON MORRIS, B.S., Announcer.

ALEXANDER HULL, B.A., B.M., Announcer.

LINCOLN MILLER, Assistant Announcer.

GRANT STEPHEN FEIKERT, M.S., Engineer.

TOM B WAGNER, M.S., Assistant Engineer.

RUTH BELLROOD, B.S., Secretary.

Visual Instruction

URIEL SELLERS BURT, Associate Professor of Visual Instruction; Head of Department.

RUTH P. ADAMS, Secretary, Visual Instruction.

THE General Extension Division of the Oregon State System of Higher Education serves the people of the state through adult education by means of extension classes, correspondence study, and visual instruction; municipal service; radio; and social welfare. Its work is organized into the following departments:

At Corvallis—

Visual Instruction
Radio

At Eugene—

Correspondence Study
Social Welfare
State-Wide Extension Classes
Municipal Service

At Portland—

The Portland Extension Center

A State-Wide Campus. Through the General Extension Division the curricula, personnel, and facilities of all the state institutions of higher education are made available in some degree to every citizen, group, and community in Oregon. The activities of the General Extension Division are closely coordinated with those of the Federal Cooperative Extension Service and all other organized service agencies in the state.

Portland Extension Center. General extension in Portland is carried on through the Portland Extension Center. One hundred and seventy evening, late afternoon, and Saturday morning courses in thirty different departments and professional schools were offered during the academic year 1937-38. The work of these classes is of standard college or university grade. The courses are intended for persons who, because of preoccupation with bread winning or with home making, or for other reasons, cannot attend college. Resident credit at the University, the State College, or the normal schools may be earned through these courses. Courses may be taken at the Portland Extension Center for graduate credit at the University or the State College; but work toward the doctor's degree may not be taken at the Portland Center. Detailed information is published in the Portland Extension Center Announcements.

Correspondence Study. Study at home under competent supervision is possible for any resident of Oregon through carefully organized courses of instruction prepared by members of the faculties of the Oregon State System of Higher Education. These lesson outlines take the place of lectures and class exercises given to students in residence. More than one hundred courses representing twenty-five widely varied subjects are offered. Courses may be taken without credit by persons who enjoy the intellectual stimulus of organized, directed study, or they may be taken for credit toward a college degree. There are no special entrance requirements to correspondence courses; any adult who has sufficient preparation to profit from them may enroll. Complete information is published in a special Correspondence Study Catalog.

Visual Instruction. The Department of Visual Instruction provides glass and film slides, microscopic slides, and motion picture films suitable for educational use by schools, community clubs, and other organizations. A special catalog is published listing the material available. This department is maintained jointly by the General Extension Division and the Federal Cooperative Extension Service.

Radio Station KOAC. The state radio station, first opened in 1925, is operated entirely in the interest of the Oregon public. Programs broadcast by station KOAC are arranged by the General Extension Division and are entirely free from commercialism. The radio service is used as a means of extending throughout the state the benefits of the varied activities of all the state institutions of higher education. KOAC operates with 1,000 watts power on a frequency of 550 kilocycles by authority of the Federal Radio Commission. Announcements of radio programs are issued periodically, and will be furnished on request.

The Summer Sessions. The summer sessions of the several institutions, although a phase of resident instruction, are administered under the General Extension Division. The 1938 summer sessions include: the State College six-week first session and five-week second session at Corvallis, the University six-week session and four-week post session at Eugene; two summer terms (six weeks and five weeks) at each of the three normal schools; the Institute of Marine Biology at Coos Bay; and the Portland six-week session, offering work for the University, the State College, and the Normal schools. At the University and State College sessions, and at the Portland session, both undergraduate and graduate courses are offered. Information concerning the summer sessions is issued in separate bulletins.

Federal Cooperative Extension

WILLIAM ALFRED SCHOENFELD, M.B.A., Dean and Director of Agriculture.
FRANK LLEWELLYN BALLARD, B.S., Vice Director of Federal Cooperative Extension; State County Agent Leader.

Extension Staff at Corvallis

Professors

HARRY CASE SEYMOUR, State Leader of 4-H Club Work.
LE ROY BREITHAUP, B.S., Extension Agricultural Economist (Statistics, News, and Outlook).
EDWIN RUSSELL JACKMAN, B.S., Specialist in Farm Crops.
OVID TULLIUS McWHORTER, B.S., Extension Horticulturist.
PAUL CARPENTER, B.S., Extension Agricultural Economist (Marketing).
WILLIAM LE ROY TEUTSCH, B.S., Assistant County Agent Leader.
ROGER WILLIAM MORSE, B.S., Extension Dairyman.
JAMES RALPH BECK, B.S., Rural Service Specialist.
*RAY GEORGE JOHNSON, B.S., Specialist in Range Management.
AZALEA LINFIELD SAGER, M.A., State Home Demonstration Leader.
HARRY ARTHUR LINDGREN, B.S., Extension Animal Husbandman.
CHARLES WESLEY SMITH, B.S., Assistant County Agent Leader.

Associate Professors

HELEN JULIA COWGILL, M.A., Assistant State 4-H Club Leader.
LEONARD JOHN ALLEN, M.S., Assistant State 4-H Club Leader.
*URIEL SELLERS BURT, Specialist in Visual Instruction.
NOBLE CLARK DONALDSON, B.S., Executive Secretary, Agricultural Conservation Program.
LUCY ADA CASE, M.A., Specialist in Nutrition.
*JOHN COLE BURTNER, B.S., Extension Editor.

Assistant Professors

HAROLD H WHITE, B.S., Associate Extension Economist.
JOHN MYERS CLIFFORD, Extension Secretary.
ARTHUR SOLOMON KING, M.S., Extension Soil Conservationist.
MAUD MUELLER MORSE, M.S., Specialist in Child Development and Parent Education.
IZOLA DOROTHY JENSEN, M.A., Specialist in Community Social Organization.
NOEL LINDSAY BENNION, M.S., Poultry Specialist.

Instructors

EVERETT HENRY DAVIS, B.S., Specialist in Agricultural Engineering.
LAWRENCE COATS JENKINS, B.S., Assistant Specialist in Farm Crops.
JOAN PATTERSON, B.Arch., Specialist in Home Management.
EILEEN PERDUE BUXTON, B.S., Acting Specialist in Clothing and Textiles.
MARION DAWS THOMAS, B.S., Assistant Extension Economist.
DOROTHY LAMB BISHOP, B.S., Home Agent-at-Large.

*Part time, Federal Cooperative Extension.

*County Extension Agents**Professors*

WALTER ARMAND HOLT, B.S., County Agent, Umatilla County.
CHARLES ALBERT HENDERSON, B.S., County Agent, Klamath County.
OTTIS SCHULER FLETCHER, M.S., County Agent, Lane County.
HARRY GRANT AVERY, B.S., County Agent, Union County.
ROBERT GREY FOWLER, B.S., County Agent, Jackson County.
RAYMOND GILBERT LARSON, B.S., County Agent, Malheur County.
WILLIAM FLETCHER CYRUS, B.S., County Agent, Washington County.
SYLVESTER BENJAMIN HALL, B.S., County Agent, Multnomah County.
JOHN JERRY INSKEEP, B.S., County Agent, Clackamas County.

Associate Professors

GEORGE ALLEN NELSON, B.S., County Agent, Columbia County.
PHILIP TUTHILL FORTNER, B.S., County Agent, Baker County.
DAVID HONORE KENNEDY, B.S., Club Agent, Tillamook County.
SARA HUNTINGTON WERTZ, B.S., Home Agent, Deschutes County.
RICHARD CARL KUEHNER, B.S., Club Agent, Lane County.
GEORGE HERRICK JENKINS, B.S., County Agent, Coos County.
MABEL CLAIR MACK, B.S., Home Agent, Jackson County.
ARCHIE LEE MARBLE, B.S.A., County Agent, Hood River County.
CHESTER HAROLD BERGSTROM, B.S., County Agent, Tillamook County.
WILBUR WRAY LAWRENCE, B.S., County Agent, Wasco County.
VICTOR WALDEMAR JOHNSON, B.S., County Agent, Lake County.
FRANCES ANN CLINTON, M.S., Home Agent, Umatilla County.
RUSSELL MELVILLE MCKENNON, B.S., District Agent, Gilliam-Wheeler District.
RALPH EDWARD BROOKE, M.S., County Agent, Grant County.

Assistant Professors

MELVIN J. CONKLIN, B.S., County Agent, Lincoln County.
LEROY CLINTON WRIGHT, B.S., County Agent, Sherman County.
JAMES ROLAND PARKER, M.S., County Agent, Douglas County.
CLAY CARL MILLER, B.S. Club Agent, Multnomah County.
ROBERT MYRON KNOX, B.S., County Agent, Curry County.
GUSTAVE YNGVE HAGGLUND, B.S., County Agent, Deschutes County.
WILLIAM SAMUEL AVERILL, B.S., County Agent, Benton County.
GARNET DOUGLAS BEST, B.S., County Agent, Wallowa County.
CHARLES JOSEPH WEBER, B.S., Urban Club Agent, Portland.
JOSEPH D. BELANGER, B.S., County Agent, Morrow County.
REX WARREN, M.S., County Agent, Yamhill County.
FLOYD CHARLES MULLEN, B.S., County Agent, Linn County.
HARRY LABARE RICHES, B.S., County Agent, Marion County.
AFTON ZUNDEL, B.S., County Agent, Clatsop County.
WALTER CHRISTIAN LETH, B.S., County Agent, Polk County.

OLIVER KENNETH BEALS, B.S., County Agent, Josephine County.
 EARL A. BRITTON, A.B., Club Agent, Douglas County.
 MAUD CONWAY PURVINE, B.S., Home Agent, Columbia County.
 HAZEL PACKER, B.S., Home Agent, Multnomah County.
 LOIS AILEEN LUTZ, B.S., Home Agent, Lane County.

Instructors

ERNEST MILLARD HAUSER, B.S. Club Agent, Malheur County.
 *WAYNE D. HARDING, Club Agent, Marion County.
 LAWRENCE EDWARD FRANCIS, B.S., Assistant County Agent, Washington County.
 CLIFFORD CHARLES JENKINS, B.S., Club Agent, Klamath County.
 KENNETH WHITE SAWYER, B.S., County Agent, Jefferson County.
 OSCAR EDWIN MIKESELL, B.S., Club Agent, Linn County.
 WILLIAM ARTHUR SAWYER, B.S., County Agent, Harney County.
 ETHAN LINDEN WOODS, B.S., County Agent, Crook County.
 HOWARD GEORGE SMITH, B.S., Assistant County Agent, Union County.
 CLIFFORD BERNARD CORDY, M.S., Assistant County Agent, Jackson County.
 CLARK WILLISTON HENKLE, B.S., Assistant County Agent, Klamath County.
 JESSIE PALMITER INGRAM, B.S., Home Agent, Coos County.
 EDWIN GUSTAVE KELTNER, B.S., County Club Agent, Clackamas County.
 ARNOLD CHRISTIAN EBERT, B.S., Assistant County Agent, Wheeler County.
 FREDERICK WAYLAND HILL, B.S., Assistant County Agent, Baker County.
 HARRY FRANKLIN CLINE, B.S.A., Assistant County Agent, Umatilla County.
 GRANT WELLINGTON PERRY, B.S., Assistant County Agent, Wasco County.
 JAY THOMAS PIERSON, B.S.A., Assistant County Agent, Umatilla County.
 HELEN ANN THOMAS, B.S., Home Agent, Clackamas County.
 CLIFFORD DE VERE CONRAD, B.S., Club Agent, Jackson County.
 LOUISE CRILLO HARWOOD, B.S., Home Agent, Wasco County.
 THOMAS FREDRICK CALDWELL, B.S., Club Agent, Benton County.
 ROBERT EDWARD RIEDER, B.S., Assistant County Agent, Marion County.
 NOLA ALLEGRA WELCH, B.S., Home Agent, Josephine County.

FEDERAL Cooperative Extension, closely coordinated with the work of the General Extension Division, performs one of the three great functions of Oregon State College, which include: resident instruction, research and experimentation, and college extension. The Extension Service is charged with the duty of extending the benefits, advantages, and available information of the State College and of the United States Department of Agriculture to every portion of the state and to all those persons who for any reason are unable to come to the campus.

The Farm and Home Interests of Oregon. The Extension Service includes all forms of cooperative off-campus instruction and assistance in those phases of agriculture, home economics, and related subjects which

*Part time, Federal Cooperative Extension.

lend themselves to extension methods or which can be practically adapted to the direct needs of the people of the state. The various extension activities are the means through which information, instruction, assistance, and methods of self-help are carried to all persons who desire them at any point within the state. In brief, the Extension Service represents the medium, both independently and in hearty cooperation with all other organized forces of betterment, for enlarging and enriching the agricultural and home interests of Oregon. No county, town, hamlet, farm, or home need be without some benefit of this service.

Extension Projects. In order to assure the maximum of efficiency, extension work is conducted on the basis of definitely planned projects. These require approval by the proper State College authority and the Secretary of the United States Department of Agriculture before Federal funds are made available.

The several distinct lines of work now covered by written projects, from which citizens of the state are receiving benefit, include:

General—

- General Administration and Organization of the Extension Service
- Visual Instruction*
- News Service and Publicity
- Preparation, Printing, and Distribution of Bulletins

Farm and Home Interests—

- County Agent Work
- Home Demonstration Work
- Four-H Club Work
- Nutrition
- Community Social Organization
- Rural Service
- Child Development and Parent Education
- Clothing and Textiles
- Home Management
- Agricultural Economics, including Marketing and the Collection and Dissemination of Statistical and Outlook Information
- Animal Husbandry
- Dairying
- Poultry Husbandry
- Farm Crops
- Horticulture
- Soils, Irrigation, and Drainage
- Agricultural Engineering
- Rodent Eradication

These projects are not assumed to cover the only problems of importance within the state. It is the purpose to put into operation and to emphasize those lines of extension service that are fundamental to large and important interests of farm or home welfare, or to material agricultural development.

*Supported jointly with General Extension Division.

Part VI
Miscellaneous

Sixty-ninth Annual Commencement

Degrees Conferred May 31, 1938

Advanced Degrees

Honorary Degrees

DOCTORS OF SCIENCE

EZRA JACOB KRAUS

B.S. (1907), Michigan State College.
Ph.D. (1917), University of Chicago.

Head of the Department of Botany, University of Chicago; principal plant physiologist, Division of Fruit and Vegetable Crops, United States Department of Agriculture; for ten years—1909-1919—a cherished member of the faculty of this institution, as instructor, professor, and dean; a research worker whose discoveries in fundamental science at Oregon State College, University of Wisconsin, and University of Chicago, have been distinguished over a period of nearly three decades; outstanding horticulturist and plant pathologist of our day, whose self-effacing counsel has endeared him to hundreds of his colleagues and students, and whose career, both as a man and a scientist, exemplifies the integrity of character and the unselfish virtues that are the distinction of the creative scholar.

THORNTON TAFT MUNGER

B.A. (1905), M.F. (1908), Yale University.

Bachelor of Arts and Master of Forestry, cum laude, Yale University; for thirty years with the United States Forest Service, advancing from forest assistant to the rank of principal forest economist and director, Pacific Northwest Forest Experiment Station; outstanding for his achievements in the field of scientific forestry; whose constructive leadership, genius in cooperation, administrative ability, and sterling character have contributed worthily to the State and to the Nation.

DOCTOR OF ENGINEERING

JOHN CYPRIAN STEVENS

B.S. (1905), C.E. (1928), University of Nebraska.

Consulting engineer, whose technical wisdom, sound judgment, and professional vision, exercised in the broad field of engineering, have subdued the forces of nature to the service of humankind; and whose contributions to civic and social progress, through various voluntary channels, have enriched the civilization of our time.

Graduate Division

DOCTORS OF PHILOSOPHY

WALDO ELIOT CARLSON

Barnum, Minnesota

B.A., 1933, University of Minnesota.

Major: Soils. Minor: Chemistry, Bacteriology.

Thesis: A Contribution to the Role of Iodine in the Nutrition of Certain Plants.

THEODORE P. DYKSTRA

Beltsville, Maryland
 B.S., 1923, Oregon State College; M.S., 1925, University of Wisconsin.
 Major: Plant Pathology. Minor: Plant Physiology, Biochemistry.
 Thesis: A Study of Viruses Infecting European and American Potato Varieties.

JESS RUEBEN KIENHOLZ

Hood River
 B.S., 1928, M.S., 1929, The State College of Washington.
 Major: Plant Pathology. Minor: Botany, Bacteriology.
 Thesis: Comparative Study of the Apple-Tree Anthracnose and Perennial-Canker Fungi.

JOHN A. MILBRATH

Walla Walla, Washington
 B.S., 1934, The State College of Washington.
 Major: Plant Pathology. Minor: Chemistry, Entomology.
 Thesis: Tomato Tip-Blight Virus.

LEROY EUGENE WEAVER

Corvallis
 B.S., 1934, Agriculture, New Mexico State College.
 Major: Plant Pathology. Minor: Morphology, Chemistry.
 Thesis: Studies of the Crinkle Disease of Strawberry with Special Reference to the Inheritance of Resistance.

CIVIL ENGINEER

GLENN S. PAXSON

Salem
 B.S., 1912, Mining Engineering, Oregon State College.
 Thesis: Light Reflecting Characteristics of Various Pavement Surfaces.

MECHANICAL ENGINEERS

WILLIAM VINCENT HANLEY

El Cerrito, California
 B.S., 1933, Mechanical Engineering, Oregon State College.
 Thesis: A Study of Detonation by Means of Electronic Instrumentation.

JACOB DONALD KROEKER

Portland
 B.S., 1937, Civil Engineering, Oregon State College.
 Thesis: Design of Mechanical Air Heating Systems.

ELECTRICAL ENGINEER

EUGENE CARL STARR

Corvallis
 B.S., 1923, Electrical Engineering, Oregon State College.
 Thesis: Storm-Static Radio-Interference Phenomena Originating on Air Craft.

MASTERS OF ARTS

CLARENCE IRWIN GIBBON

Hines
 B.S., 1936, Oregon State College.
 Major: Organic Chemistry. Minor: Inorganic Chemistry.
 Thesis: Investigation of the Oil of Lavandula vera Cultivated in Oregon.

DELMER MORRISON GOODE

Corvallis
 B.A., 1916, University of Minnesota.
 Major: Higher Education. Minor: Finance.
 Thesis: The Oregon State Board of Higher Curricula as an Agency for Curricular Control.

LEOTA LIEURANCE LASLETT

Corvallis
 B.A., 1911, University of Kansas.
 Major: Education. Minor: Guidance.
 Thesis: Educational Fates of College Entrants in the Two Lowest A. C. E. Deciles.

THOMAS PARKER MARSH

Portland

B.S., 1936, Oregon State College.

Major: Analytical Chemistry. Minor: Agricultural Chemistry.

Thesis: A Cerometric Method for Determination of Copper in Paris Green and Ores.

WILLIAM HICKMAN MOORE

Portland

B.A., 1934, Reed College.

Major: Physics. Minor: Mathematics.

Thesis: Installation of a Wood-Anderson Seismometer at Oregon State College.

C. GORDON MORRIS

Amity

A.B., 1936, Willamette University.

Major: Mathematics. Minor: Physics and Mathematics.

Thesis: A Study of the Differential Equation $\frac{d^2w}{dz^2} + (m + z^2)w = 0$.

ANNE KING STOUT

Corvallis

B.S., 1935, Science, Oregon State College.

Major: Organic Chemistry and Biochemistry. Minor: Physical Chemistry.

Thesis: A Study of Inositol in its Relation to Yeast Growth.

LUCILLE EUGENIE WALL

Monmouth

B.Ed., 1928, University of California at Los Angeles.

Major: Education. Minor: Household Administration.

Thesis: The Growth and Development of Practice-Teaching Facilities at the Oregon Normal School.

MASTERS OF SCIENCE

LEA ROY ALDWELL

Sonora, Texas

B.S., 1935, Agricultural and Mechanical College of Texas.

Major: Agricultural Economics. Minor: Economics and Animal Husbandry.

Thesis: The Management and Financial Condition of Eastern Oregon Grain Co-operatives.

NELLY ANA-MIRTA ARMAND-UGON

Montevideo, Uruguay

B.S., 1935, University of Montevideo.

Major: Food Products Industries. Minor: Chemistry.

Thesis: A Practical Method of Commercial Jelly Manufacture.

FREIDA MAE BENNETT

Burlington Junction, Missouri.

B.S., 1927, Northwest Missouri State Teachers College.

Major: Clothing and Textiles. Minor: Household Administration.

Thesis: A Study of Consumer Buying of Shoes.

MAX MARK BOCEK

Portland

B.S., 1937, Science, Oregon State College.

Major: Organic Chemistry. Minor: Chemical Engineering, Physical Chemistry.

Thesis: Studies on the Catalytic Conversion of Borneol to Camphor.

DUIS DONALD BOLINGER

Corvallis

B.S., 1930, Engineering, University of Missouri.

Major: Physics, Mechanical Engineering. Minor: Mathematics.

Thesis: A Semi-Portable, Infra-Red, Vacuum Spectrometer.

CLYDE ARTHUR BRIDGER

Boise, Idaho

B.A., 1931, Whitman College.

Major: Mathematics. Minor: Physics, Education.

Thesis: On the Numerical Integration of the Second Order of Differential Equation with Assigned End Points.

E. SOON CHOI

Korea

Ewha College, Korea.

Major: Household Administration. Minor: Nutrition.

Thesis: A Plan for Adapting Principles of Child Development to Meet the Needs of Korean Children.

JOSEPH WILLIAM COOK

Pullman, Washington

B.S., 1935, Science, Oregon State College.

Major: Chemistry. Minor: Animal Nutrition.

Thesis: The Occurrence of Nutritionally Important Sulfur Compound in Alfalfa as Influenced by Sulfur Fertilization.

RAYMOND WALDEMAR COOPEY

Klamath Falls
 B.S., 1930, Education, Oregon State College.
 Major: Zoology. Minor: Geology.
 Thesis: A Census of Water Bird Life on Upper Klamath Lake.

JOSEPH ALFRED COX

Monmouth
 B.A., 1926, Colorado College.
 Major: Education. Minor: Physical Education, Psychology.
 Thesis: The Development of Health and Physical Education for Men at the Oregon Normal School: A Proposed Set-Up.

EUGENE EDWARD CRAWFORD

Corvallis
 B.S.F., 1935, University of Michigan.
 Major: Fish and Game Management. Minor: Entomology, Veterinary Medicine.
 Thesis: A Study of the Food Habits of Waterfowl in the Willamette Valley.

MARGARET SHAMEL CRUMLY

Boise, Idaho
 A.B., 1919, University of Southern California.
 Major: Guidance. Minor: General Education.
 Thesis: A Study of the Children in the Emergency Nursery Schools of Idaho.

EDWIN BLUNDELL DAVIS

Corvallis
 B.S., 1935, Education, Oregon State College.
 Major: Education. Minor: Sociology.
 Thesis: A Study of the Educational Status and Some Educational Implications of a Local Relief Population.

MYRON CARL DAVIS

Stafford Springs, Connecticut.
 B.S., 1935, Massachusetts State College.
 Major: Food Products Industries. Minor: Bacteriology.
 Thesis: Heat Penetration in Canned Fish.

RAY DESCHAMPS

Corvallis
 B.A., 1934, Utah State Agricultural College.
 Major: Farm Management. Minor: Soils.
 Thesis: An Analysis of the Farm Organization and Progress of Farm Security Administration Clients in Marion County.

PRESTON FRANKLIN DOUGHTON

Dallas
 B.S., 1927, Commerce, Oregon State College.
 Major: Education. Minor: Education.
 Thesis: Budgeting and Accounting Practices for Extra-Curricular Activities in Selected Oregon High Schools—A Proposed System.

CARL ROBERT EKLUND

Tomahawk, Wisconsin
 B.A., 1932, Carleton College, Minnesota.
 Major: Fish and Game Management. Minor: Botany and Animal Industries.
 Thesis: Ecological and Mortality Factors Affecting the Nesting Stage of the Chinese Pheasant, *Phasianus torquatus* Gmelin, in the Willamette Valley, Oregon.

JOHN WALTER ERICKSON

Corvallis
 B.S., 1931, Commerce, Oregon State College.
 Major: Education. Minor: Commercial Education.
 Thesis: A Survey of Secondary School Standards in the United States.

HERBERT WILLARD EWEN

Kimberly, Idaho
 B.S., 1931, Commerce, Oregon State College.
 Major: General Education. Minor: Counseling.
 Thesis: A Study of the Relationship of Academic Training and Subjects Taught by Teachers in Oregon High Schools.

KEITH PECK FENNER

Corvallis
 B.S., 1935, Science, Oregon State College.
 Major: Food Products Industries. Minor: Education.
 Thesis: Utilization of Surplus Italian Prunes.

- HOWARD GIBSON
Corvallis
B.S., 1934, Agriculture, Oregon State College.
Major: Farm Crops. Minor: Soils.
Thesis: Root Development Studies of Certain Genera and Species of Grass with Special Reference to Soil Types.
- PHIL A. HORNER
Covina, California.
A.B., 1929, Santa Barbara State Teachers College.
Major: Industrial Education. Minor: Education, Psychology.
Thesis: Visual Instruction Supplementary to Industrial Education.
- TSAI YU HSIAO
Shantung, China
B.A., 1931, National Normal University, Peiping, China.
Major: Entomology. Minor: Horticulture.
Thesis: Investigation of the Life History and Habits of the Cherry Case-bearer, *Cleophora pruniella* Clemens and the Cigar Case-bearer, *C fletcherella* Fernald, in the Willamette Valley.
- ALBERT MARION HUGHES
Salem
B.A., 1936, Willamette University.
Major: Physical Chemistry. Minor: Organic Chemistry, Physics.
Thesis: Heats of Combustion of Hydrazine, Hydrazine Hydrate, and Related Compounds.
- LORENA NADINE JACK
Salem
B.S., 1931, Home Economics, Oregon State College.
Major: Institution Economics. Minor: General Home Economics.
Thesis: An Investigation of Housing Needs of Women Students in Residence Halls.
- ALFARETTA CLARA JOHNSON
Antigo, Wisconsin
B.S., 1934, Emmanuel Missionary College, Michigan.
Major: Foods and Nutrition. Minor: Institution Economics, Education.
Thesis: Growth Response of Young Albino Rats to Graded Amounts of Crystalline Vitamin B₁.
- FREDERICK WALTER JOHNSTON
East Cleveland, Ohio
B.S., 1936, Civil Engineering, Oregon State College.
Major: Mechanical Engineering. Minor: Mathematics, Civil Engineering.
Thesis: A Photo-Elastic Analysis of an Airplane Gusset Plate.
- GLADYS SHANK KELTY
Corvallis
B.S., 1932, Commerce, Oregon State College.
Major: Education. Minor: Guidance.
Thesis: Subject Combinations in the Programs of Oregon High School Teachers, Fall Semester, 1937.
- MOHAMAD ASLAM KHANMAI
Peshawar, India
Diploma in Agriculture, 1928, University of Reading, England.
Major: Horticulture. Minor: Food Products.
Thesis: Certain Correlations between Leaf Area and the Fruit Production of Red Raspberries.
- LEO YUKIO KIYOHRO
Portland
B.S., 1937, North Pacific College.
Major: Pharmacy and Organic Chemistry. Minor: Physical Chemistry.
Thesis: Some Properties and Reactions of Umbellulone, from the Leaf Oil of Coos Bay Myrtle, *Umbellularia californica*.
- LEUNG YUK MAAN
Canton, China
B.S., 1929, Lingnan University, Canton, China.
Major: Entomology. Minor: Fish and Game Management, Botany.
Thesis: A General Study of the Mint Flea-Beetle, *Longitarsus waterhousei* Kutsch.
- ROY HAROLD LIEN
Portland
B.A., 1936, Reed College.
Major: Mathematics. Minor: Physics.
Thesis: Numerical Solution of the Second Order Differential Equation.

CHARLES MAURICE LORD

Corvallis

B.S., 1936, Forestry, Oregon State College.

Major: Forestry. Minor: Botany.

Thesis: Natural Reproduction in Douglas Fir Stands as Affected by the Size of Openings.

LAWRENCE ALFRED LOVEGREN

Corvallis

B.S., 1933, Industrial Arts, Oregon State College.

Major: Industrial Education. Minor: Education.

Thesis: An Investigation of Some Foundational Factors as a Basis for Improvement of the Corvallis Junior-Senior High School Industrial Arts Program.

LUK LAI SHEUNG

Hongkong, China

B.A., 1930, Lingnan University, Canton, China.

Major: Clothing and Textiles. Minor: Household Administration.

Thesis: A Comparative Study of the Construction and Quality of Silk Materials Purchased in China and the United States.

JOHN RAY MESSINGER

Delano, California

A.B., 1930, Industrial Education, State Teachers College of Chico.

Major: Industrial Education. Minor: Education.

Thesis: Suggested Programs in Evening Classes for Farm Mechanics.

ANN CHARSTE MIKKELSON

Spokane, Washington.

B.S., 1921, North Dakota Agricultural College.

Major: Household Administration. Minor: General Home Economics.

Thesis: A Study of Housing Requirements of Fifty Selected Families in Spokane, Washington.

HERSCHEL KENWORTHY MITCHELL

Corvallis

A.B., 1936, Pomona College.

Major: Organic Chemistry and Biochemistry. Minor: Physical and Analytical Chemistry.

Thesis: A Micro-Study of the Reduction of Organic Compounds with Hydriotic Acid.

PAUL HARRIS MOORE

Wasco, California

A.B., 1927, Santa Barbara State Teachers College.

Major: Industrial Education. Minor: Education.

Thesis: A Plan for Integrating a "General Shop Program."

EVA MARIE NEWTON

Corvallis

B.S., 1927, Commerce, Oregon State College.

Major: General Education. Minor: Measurements.

Thesis: "A Nation-Wide Study of State Commercial Contests for High School Students."

DAN WILLIAMS POLING

Corvallis

B.S., 1928, Commerce, Oregon State College.

Major: Education. Minor: Psychology.

Thesis: A Study of the Professional Training and Experience of Superintendents and Secondary School Administrators in the State of Oregon.

WILMA MILLER RONDEAU

Corvallis

B.S., 1923, Home Economics, Oregon State College.

Major: Household Administration. Minor: Clothing and Textiles.

Thesis: Planning the Family Dwelling for a Willamette Valley Village.

PRISCILLA ROWLAND

Logan, Utah

B.S., 1923, Utah State Agricultural College.

Major: Household Administration. Minor: Home Economics, Education, Foods and Nutrition.

Thesis: An Analysis of the Attitudes of Two Hundred High School Seniors Toward Adjustments in Family Living.

LAWRENCE EDWIN RUCH

Vallejo, California

B.S., 1924, Education, Oregon State College.

Major: Industrial Education. Minor: Education.

Thesis: A Study of Grade Distribution in Large and Small Class Groups, Covering the Same Students and the Same Class Work.

BERT SANTFORD RUSK

Salem

B.A., 1936, Willamette University.

Major: Physical Chemistry. Minor: Chemical Engineering.

Thesis: Studies on the Fractionation of Waste Sulphite Liquor.

PAUL JOSEPH RYAN

Eugene

B.S., 1932, Commerce, Oregon State College.

Major: General Education. Minor: Counseling.

Thesis: A Survey of School Transportation in Oregon.

E. MATTHEW SKENE

Hillsboro

A.B., 1934, Pacific University.

Major: Education. Minor: Physics, Mathematics.

Thesis: Student Who Fail Algebra—A Study of Students Repeating Algebra 1.

SZE YEN Po

Soochow, China

B.S., 1936, Yenching University, China.

Major: Chemical Engineering. Minor: Chemistry, Mechanical Engineering.

Thesis: Tests on Various Activated Carbons.

MARION T. WEATHERFORD

Arlington

B.S., 1930, Industrial Arts, Oregon State College.

Major: Industrial Education. Minor: Education.

Thesis: Metal Craft as an Educational Medium in the Industrial Arts Program.

JOHN MARTIN WEBER

Corvallis

B.S., 1937, Education, Oregon State College.

Major: Education. Minor: Sociology.

Thesis: A Motivating and a Disciplinary Force in Society.

ALVIN WILBUR WHEELER

Corvallis

B.S., 1916, Agriculture, Oregon State College.

Major: Farm Management. Minor: General Agriculture.

Thesis: Labor Requirements for Certain Oregon Agricultural Enterprises.

MARGARET RUTH WHIPPLE

Corvallis

B.S., 1935, Agriculture, Oregon State College.

Major: Fish and Game Management. Minor: Farm Crops, Entomology.

Thesis: Artificial Incubation and Brooding of Ring-Necked Pheasants on State Game Farms at Eugene and Corvallis, Oregon.

HAROLD H. WHITE

Corvallis

B.S., 1920, Agriculture, Oregon State College.

Major: Farm Management—Agricultural Economics. Minor: Agricultural Education.

Thesis: A Survey of the Demand for Agricultural Labor in Oregon.

MELFORD ALLAN WOODS

Yucaipa, California

B.A., 1936, University of Redlands.

Major: Organic Chemistry. Minor: Physical Chemistry.

Thesis: Selective Oxidation of Organic Compounds Particularly by Iodic Acid.

MABEL ELLEN YOUNGBERG

McMinnville

B.S., 1933, Linfield College.

Major: Mathematics. Minor: Education.

Thesis: Formulas for Mechanical Quadrature of Irrational Functions.

RAYMOND LOUIS ZOBEL

Prospect

B.S., 1926, Forestry, Oregon State College.

Major: Education. Minor: Education.

Thesis: Work of the County Health Unit in the Third Class High School Districts, in Jackson County, Oregon: A Proposed Organization.

Baccalaureate Degrees

School of Science

BACHELORS OF ARTS

PEARL ALBERT
Portland
HELEN ALDRICH
Seaside
HOWARD LeGRANDE CHERRY
Corvallis
WILFRID JOSEPH DIXON
Portland
CYRIL FELDSTEIN
San Francisco, California
JOHN KEPLINGER FISHER
La Grande
LEROY WILLIAM JENSEN
Portland

JOHN MARTIN PIERSON, JR.
Portland
ELIZABETH REEVES
Oak Grove
LAURA ESTHER REICHEN
Portland
ROBERT LEON ROSE
Parkdale
IRVIN BARRY TARSHIS
Portland
CONSTANCE M. WILLARD
Portland
FREDERIC HARRIS YOUNG
Sheridan

BACHELORS OF SCIENCE

CONRAD AUSTANCE ANDERSON
Cove
LOGAN ELLSWORTH ANDERSON, JR.
Cove
DONALD WITHERS BAILEY
The Dalles
ALBERT ODEEN BARTELL
Portland
JAMES TREVOR BRYANT
Portland
WILLIAM NELSON BURNS
Corvallis
WILLIAM ROBERT CAMPBELL
Portland
CLARA JANE CHAPMAN
Portland
GEORGE ROBERT COE
Sacramento, California
JAMES FREDERICK COOK
Myrtle Creek
CONRAD ALPHONSE DeLATEUR
Hoquiam, Washington
IVAN MERWIN DUNCAN
Burns
LOYAL MOORE FELTS
Portland
CHARLES WESLEY FLUKE
Portland
WILLIAM GRAF
Shedd
WILFRED LAWRENCE GRENFELL
McMinnville
WILLIAM EDWIN JONES
Kelso, Washington
WILLIAM MARTIN KAHN
Portland
ROBERT WINDLE LAWRENCE
Corvallis
BEN YIM LIU
Portland
RICHARD HARDING MCBEE
Eugene
HOWARD EARL MCCURDY
Portland

IAN DONALD MACDONALD
Milwaukie
CLARK WALTER MILES
Portland
AARON MILLER
Portland
RICHARD HODGES MOTE
Corvallis
MAURICE JOHN MUNDORFF
Cornelius
DONALD WILBERT NEILSON
Medford
IVAN KAYE NICHOLS
Oregon City
THOMAS FRANCIS O'NEILL
Forest Grove
MAX HORTON PARROTT
Portland
JOHN REUTER PERKINS
Roseburg
LENN MORRIS PIERSON
La Grande
DARIO MICHAEL RASCHIO
Portland
NOEL BURDETT RAWLS
Corvallis
DOROTHY FRANCES REVELL
Bonanza
WILLIAM WESLEY RICHARDSON
Portland
JOHN ALVIN ROWLAND
Eugene
LOYD OTTO SCHAAD
Newberg
ROGER SCOTT
Etwanda, California
RUTH ZONA SMITH
Portland
THOMAS JEFFERSON TAYLOR, JR.
Olympia, Washington
ROSCOE CLARENCE WILSON
Portland
HERBERT HARRMENN WYMORE
Oregon City

School of Agriculture

BACHELORS OF SCIENCE

RICHARD WALTER BAILEY Milwaukie	GERALD RAYMOND KUBIN Salem
IVAN RAE BIERLY Gervais	KATHARINE ELIZABETH LATHROP Central Point
GEORGE MARTIN BLAKELY, JR. Redmond	GENE MAURICE LEAR Condon
MELVIN ERNEST BOAK Bandon	JAMES RUSSELL LEEKLEY Lake Grove
TURNER HANKS BOND La Grande	WILLIAM MONROE LEVEE Corvallis
WILL HARTLEY BROWN Roseburg	MUREL ALLEN LONG Malin
JAMES RALPH CALLAWAY Long Beach, California	JOHN ALLAN MCCORMICK Portland
PROSSER EVERETT CLARK Portland	GEORGE STANNARD MCCrackEN Corvallis
ROBERT LAGRANDE CLARK Portland	JOHN WESLEY MCKEAN Roseburg
FREDERICK KARL CRAMER The Dalles	WILLIAM PRESTON MCKINNEY Wasco
WILLARD NELSON CRAWFORD Corvallis	ROBERT EARL MCMAHAN Hillsboro
KEITH EDWIN DAVIS Lincoln, Nebraska	CARL JAMES MCMURPHY Palo Alto, California
JOHN D. DURR Bellingham, Washington	JAMES DEWITT MCWILLIAMS Portland
GEORGE O. ELLE Milwaukie	MERLE HINRICHS MARKLEY Hood River
HARRY JAMES ENDICOTT Springfield	ALPHONS RICHARD MELIS Mist
PHILLIP WARD FARRELL Gateway	GERALD NIBLER Aurora
NORMAN FLETCHER Salem	MARVIN BOONE NOBLE Corvallis
MAURICE GILBERT FRAKES Ontario	DEAN EDGAR PAINTER Corvallis
PAUL ANTHONY FRASER Moro	FRANK JOSEPH PAVELEK Woodburn
ANDREW OSCAR FREDERICKSON Portland	GEORGE LEWIS PENROSE Corvallis
GEORGE TATSUO FUJINAKA Portland	HERSEL WILLIAM PEYREE Independence
VIRGIL MAURICE GARNER Albany	LOWELL ROBERT PFARR San Francisco, California
E. LYNN GUENTHER Hillsboro	WALDO ASHMEAD RICHES Turner
HUGH POMEROY HANNA Independence	JIM RIDDERS Albany
ROBERT W. HENDERSON Hermiston	RALPH CLIFFORD RITTENOUR Portland
BAYARD WALTER HILLWAY Sheridan	ROBERT WHIPPLE ROOT Medford
ROBERT CLARK HOLLOWAY Portland	HARRY RUDOLPH SANDQUIST Roseburg
MARION GEORGE HOSKINS Dundee	ROBERT HOWARD SAWYER Delake
CHARLES ELDON HUTCHINSON North Powder	EDWARD HAROLD SCHEIFER Corvallis
GEORGE LEIGH HYSLOP Corvallis	GEORGE DIXON SHAMBROOK Roseburg
LOYD RUSSELL JACKSON Union	DAVID STANLEY SHEPARD Salem
WALTER JOHN JENDRZEJEWSKI Hermiston	EDWIN JAMES STASTNY Malin
ROBERT DEAN JONES Corvallis	WILLIAM LOWELL STEEN Milton
EARLE FRED JOSSY Portland	ROY EDGAR STOUT Corvallis
CHESTER EDWIN KEBBE Mohler	EDWIN LOUIS STRACK Portland
ORME STERLING KELLETT Vancouver, Washington	DON H. TELFORD Troutdale
JAMES WILLIAM KERNS Klamath Falls	PALMER STANLEY TORVEND Silverton

School of Agriculture—*Continued*

STEPHEN HENRY VAN WOUDEBERG Corvallis	HARVEY LOMAN WOLFE Antelope
ROBERT WILSON WILCOX Oakland	ELDEN DEWAYNE YEOMAN Tillamook
CECIL JULIUS YOUNGSTROM Prineville	

School of Education

BACHELORS OF ARTS

JEAN DOROTHY COOPER Corvallis	KATHRYN ELDORIS ROWE Salem
BETTY KIMMEL South Pasadena, California	FRANCES STAVER Portland
EVANGELINE MILNE Corvallis	LOIS DELPHINE TAYLOR Forest Grove

BACHELORS OF SCIENCE

DOROTHY HARRIETT BAILIE Klamath Falls	ARTHUR DITTMAR MERRYMAN Corvallis
CLEM C. CLARKE Butte Falls	THELMA AGNETA MILLER The Dalles
SHERMAN PAUL CROW Joseph	BICKIE GAYEL MOE Corvallis
CHARLES LAUGHERY DAWSON Corvallis	FRANK MICHAEL NIHIL San Francisco, California
HARRY EDWIN DAWSON Joseph	OLIVER ERIC RAIKKO Portland
MILDRED EVELYN DEAL Alsea	LOIS MAUD REEDY Klamath Falls
AARON CORNELIUS FUNK Corvallis	MARY MARIAN ROMITI St. Helens
GRETCHEN MARION GAMER Salem	ROBERT GEORGE ROSENSTIEL Portland
GEORGE ANGUS GILLIS Portland	LOYD GLENN SEELY Beatty
RUSSELL HOLCOMB GODARD Tillamook	VIOLA MAE SMITH Mayville
JAMES CHARLES HEARTWELL Long Beach, California	DORIS EVELYN SUTER Corvallis
DOROTHY CAVANAUGH HILL Portland	THOMAS ALBERT SWANSON The Dalles
EVA MARY KLENK Eugene	ERLING HENRY THORSEN Bellingham, Washington
VIOLET MCMURTREY Portland	JOHN LUDWIG WATTS Burlingame, California
RICHARD ELDON MARTIN Hermiston	RICHARD OSMOTHERLY WELLINGTON Portland
MELVIN CLAYTON WILSON Independence	

School of Engineering

BACHELORS OF SCIENCE

DUANE WRIGHT ACKERSON Milwaukie	MELVIN LEE-ROY BARMETTLOR Portland
KENNETH WARD ANDERSON Portland	ARTHUR WALLER BAUM Roseburg
ROBERT VINCENT ANDREWS Portland	FRED HERMAN BEHRENS Baker
AUSTIN WILLARD ANGELL, JR. Portland	GEORGE WRIGHT BENNETT Portland
DWIGHT IRWIN BAKER Gresham	STANTON D. BENNETT Forest Grove

School of Engineering—Continued

ROBERT CALDWELL BLACKLEDGE Corvallis	ROBERT EUGENE HILL Vale
JOHN HALBERT BONER Los Angeles, California	JOHN MEIER HILPERT Bethlehem, Pennsylvania
ROBERT WESLEY BROWN Baker	WILLIAM CHIPMAN HOLLEY Klamath Falls
PHIL R. BROWNELL Salem	LAWRENCE MERRIL HOOVER Hood River
CECIL SAMUEL BUCK Eugene	JAMES CHASE HOWLAND Oregon City
HENRY LEE BURNS Corvallis	ALF HUNDERT Seaside
MARION EUGENE CARL Hubbard	DORAN A. HUSTON Prineville
ORRIS ALVIN CARNEGIE Albany	JOHN WINKLEY IRVINE Corvallis
HOWARD FRANCIS CARNES Roseburg	LEONARD GEORGE JEWETT Portland
VICTOR STUART CARSON Corvallis	RICHARD HENRY JOHANNSEN Lebanon
CARL HAL CHAMBERLIN Portland	WILLIAM SHIRLEY JONES Corvallis
HOWARD WAYNE CHRISTENSON Portland	STANLEY ROBERT KELLEY Portland
CLAUDE BERT CHRISTIANSEN Ontario	LEONARD MARTIN KLEIN Medford
FREDERICK BETZ CLAUSSEN Portland	MILAN KNEZEVICH Portland
CLIFTON THEODORE CLEMENS Corvallis	LLOYD MILO LANDWEHR Astoria
HOLLY ADAMS CORNELL Portland	EMMETT PATRICK MCCORMICK Wapato, Washington
THOMAS NELSON CREACY Corvallis	MILTON MAEDA Portland
GEORGE MURRAY CUNNINGHAM Portland	FRANCIS JOSEPH MARKS Portland
JAMES DENMAN DARBY Roseburg	JACK MARTIN Hermiston
CLYDE ROBINSON DEAN, JR. Portland	LAWRENCE WILLIAM MAYER Helena, Montana
LAWRENCE MERTON DELONG Portland	HERBERT JOHN MEIER Corvallis
LOUIS REYNOLD DIETRICH Portland	HENRY CITO MEINERS Portland
STEARNS DAVID EASON Salem	LAURENCE REGNELL METCALF Hood River
NORMAN ESTBERG Portland	HERBERT ADOLPH MOHR Hillsboro
REO RAE FAUS Merrill	FRANK DOUGLAS MORGAN Hermiston
WILLIAM HENRY FISHER Medford	ROBERT DEWAR MORRIS Portland
EINER JOHN FLOOD Portland	JOHN EDWARDS MOWICK Hammond
THOMAS ROBERT FORSTER Portland	HAROLD CHANDLER NELSON Durkee
THEODORE NEVILLE FRAZEE Albany	ALBERT PETER NICOL Corvallis
JOHN HUBERT GALLAGHER, JR. Portland	THOMAS GILBERT NOCK Baker
RICHARD CHARLES GEARHART Portland	BURTON FLOYD O'MEALY Portland
EDWARD ZIGMUND GRAY Portland	TURE EDWARD OTHEMAN Astoria
HARRISON GREENOUGH Coquille	ELIOT ROOT PECK Corvallis
ROBERT NELSON HACKETT Hood River	DONALD EARL PHELPS McMinnville
JACK IRVING HALL Schenectady, New York	WILLIAM PITTAM North Bend
LOUIS PHILIP HANSON Paisley	EMORY ELBERT REITZ Salem
THOMAS BURKE HAYES Pendleton	RUSSELL WHITTINGTON REVELL Bonanza
HERBERT FAHY HIATT Portland	HARRY WILBUR RICHARDS Molalla

School of Engineering—*Continued*

JAMES J. ROBERTSON Oswego	SAMUEL DIETRICH TABER Los Angeles, California
FRANCIS HAROLD ROSE Oswego	WILLIAM RICHARD TAYLOR Portland
VERNON HART ROSEBRAUGH Aloha	U. LAYTON UPSON Portland
BERT RORICK SCOTT, JR. Avalon, California	LESTER OSCAR VAN BLARICOM Corvallis
VERNON EDGAR SEELEY Independence	FRANKLIN HENRY VAN PELT Salem
CLYDE KEENER SHERMAN Klamath Falls	SELMER OLENE WAKE Corvallis
BRITT MAGRAW SMITH Milwaukie	ROBERT WELTY The Dalles
KENNETH JAMES SMOUSE Ione	STILLMAN JOSEPH WESSELA Scottsburg
DONALD SNYDER Glendale	GORDON WONG Portland
CHARLES EDWARD STOCKMAN Baker	FREERICK ZITZER Portland
MALCOLM WINSTON STRANSKY Milwaukie	JOHN WILFRED ZWICK Portland

School of Forestry

BACHELORS OF SCIENCE

KEMUEL KENYON BLACKER Corvallis	GEORGE PACEY HOWATT Corvallis
RODERICK KENYON BLACKER Corvallis	ROBERT LINCOLN HUDSON Pendleton
ROY C. BRADY Silverton	JOHN LAURENCE JEFFERSON Upland, California
JOHN SEBASTIAN BRANDIS Seattle	WALTER ROBERT JOHNSON Portland
KENNETH ARTHUR BURKHOLDER Portland	EVAN ENNIS JONES Eugene
JOSEPH CALLAGHAN Alturas, California	DAVID HUGH KERR La Porte City, Iowa
WALTER HOWARD CAMPBELL Prairie City	FRANK KINCAID Portland
JOHN LEWIS CARLICH Portland	ROBERT MARSHALL KING Oregon City
HOMER EUGENE CARSON Corvallis	RAYMOND WALTER KNUDSON Glenns Ferry, Idaho
EDWARD ALEXANDER CONGDON Portland	DONALD ROYCE LANG Sweet Home
WILBUR DAVID COOPER Parkdale	JOHN EDWARD LETOURNEUX Portland
MELVIN EMERSON CRAWFORD Corvallis	LEONARD BRUCE LOGAN Portland
HAROLD ANTHONY DAHL Troutdale	BERNARD McCLENDON O'Brien
RALPH WILLIAM DEMPSEY Rickreall	FREMONT McCOMB Portland
ROY CLIFFORD ELMGREN Portland	WILLIAM THOMAS MCGREER Redmond
CHARLES RICHARD FISHER La Grande	EDWARD H. McLEAN Medford
MAURICE KELLY FOX Portland	JENE EARL MILLS Zig Zag
CHARLES DEMOTTE FREELAND Portland	JENE MOSS Somerton, Arizona
HEATH VALE HALL Salem	GEORGE THEODORE MUELLER Pasadena, California
FORREST RAYMOND HANSON Grants Pass	FRANK RODNEY PHILLIPS Corvallis
GEORGE HIGH HARRINGTON Oregon City	WILLIAM McDONALD RIGGS LaFollette, Tennessee
OSCAR HEINTZ, JR. Portland	DONALD CARL ROHN Weston
CHESTER DOUGLAS HOLE Jennings Lodge	CHARLES P. SAMSON Corvallis

School of Forestry—Continued

FLOYD WINFIELD SCOTT Marshfield	STEPHEN D. WAITE Toledo
HOWARD JAMES SLONECKER Corvallis	J. MILO WALTER Portland
HARTWELL SPRINGER Dierks, Arkansas	CLAYTON NEET WEAVER Myrtle Creek
BERTRAM SAM TAYLOR Corvallis	FRANK CAROL WHEELER Corvallis
ERNEST POLLARD TAYLOR Portland	CLIFFORD LESLIE WHITTEN Pondosa
GLENN ANDREW THOMPSON Salem	ROSS WOODROW WILLIAMS Corvallis
PAUL OSMO TOLONEN Astoria	FRED ELMER WOOLF Pasadena, California
GORDON EUGENE TOWER Salem	HERBERT AUSTIN YOCOM Myrtle Creek
	ROSS ANDREW YOUNGBLOOD Corvallis

School of Home Economics

BACHELORS OF ARTS

ANNA GERTRUDE BAKER Bend	JOAN ELIZABETH ORR Pendleton
MARY HOPE CHAMBERLIN Corvallis	LENORE REYNOLDS Portland
HOPE HAMILTON CHATFIELD Portland	HARRIET RICHARDS SLAYTON Corvallis
GLADYS EMMA HEDLUND Brownsville	DORIS HELEN SPEARS Portland
LAURA ELIZABETH HUDDLESTON Corvallis	ELIZABETH CHELAN WHITE Portland
HILDA ETTA MYERS Condon	HAZEL GLENN WHITTIG Caldwell, Idaho

BACHELORS OF SCIENCE

EVELYN ANNA ALNUTT Corvallis	EMMA MAE DENYER Turner
COSMA OVIDIA ARNOLD Portland	GENEVIEVE MATIE EASTLING Roseburg
KATHLEEN ELIZABETH ASTON Portland	MILDRED LILLIAN ECKMAN Corvallis
LOLA RUSHING BALLINGER Oakland, California	SUE IDELL EDWARDES Corinth, New York
LAURA WAGGONER BAYLES Salem	MILDRED IRENE ETTER Pilot Rock
JULIA MARIAN BENNETT Portland	HELEN BESS FIFER Portland
DOROTHY ELIZABETH BISHOP Portland	ANNABELLE PALMER FISHER Roseburg
CAROL ELIZABETH BOYD Bend	CAROL FOSTER Arcata, California
PAULA MAE BREUER Myrtle Point	FLORENCE AGNES FROMHERZ Lebanon
MARJORIE FLORENCE BRITTON Portland	MARY SUMIE FUJII Nampa, Idaho
LOIS I. BURCHARD Roseburg	VIRGINIA GALLAGHER Portland
HELEN MARGARET CLARK Portland	HELEN MARY GEORGE Corvallis
MARY LOUISE COCKEFAIR Madison, Wisconsin	MARY ELOISE GORRILL Oakland, California
VIRGINIA CONN Oswego	MARIETTA GERTRUDE GRANDY Tigard
VALERIA ANNA COON Huntington Park, California	FERRIS JANE GREEN Portland
DOLORIS MAE DELONG Portland	EILEEN HEALY Worland, Wyoming

School of Home Economics—Continued

MARGARET CELIA HEINRICH Corvallis	GEORGIA CAROL PHILPOTT Coquille
LENORA HESSLER Dayton	MILDRED GEORGENE PITNEY Junction City
SUZANNE HOF Pasadena, California	MARGARET LOUISE PORTER Vancouver, Washington
MARY ELIZABETH HUNT Eugene	EVELYN GRACE POWELL Tyee
HELEN FLORENCE JACOBSON Portland	PATRICIA PRESTON Corvallis
ELLEN JARVINEN Astoria	DOROTHY ALICE PRICE Corvallis
FRANCES JENSEN Corvallis	HELEN REWA Portland
ROBERTA ALICE JOHNSON Portland	BERNADETTE RICHMOND Gardiner
NANCY PEARL KARR Portland	MAXINE RIGGS Portland
EMILY MAE KENNETH Astoria	LENA SANTORO Beaverton
ARVELLA ROSE KUBIN Salem	BIRNEY ODESSA SCHEUERMAN Vernonia
BARBARA ELIZABETH LARSON Marshfield	MARTHA SCHLAPKOHL Ontario
KATHRYN MAY LEGRAND Portland	RUBY MAE SCULLEN Corvallis
KATHLEEN JEAN McCRAE Monmouth	CATHERINE DORIS SIMMONDS Bonners Ferry, Idaho
ESTHER FRANCES McGREW Portland	VIRGINIA SPENCE Enterprise
JUNE MAY MARCH Corvallis	GERALDINE LENA SPICER Portland
MARGARET ETHEL MAXWELL Portland	MARGARET DE STEVENSON Bandon
MARY JANE MENIG Portland	NORMA MYRTLE STORLI Portland
LOIS ELAINE METCALF Portland	JEAN THOMPSON Corvallis
MARJORIE NOREEN METZGER Salem	MARIGENE TICHBORNE Portland
RUTH JOSEPHINE MITCHELL Grants Pass	LETTIE MARSH WARRINGTON Corvallis
ELIZABETH ANN NAYLOR Portland	MARGARET ROSA WASNER Portland
MARJORIE EMMA NISH Mikkalo	VELMA BERNICE WEAVER Corvallis
CONSTANCE BIRD NORTON Corvallis	JEAN MACKLIN WHITELAW Corvallis
EDNA ELLEN OTT Hermiston	MEREDITH GENE WILBER Portland
JEAN AVIS PAULSEN Astoria	DOROTHY MAE WITCHER Cottage Grove
ELINORE SHIELDS PENROSE Corvallis	CAROL LEE YOCUM Corvallis
	EVELYN PEARL YOKOM Mt. Vernon

Nursing Education

The names of students receiving baccalaureate degrees in nursing education from the University of Oregon Medical School through the State College are printed in the separate catalog of the Medical School.

School of Pharmacy

BACHELORS OF SCIENCE

PHILIP GULICK ACKERMANN Corvallis	CHARLES LELAND BECK Blackfoot, Idaho
WILMA MAXINE ARNOLD Corvallis	CLAIRE BOWEN Houlton
WAYNE BURNETT BANNISTER Athena	ELLIOTT R. BRAITHWAITE Portland

School of Pharmacy—Continued

ARTHUR RICHARD BREITENSTEIN Klamath Falls	JOSEPH YOSHIO KOMOTO Independence
ANNETT WILLIAMS BUDKE Corvallis	OMA MAY MCELROY McMinnville
JOHN HARTIG DENTON Ashland	RAYMOND PRINCE MCGREW Portland
WAYNE CARLILE FERGUSON Union	WILLIAM FULTON MURRAY Baker
GORDON WILLIAM HAACK Portland	ROBERT BROOKES SULLIVAN Portland
MARY PARMELEE HALL Clatskanie	EUGENE WESLEY WHITEHOUSE Lakeview
GEORGE EDWARD WHITMAN Klamath Falls	

Secretarial Science

BACHELORS OF SECRETARIAL SCIENCE

VIRGINIA BEATRICE ALBRIGHT Portland	MINNIE LEONA MOORE Rainier
JOHN ROBERT ALLGOOD, JR. Dallas	ALICE ELLEN MORRIS Lakeview
VIRGINIA LEOLA ALLISON Noti	HELEN WINIFRED MORRIS Waldport
DELBERT A. ANDERSON Pendleton	ELIZABETH JANE MULDRICK Baker
ANNE TERESA BARRY Lakeview	MARY LOUISE OLLIVER Albany
MELVA FAE BULL Summerville	CATHERINE MARIE OORTHUIS Corvallis
ONA MERTIE CARNINE Condon	HAZEL RAY PLUMMER Dallas
DOROTHY ANN DARLING Portland	JACK ARTHUR POULIN Salem
GENEVIEVE LUCY DEVANEY Corvallis	NORMAN HAROLD RANDS Portland
EDMUND JAMES DOOLEY Albany	WILLIAM ALEXANDER REYBURN, JR. Eugene
EDWIN ELLSWORTH EARP Albany	ROBERT PAUL SASSER Fossil
FRANCES LOUISE FREDERICKSON Corvallis	LYMAN EVERETT SEELY Woodburn
MAXINE ROSEMARY HENDRICHS Moro	RALPH SAMUEL SENDERS Albany
HAROLD DEWITT HIGGS Burns	RAYMOND FREDERICH SIEGENTHALER Portland
LOIS HOUT HOLLEY Klamath Falls	LENEVE MARIE SIMKINS Cottage Grove
LOUISE HOLZMEYER Dundee	ELEANOR MARGARET SNYDER Enterprise
MARGARET KASTER HUDSON Salem	MAXINE SWENSON Swishhome
EDNA MARGARET IAMS Corvallis	DOROTHY JEAN TRIPP Portland
NORMA MARGARET IAMS Corvallis	SYLVIA EDITH TURN La Grande
JAMES WALLACE KRUSE Portland	ALFRED NATHAN VOGT Eugene
MARIAN ADELINE LEININGER Corvallis	MIGNON ELIZABETH WALL Corvallis
PHYLLIS JEANETTE MCCARTY Marshfield	BARBARA ELIZABETH WATERMAN Corvallis
WALDA HARDING MASSEY Salem	ROSAMOND JANE WESTON Grants Pass

Honors and Awards, 1937-38

Senior Honor Students

(See page 73.)

- School of Science:* DOROTHY FRANCES REVELL, JOHN KEPLINGER FISHER, JOHN REUTER PERKINS, CLARA JANE CHAPMAN, WILFRID JOSEPH DIXON, THOMAS FRANCIS O'NEILL.
- School of Agriculture:* IVAN RAE BIERLY, ROBERT WILCOX, GERALD RAYMOND KUBIN, HARRY JAMES ENDICOTT, ELDEN DWAYNE YEOMAN, ELIZABETH KATHARINE LATHROP, TURNER HANKS BOND.
- School of Education:* HARRY EDWIN DAWSON, RUSSELL HOLCOMB GODARD, EVANGELINE MILNE, VIOLA MAE SMITH.
- School of Engineering:* HENRY CITO MEINERS, JAMES CHASE HOWLAND, VICTOR STUART CARSON, RUSSELL WHITTINGTON REVELL, HOLLY ADAMS CORNELL, ALF HUNDERE, MILAN KNEZEVICH, BRITT MAGRAW SMITH, GEORGE WRIGHT BENNETT, FRANK DOUGLAS MORGAN, PHIL R. BROWNELL.
- School of Forestry:* EUGENE GORDON TOWER, ERNEST POLLARD TAYLOR, PAUL OSMO TOLONEN, OSCAR HEINTZ, JR., SAM BERTRAM TAYLOR, ROY C. BRADY, CHARLES P. SAMSON.
- School of Home Economics:* ETHEL MARGARET MAXWELL, JEAN MACKLIN WHITELAW, FRANCES JENSEN, EMMA MAE DENYER, CONSTANCE M. NORTON, JOAN ORR, VALERIA ANNA COON, ROBERTA ALICE JOHNSON, LENORA HESSLER, KATHLEEN ASTON, MARY LOUISE COCKEFAIR.
- School of Pharmacy:* PHILIP GULICK ACKERMAN, MARY PARMELEE HALL.
- Secretarial Science:* RAYMOND FREDERICH SIEGENTHALER, EDNA MARGARET IAMS, HAZEL RAY PLUMMER, MINNIE LEONA MOORE, BARBARA ELIZABETH WATERMAN.
- Honor Graduates, Military Department:* RAYMOND FREDERICH SIEGENTHALER (Infantry Unit); JENE EARL MILLS, CHARLES P. SAMSON (Field Artillery Unit); HOLLY ADAMS CORNELL, STANLEY ROBERT KELLEY (Engineer Unit).

Scholarships and Fellowships

(See pages 88-91.)

- State Scholarships:* ESTHER ALINE, Lower Division; BOB ATHEY, Engineering; HOPE SHIRLEY BALLAGH, Lower Division; GLENDA LEE BARKER, Secretarial Science; GLADYS ETHEL BENNETT, Home Economics; ROBERT O. BERGER, Agriculture; FRANK BIASCA, Engineering; IVAN R. BIERLY, Agriculture; NORMA SHIRLEY BLACKBURNE, Lower Division; ELIZABETH BOECKLI, Home Economics; ROBERT M. BONNEY, Engineering; ELAINE BOWMAN, Education; HELEN BREDDING, Secretarial Science; ALMA BRONNER, Home Economics; KEITH STANLEY BUCKINGHAM, Agriculture; DELBERT BURKE, Education; LOUISE CAVAGNARO, Lower Division; CLIFTON CLEMENS, Engineering; CAROLINE COOK, Secretarial Science; DON COONS, Agriculture; DICK WINFIELD EBELING, Engineering; DOROTHY EVENDEN, Science; ORVAL FARANCE, Engineering; GLEN S. FAXON, Education; JOHN K. FISHER, Science; HUGH B. FLEMING, Lower Division; LAURENCE FOXFORD, Lower Division; JUNETTE FULLER, Secretarial Science; RUSSEL H. GODARD, Education; GRACE M. GRAMMS, Secretarial Science; JOHN D. GRAY, Secretarial Science; RAYMOND L. HACK, Pharmacy; MARY P. HALL, Pharmacy; WILLIAM LEWIS HALLMARK, Engineering; MAL HARRIS, Forestry; JEANNE HARTMAN, Education; PHILMORE HEINONEN, Pharmacy; LEROY INGRAM, Education; PAUL MILLER JOHNSTON, Engineering; ROBERT MERLE JONES, Engineering; URSULA KLIPSTEIN, Lower Division; CLARENCE KRAFT, Lower Division; VIVIAN A. KUDRNA, Secretarial Science; KENNETH W. LANGE, Engineering; JEAN LAWRENCE, Home Economics; CHUNG KWAI LUI, Graduate; JOHN A. MCCORMICK, Agriculture; MARY ELIZABETH MARSH, Home Economics; WINIFRED MARTIN, Home Economics; MARGARET E. MAXWELL, Home Economics; A. RICHARD MELIS, Agriculture; MARGARET M. MEYER, Home Economics; WILLIAM G. MEYER, Engineering; KEITH LEON MIKESELL, Engineering; CAL MONROE, Agriculture; GUY MONROE, Agriculture; DON E. MORGAN, Engineering; PAULINE MYERS, Home Economics; ELIZABETH PARKER, Education; JACK EDWARD PHILLIPS, Engineering; ROBERT PLANANSKY, Engineering; HAZEL R. PLUMMER, Secretarial Science; IRENE RASMUSSEN, Home Economics; DOROTHY F. REVELL, Science; MARIA RIDDERS, Lower Division; ALICE SCHLENDER, Secretarial Science; CHARLES P. SCHUMANN, Engineering; KENNETH E. SHETTERLY, JR., Forestry; LOIS FRANCES SHRINER, Secretarial Science; RAY SIEGENTHALER, Secretarial Science; ANSON HENRY SMITH, Forestry; JAMES SMITH, Lower Division; MARGARET ELLEN SMITH, Secretarial Science; LEE SPITZER, Engineering; JANE STIDD, Lower Division; ALICE FRANCES STILES, Agriculture; MARION N. TATOM, Secretarial Science; MARGARET TAW, Lower Division; LLOYD TIMONEY, Engineering; STUART WARREN, Engineering; FRANK L. WELLS, Engineering; AARON WIENER, Forestry; OWEN LLEWELYN WILLIAMS, Engineering; WAUNETA LEON WILSON, Secretarial Science.

Prizes and Awards

(See pages 91-93.)

- The Clara H. Waldo Prizes: Senior First Honor—MILDRED IRENE ETTER (Home Economics); JEAN MACKLIN WHITELAW (Home Economics); Honorable Mention—EMMA MAE DENYER (Home Economics); MARY PARMELEE HALL (Pharmacy).*
- Junior First Honor—DOROTHY LOUISE HARSTAD (Home Economics); Honorable Mention—CAROL CARNES (Education); LOIS ELIZABETH BROWN (Secretarial Science).*
- Sophomore First Honor—JULIA DUNCAN (Secretarial Science); Honorable Mention—DORIS AUTRY THOMPSON (Home Economics); JUNE ELIZABETH MORSE (Home Economics).*
- Freshman First Honor—JEANNE HARTMAN (Education); Honorable Mention—BETTY-SUE MCCREADY (Education); MARGARET LOUISE JOHANSON (Secretarial Science).*
- The Lipman Wolfe Prizes: Senior First Honor—FRANCES JENSEN (Home Economics); RAYMOND FREDERICH SIEGENTHALER (Secretarial Science); Honorable Mention—JAMES CHASE HOWLAND (Engineering); HOLLY ADAMS CORNELL (Engineering).*
- Junior First Honor—DELBERT WALTER BURKE (Education); Honorable Mention—CLYDE MARVIN WALKER (Forestry); FRANK ROBINS HENRY (Pharmacy).*
- Sophomore First Honor—LESTER COPENHAGEN (Engineering); Honorable Mention—WILLIAM CARL WEIR (Agriculture); LOIS ANNE MCWHORTER (Home Economics).*
- The Joseph H. Albert Prize: RUSSELL HOLCOMB GODARD (Education).*
- The Chi Omega Prize: HAZEL RAY PLUMMER (Secretarial Science).*
- The E. D. Ressler Memorial: BERNICE RUTH ELLE (Education).*
- Phi Sigma Scholarship Award: CLARA JANE CHAPMAN (Science).*
- The Drucilla Shepard Smith Prize: GLADYS ETHEL BENNETT (Home Economics).*
- Locey Athletic Award: JOHN LUDWIG WATTS (Education).*
- Tau Beta Pi Local Award: FRANK WILLIAM WOODFIELD; FRANK DOUGLAS MORGAN.*
- Sigma Tau Award: DONALD EARLE MORGAN.*
- Eta Kappa Nu Award: DONALD EARLE MORGAN; Honorable Mention—ROBERT STEPHEN HAMPTON; DEAN K. STEIDINGER.*
- Epsilon Pi Tau Award: HOWARD LAVERNE CORNUTT.*
- The American Institute of Chemical Engineers Awards: MILOSH POPOVICH (Junior); MARVIN WILLIAM WILSON (Sophomore); First Prize—(\$10.00) ALFRED TROMMERSHAUSEN—Second Prize—(\$5.00)—FRANK WILLIAM WOODFIELD—Third Prize—(\$2.50)—HAROLD RICHARD BARTEL.*
- The American Society of Civil Engineers Awards: First Prize—THOMAS NELSON CREACY; Second Prize—HOLLY ADAMS CORNELL.*
- The American Institute of Electrical Engineers Awards: First Prize—JACK IRVING HALL; Honorable Mention—VICTOR STUART CARSON.*
- The American Society of Mechanical Engineers Awards: First Prize—ALF HUNDERE; Second Prize—ELIOT ROOT PECK.*
- The Society of Automotive Engineers Prizes: First Prize—(\$25.00 in cash)—JOHN HALBERT BONER, LLOYD MILO LANDWEHR; Second Prize—(\$15.00 in cash)—BRITT MAGRAW SMITH; Third Prize—(Merchandise \$15.00)—ALLEN DUNBAR MCLEAN; Fourth Prize—(\$10.00 in cash)—HOWARD WAYNE CHRISTENSON.*
- The American Society for Metals Award: ELIOT ROOT PECK.*
- The Charles Lathrop Pack Forestry Prize: First Prize—GEORGE MATHEW HANSEN; Second Prize—ROY ELMGREN; Third Prize—LOUIS LISLE WALKER.*
- The Lee Scholarship: MARGARET LOUISE WEST.*
- The Omicron Nu Plaque: JEAN MACKLIN WHITELAW.*
- The Home Economics Prize: ALICE PEARL CUNNINGHAM.*
- The A. Grace Johnson Memorial Scholarship: MARGARET FERN BUMP.*
- The International Friendship Scholarships: (RUTH) TSING-MIN SUN.*
- The Oregon Home Economics Association Award: EVELYN MARIE LARSEN.*
- The Oregon Home Extension Council Scholarship: JULIA MARIAN BENNETT.*
- The Blumauer-Frank Scholarship: MARY PARMELEE HALL.*
- The Rotana Club Scholarship: MARGARET MAY BROWN.*
- The Goodwin Oriental Good Will Scholarship: HSI-HSUAN YU.*
- The Kappa Delta Pi Award: ELIZABETH PARKER.*
- The Women's Auxiliary O. S. P. A. Prize: ANNETTE WILLIAMS BUDKE.*
- The Lehn & Fink Medal: MARY PARMELEE HALL.*
- Daughters of the American Revolution Award: EMMA MAE DENYER.*
- Altrusa Award: PEARL ALBERT.*
- Mortar Board Senior Award: ARDYTHE WILSON.*

North Pacific Branch of the American Pharmaceutical Association Award: FRANK ROBINS
HENRY.

The Alpha Zeta Scholarship Cup: WILLIAM CARL WEIR.

J. A. Hanson Scholarship: ALLEN FRED MILLS.

Swift & Company Essay Award: DON H. TELFORD.

National and Regional Engineering Awards: Tau Beta Pi National Award: JAMES CHASE
HOWLAND.

The American Institute of Electrical Engineers District Award: Honorable Mention—
PETER ALBERT DEPAOLO.

Students, 1937-38

In the following lists, class and curriculum are designated as follows:

Class: fr, Freshman; so, Sophomore; jr, Junior; sr, Senior; gr, Graduate; sp, Special; and, Auditor.

Curriculum: A, Agriculture; AA, Architecture and Allied Arts; BAd, Business Administration (lower division); Bac, Bacteriology; Bot, Botany; Ch, Chemistry; CE, Civil Engineering; ChE, Chemical Engineering; E, Engineering; Ed, Education; EE, Electrical Engineering; Ent, Entomology; F, Forestry; G, Geology; H, Home Economics; IA, Industrial Arts; J, Journalism (lower division); LA, Landscape Architecture; LD, Lower Division (Liberal Arts and Sciences); M, Music (lower division); Mth, Mathematics; ME, Mechanical Engineering; P, Pharmacy; PE, Physical Education (lower division); Ph, Physics; Sc, Science; SS, Secretarial Science; Z, Zoology.

Students in Regular Session 1937-38

GRADUATE AND UNDERGRADUATE

Abbott, Cora Belle, H, fr.....	Seaside	Allen, Alfred Albert, F, so.....	Cottage Grove
Abbott, Forrest J., F, fr.....	Sargent, Neb.	Allen, Alicia Emeline, H, so.....	.....
Abe, Harry Fukuzo, Sc, so.....	Portland	.....	Los Gratos, California
Abelgore, Lois Annette, H, so.....	Corvallis	Allen, Don, E, fr.....	Portland
Abraham, Bettie Ann, SS, fr.....	Albany	Allen, Doris Jane, SS, fr.....	Wallowa
Abraham, Frank William, IA, so.....	Corvallis	Allen, Edward, A, fr.....	Hood River
Abraham, Woodrow Lee, LD, so.....	Corvallis	Allen, Frances Rose, H, so.....	Bend
Abrahamsen, George Lee, E, fr.....	Astoria	Allen, Gerald Hunter, E, so.....	Juntura
Ackerman, Philip G., P, sr.....	Corvallis	Allen, Hazel Anna, H, fr.....	Nehalem
Ackerson, Duane Wright, CE, sr.....	Milwaukie	Allen, Ivan Jefferson, F, fr.....	Monmouth
Adair, Clyde Walter, A, jr.....	Roseburg	Allen, John Winfield, CE, jr.....	Mill City
Adams, George, BAd, sp.....	Albany	Allen, Lagrand, EE, so.....	LaGrande
Adams, Herbert Gerald, A, so.....	Portland	Allen, Norman Philip, LD, fr.....	Portland
Adams, John Alexander, CE, jr.....	Portland	Allen, Owen, LD, fr.....	La Grande
Adams, Madalene Lorraine, P, so.....	.....	Allgood, James Dempsey, S, jr.....	Dallas
.....	Myrtle Creek	Allgood, John Robert, SS, sr.....	Dallas
Adams, Sue, LD, so.....	Portland	Allhands, Jr., Frank H., A, so.....	Portland
Adamson, Dorothy Fithian, H, fr.....	Lakeview	Allison, Chilton LaVoie, A, gr.....	Astoria
Adamson, Maurice Conrad, Ch, jr.....	Astoria	Allison, Grant William, F, jr.....	Portland
Adcock, Graydon M., F, jr.....	Yamhill	Allison, James B., A, so.....	Newberg
Addison, John Kenneth, CE, so.....	Lorane	Allison, Virginia Leola, SS, sr.....	Noti
Adkisson, Dale Elwood, A, fr.....	Boyd	Allison, William Andrew, CE, so.....	Hillsboro
Adkisson, Verona Agnes, H, jr.....	The Dalles	Almgren, Dean Arvid, A, so.....	Corvallis
Agan, Anna Tessie, H, gr.....	Manhattan, Kan.	Almgren, Mildred Frances, H, fr.....	Corvallis
Ager, Gloria Mavis, H, fr.....	Portland	Alnutt, Evelyn Anna, H, sr.....	Corvallis
Ager, Harold Weiler, ME, jr.....	Portland	Alphonse, Lucille Elizabeth, SS, fr.....	Portland
Ager, Helen Blanche, LD, so.....	Ashland	Alspaugh, Alton Emanuel, CE, sr.....	.....
Agnew, Beatrice Orcelia, SS, jr.....	Portland	.....	Myrtle Creek
Aikins, Paul Robert, A, so.....	Ashland	Alt, Inez Elizabeth, Ed, jr.....	Portland
Aitken, Herbert Christie, A, gr.....	.....	Ambrose, Jane, P, so.....	Missoula, Montana
.....	Kentville, Nova Scotia, Canada	Ames, Helen Bess, SS, fr.....	Astoria
Aitken, Melvin R., F, so.....	Garden Home	Ammer, Edward John, ChE, so.....	Portland
Aker, Jr., George Russell, LD, fr.....	.....	Amos, Howard Hildreth, ChE, so.....	Portland
.....	Myrtle Creek	Amos, Lawrence Connell, ChE, so.....	Portland
Albert, Pearl, Bac, sr.....	Portland	Andersen, Neil Edward, EE, jr.....	Bend
Albright, Virginia Beatrice, SS, sr.....	Portland	Andersen, Beth Carol, H, so.....	Portland
Aldrich, Helen, Z, sr.....	Seaside	Andersen, Betty Mariann, SS, fr.....	Portland
Aldridge, Elmo Ira, F, so.....	Vernonia	Andersen, Charles Lloyd, E, fr.....	Portland
Aldwell, Lea Roy, A, gr.....	Sonora, Texas	Andersen, Conrad Austance, Sc, sr.....	Cove
Alexander, Clare Frances, H, so.....	Philomath	Andersen, Darwin Keene, CE, sr.....	.....
Alexander, Harold Kenneth, A, fr.....	.....	.....	Grants Pass
.....	Pendleton	Anderson, Delbert A., SS, sr.....	Pendleton
Alexander, John MacGowan, A, jr.....	.....	Anderson, Doris I., H, so.....	Monmouth
.....	Pasadena, California	Anderson, Eleanor Elizabeth, SS, so.....	.....
Alexander, Lucian, F, so.....	Portland	.....	Portland
Alexander, Robert Wayne, LA, so.....	Corvallis	Anderson, Faurest Luther, F, fr.....	Hillsboro
Alexander, Robert William, SS, so.....	Portland	Anderson, Frank, A, so.....	Heppner
Aline, Donna Esther, LD, so.....	Eugene	Anderson, Gayle LeVine, E, fr.....	Grants Pass
Allegre, Dorothy Marie, H, so.....	Hood River	Anderson, Harlan Peter, E, so.....	Silverton

- Anderson, Hubert Waterbury, Sc, jr.....
Corvallis
- Anderson, Irene N., H, fr.....
Portland
- Anderson, James Robbie, ME, jr.....
Corvallis
- Anderson, Janet Alden, Ed, jr.....
Corvallis
- Anderson, Joe Raymond, A, jr.....
Ontario
- Anderson, John K., A, so.....
Ontario
- Anderson, John Russell, ChE, so.....
Portland
- Anderson, John William, A, so.....
Seaside
- Anderson, Kenneth Ward, CE, sr.....
Portland
- Anderson, Lillian Mae, H, so.....
Portland
- Anderson, Jr., Logan Ellsworth, Sc, sr.....
Cove
- Anderson, Louise Carolyne, H, fr.....
Heppner
- Anderson, Marian Lorraine, SS, fr.....
Portland
- Anderson, Martin James, ME, so.....
Seaside
- Anderson, R. A. Kenneth, CE, jr.....
Portland
- Anderson, Rognar F., A, jr.....
Colton
- Anderson, Ruth Sophie, Ed, jr.....
Portland
- Anderson, Theodore Lester, A, fr.....
Sherwood
- Anderson, Wallace Edward, F, so.....
Eugene
- Andrew, Jack T., LD, fr.....
Butte, Montana
- Andrew, William M., E, so.....
Portland
- Andrews, Azalea Frederica, SS, so.....
Elkton
- Andrews, Dorothy Ann, LD, fr.....
Glendale, California
- Andrews, Ella Melba, H, so.....
Eugene
- Andrews, Norman Wilson, A, fr.....
Ontario
- Andrews, Robert Vincent, ChE, sr.....
Portland
- Angell, Austin Willard, EE, sr.....
Portland
- Anliker, Lillian Louise, H, so.....
Goble
- Ansley, John Mackellar, E, fr.....
Portland
- Apperson, Robert Clifford, IA, so.....
Portland
- Appleby, Robert Walsh, F, so.....
Mt. Angel
- Appleton, William Harrington, E, fr.....
Simi, California
- Archibald, Fred, CE, so.....
Portland
- Arenz, Jr., George Clarence, CE, so.....
Portland
- Armand-Ugon, Nelly Ana Mirra, A, gr.....
Montevideo, Uruguay
- Armstrong, Malcolm, George, E, fr.....
Portland
- Arnell, Dick Paul, F, so.....
Portland
- Arneson, Martha Susanne, SS, so.....
Maplewood
- Arnold, Cosma Ovidia, H, sr.....
Portland
- Arnold, W. Maxine, P, sr.....
Corvallis
- Arnoldus, Robert Thermond, CE, so.....
La Grande
- Arnott, David Shires, IA, jr.....
Corvallis
- Arnspiger, Bertha Jane, Ed, so.....
Medford
- Arnspiger, Frances Elizabeth, H, sr.....
Medford
- Asai, Masami, LD, so.....
Hood River
- Asai, Taro, A, so.....
Hood River
- Asbahr, Max, A, so.....
Corvallis
- Asbahr, Nina E., H, so.....
Corvallis
- Ash, Brittain Henshaw, F, gr.....
Eugene
- Ashbaugh, Carroll DeLancey, BA, fr.....
Corvallis
- Ashbaugh, James Hawthorne, Bot, gr.....
Los Angeles, Calif.
- Ashcraft, Dean B., F, so.....
Talent
- Ashcraft, Kent Norman, Ed, fr.....
Talent
- Ashton, Helen Gertrude, Ed, jr.....
Toledo
- Astleford, Paul, A, so.....
Newberg
- Aston, Kathleen, H, sr.....
Portland
- Athey, Bob, E, fr.....
Mt. Vernon
- Atkins, Joseph Leicester, F, so.....
Portland
- Atkins, Melburn R., F, so.....
Central Point
- Auld, Philip Leroux, LD, so.....
Corvallis
- Aungst, Raymond Charles, ChE, jr.....
Baker
- Ausland, Vivian Eleanor, LD, fr.....
Grants Pass
- Averill, Beth, H, fr.....
Corvallis
- Avery, Richard Stewart, A, fr.....
Corvallis
- Axelsen, Carl Alfred, A, so.....
Portland
- Aydelott, Elvin Arthur, P, fr.....
Garibaldi
- Ayers, William Robert, E, so.....
Oakland, Calif.
- Aylesworth, Howard Clarence, Ed, jr.....
Corvallis
- Aylesworth, Lawrence Wray, A, fr.....
Gresham
- Bachmayr, Georg Von, A, sp.....
III Streicherg 7 Vienna, Austria
- Backe, Gordon J., CE, so.....
Salem
- Baer, Robert Oliver, ME, so.....
Milwaukie
- Bailey, Bonnie Jean, LD, so.....
The Dalles
- Bailey, Bryson R., P, so.....
Forest Grove
- Bailey, Burns Thomas, A, fr.....
Blitzen
- Bailey, Bur Maurice, EE, jr.....
Portland
- Bailey, Dan Valor, ME, so.....
Corvallis
- Bailey, Donald Withers, Ch, sr.....
The Dalles
- Bailey, Frank Edward, LD, fr.....
Corvallis
- Bailey, Gordon, A, jr.....
Portland
- Bailey, Jack Raymond, A, so.....
The Dalles
- Bailey, Leeds C., A, so.....
Blitzen
- Bailey, Richard Burke, ChE, so.....
Portland
- Bailey, Richard Charles, LD, fr.....
Corvallis
- Bailey, Robert Leonard, SS, so.....
Springbrook
- Bailie, Dorothy Harriett, Ed, sr.....
Klamath Falls
- Bain, Barbara Jane, LD, so.....
Portland
- Bain, Betty Ann, LD, fr.....
Portland
- Baker, Anna Gertrude, H, sr.....
Bend
- Baker, Dwight Irwin, ME, sr.....
Gresham
- Baker, Edith, Sc, sr.....
Home
- Baker, Ned Bradbury, Ch, jr.....
Marshfield
- Baker, Richard George, F, so.....
Hood River
- Baker, Robert Edward, LD, so.....
The Dalles
- Baker, Robert Marsh, ChE, so.....
Hood River
- Baker, Shirley Joan, LD, fr.....
Portland
- Baldock, Robert Marchant, CE, so.....
Salem
- Baldwin, Blanche, LD, fr.....
Corvallis
- Baldwin, Gertrude Frances, LD, fr.....
Corvallis
- Baldwin, Jack, Ed, fr.....
Woodburn
- Baldwin, Peggy, LD, so.....
Hood River
- Baldwin, Sereno James, F, fr.....
Salem
- Bales, Joan Eudora, H, so.....
Wallowa
- Ballagh, Hope Shirley, LD, fr.....
St. Helens
- Bain, Barbara, LD, so.....
Portland
- Bain, Betty Ann, LD, fr.....
Portland
- Balsiger, Adele Margaret, SS, so.....
Portland
- Balsiger, Eston Elmer, BA, fr.....
Klamath Falls
- Bandy, Orville L., LD, so.....
Corvallis
- Banfield, Ernest Eldon, Bac, so.....
Portland
- Banks, Jack Ralph, F, fr.....
Portland
- Bannister, Walter Arthur, A, fr.....
Athena
- Bannister, Wayne Burnet, P, sr.....
Athena
- Barber, Donald Cameron, A, fr.....
Marshfield
- Barber, Joe L., A, so.....
The Dalles
- Barber, Rex Theodore, A, so.....
Culver
- Barclay, William John, EE, sr.....
Portland
- Barker, Glenda Lee, SS, fr.....
Marshfield
- Barkley, Robert Orville, F, fr.....
Chiloquin
- Barmettlor, Melvin Lee-Roy, ME, fr.....
Portland
- Barnes, Dean Warren, E, fr.....
Willamette
- Barnes, Norman Perry, LD, so.....
Willamette
- Barnes, Robert Francis, E, fr.....
Bend
- Barnes, William Sherman, F, jr.....
North Bend
- Barock, Betty, B., SS, fr.....
Portland
- Baron, Loyd Carl, A, so.....
Newberg
- Barron, Re Henderson, A, so.....
Corvallis
- Barron, Robert McLeod, F, so.....
Corvallis
- Barry, Anne Teresa, SS, sr.....
Lakeview
- Barry, Ed Merein, F, fr.....
Marshfield
- Barry, Elizabeth Veronica, SS, so.....
Lakeview
- Barry, Phil Jeremiah, A, E, fr.....
Lakeview
- Bartel, Harold Richard, ChE, jr.....
Portland
- Bartell, Albert Odeen, Sc, sr (G).....
Portland
- Bartell, Virginia Cadence Lee, Ed, so.....
Roseburg

- Blosser, Jack H., A, so.....Hubbard
 Blow, Grace Hayward, Ch, gr.....Corvallis
 Blundell, Percy Ronald, LD, so.....Salem
 Boak, Melvin Ernest, A, sr.....Bandon
 Boak, Ralph Harold, BA, so.....Bandon
 Boeck, Max Mark, ChE, gr.....Portland
 Boe, Arthur H., P, so.....Parkdale
 Boeckli, Elizabeth Hedwig, H, fr.....Portland
 Boegli, Willis Claire, A, gr.....Corvallis
 Boehi, Harold Samuel, A, sr.....Milwaukie
 Boehm, Clyde Harry, P, so.....Salem
 Boggess, Will Lindsay, A, so.....Conoga Park, Calif.
 Bogner, Charles, A, so.....Lakeview
 Bohle, Loren Wilton, LD, so.....Lebanon
 Boire, Leo Matthew, A, so.....Portland
 Bold, Ivan Harlan, Ed, fr.....Bonanza
 Boldon, Bruce Byron, A, fr.....Corvallis
 Bolinger, Duis Donald, Ph, gr.....Corvallis
 Bolter, Arthur, A, jr.....Hinsdale
 Bolter, Milton LaVelle, E, fr.....Monmouth
 Bolton, Anna Jean, SS, so.....The Dalles
 Bolton, Betty Jane, H, so.....The Dalles
 Bolton, Bonnie Jane, Ed, sr.....Corvallis
 Bolton, Wilbur Wesley, BA, fr.....Palo Alto, Calif.
 Bond, Turner Hans, A, sr.....La Grande
 Bond, William Merrill, F, so.....Portland
 Bone, Elizabeth Jeanne, H, so.....Portland
 Boner, John Halbert, ME, sr.....Los Angeles, Calif.
 Bonney, Robert Milton, E, fr.....Silverton
 Boomer, Raymond Lester, A, so.....Pendleton
 Booth, Frederick Hoefflein, A, so.....Eugene
 Booth, Merrie Edith, LD, fr.....Pasadena, Calif.
 Booth, Robert Roy, F, fr.....Eugene
 Boothe, Janice Irene, H, so.....Santa Maria, Calif.
 Borger, Ray C., ME, jr.....Portland
 Borin, Jim Oscar, SS, fr.....Portland
 Borland, Roberta, SS, fr.....Grants Pass
 Boswell, Frances, SS, so.....Ontario
 Bosworth, Phoebe Anna, SS, jr.....Corvallis
 Bothamley, William Edward, A, so.....North Hollywood, Calif.
 Botsford, Jean Anna, H, so.....Portland
 Bourne, Jack Pressdee, A, fr.....Portland
 Bowe, Gilbert Mendenhall, F, jr.....Portland
 Bowen, Claire, P, sr.....Houlton
 Bowen, Lewis Angell, A, sr.....Portland
 Bowers, Erma Iva, H, fr.....Corvallis
 Bowlby, Fred Howard, A, sr.....Cornelius
 Bowles, Edna, LD, fr.....Albany
 Bowman, Edith Montana, SS, so.....Scio
 Bowman, Flora Jean, G, jr.....Prineville
 Bowman, Rae Elaine, Ed, fr.....Prineville
 Boyd, Donald Robert, F, jr.....Portland
 Boyd, Iris Vinita, SS, fr.....Milwaukie
 Boydell, Ethel Mary, SS, jr.....Nyssa
 Boyington, Mary Elizabeth, SS, so.....Astoria
 Boyland, Harold Albert, LD, so.....Trinidad, Colo.
 Boyle, Margarite, Sc, sr.....Medford
 Boyles, Helen Ione, LD, fr.....Forest Grove
 Boynton, Mary Alys, SS, fr.....Eddyville
 Boynton, Phyllis (Billie) Gene, LD, fr.....Glendale, Calif.
 Boyt, John Petroff, E, fr.....Independence
 Bracchi, Robert Roy, E, fr.....Portland
 Brack, Robert Arnold, F, fr.....Pendleton
 Braden, Frances Leigh, H, so.....Portland
 Brady, Roy C., F, sr.....Silverton
 Brady, Thomas Francis, ME, so.....Portland
 Brainard, Fay Alvin, E, fr.....Marshfield
 Brainard, Paul Lynley, ME, jr.....Marshfield
 Braithwaite, Elliot R., P, sr.....Portland
 Brakke, Richard Thorburn, E, fr.....St. Helens
 Braman, Carl A., F, so.....Corvallis
 Bramwell, Lindon Howard, P, so.....Corvallis
 Brand, Earl Davies, IA, fr.....Roseburg
 Brandeberry, M. Ruth, LD, fr.....Albany
 Brandhorst, Marguerite LaRouche, LD, fr.....Corvallis
 Brandis, John Sebastian, F, sr.....Seattle, Wash.
 Brandon, Dorothy Irene, H, jr.....Corvallis
 Brandon, Margaret Eileen, H, fr.....Corvallis
 Branson, Philip Forrest, A, so.....Lakeview
 Branson, William Pearl, F, so.....Eugene
 Brantner, John, A, so.....Portland
 Branton, Eileen, Ed, sr.....Corvallis
 Brechenridge, Clara Marie, SS, fr.....Hood River
 Breeding, Helen Elizabeth, SS, fr.....Pendleton
 Breeding, Wilma Cathryn, SS, fr.....Pendleton
 Breitenstein, Arthur Richard, P, sr.....Klamath Falls
 Brennan, Audrey Patricia, H, so.....Portland
 Brenner, Laura T., SS, so.....Portland
 Bressie, Elinor Marie, H, so.....Portland
 Bressler, Genevieve Mildred, H, so.....Cottage Grove
 Brettauer, Alfred Erwin, A, sp.....Meliele, Switzerland
 Breuer, Earl M., A, so.....Myrtle Point
 Breuer, Paula Mae, H, sr.....Myrtle Point
 Brewster, Richard Leslie, ChE, fr.....Corvallis
 Bridenstine, Francis Donulus, F, gr.....Portland
 Bridges, Joyce Elaine, LD, fr.....Oakland
 Briedwell, Jr., Glenn L., EE, so.....Silverton
 Briggs, Dale William, PE, fr.....Freewater
 Brigham, Martha Marie, H, so.....Portland
 Brill, Arthur Thaddeus, ME, so.....Portland
 Brinkman, Phil M., IA, jr.....Portland
 Brissenden, Clarence Edwin, A, so.....Multnomah
 Britton, Marjorie Florence, H, sr.....Portland
 Britton, Marjory Lorraine, SS, fr.....Klamath Falls
 Broadwater, Kenneth Furman, SS, so.....Corvallis
 Broadwater, Robert James, ChE, so.....Corvallis
 Bronleewe, Tom Gerald, ME, jr.....Hillsboro
 Bronner, Alma Marie, H, fr.....Portland
 Bronson, Verne Dee, F, fr.....Harrisburg
 Brooks, George Herbert, F, so.....Corvallis
 Brostrom, Richard Davis, F, fr.....Oakland, Calif.
 Broten, George Arthur, Ed, so.....Portland
 Brougher, Robert Wasser, F, jr.....Portland
 Brower, Gerald Loren, E, fr.....Milton
 Brown, Barton Hoyt, F, jr.....Roseburg
 Brown, Bette Anne, Ed, jr.....Corvallis
 Brown, Beuna Fanchon, Ed, gr.....Monroe
 Brown, Donald Raymond, CE, jr.....Healdsburg, Calif.
 Brown, Duane Joshua, F, so.....Dexter
 Brown, Eleanor Marie, H, fr.....Marshfield
 Brown, Hollis, CE, so.....Baker
 Brown, James Archie, A, fr.....Portland
 Brown, Kenneth Canfield, LD, so.....San Jose, Calif.
 Brown, Lois Elizabeth, SS, jr.....Corvallis
 Brown, Margaret May, H, so.....Corvallis
 Brown, Paul C., E, fr.....Heppner
 Brown, Philip Gordon, E, fr.....Hood River
 Brown, Robert Clay, F, fr.....Sheridan
 Brown, Robert Wesley, ME, sr.....Baker
 Brown, Stuart Morgan, CE, fr.....Portland
 Brown, Will Hartley, A, sr.....Roseburg
 Brown, William Ephram, AA, fr.....Eddyville
 Brown, William Foraker, Ed, sr.....Portland
 Browne, Chelsea Henry George, F, fr.....Terrebonne
 Brownell, Phil R., EE, sr.....Salem

- Brownell, Robert Marion, ChE, so.....Salem
 Browning, Jeannette Davis, Ed, sr.....
Kauanakakai Molokai, T. H.
 Bruechert, William Edwin, Ed, jr.....
Jennings Lodge
 Brugger, Arthur William, A, jr.....Portland
 Bruinsma, Helen, SS, so.....Amity
 Brun, Rinaldo, ME, so.....Klamath Falls
 Brundage, Albert Carter, F, fr.....Portland
 Brundage, Mary Elizabeth, SS, fr.....Portland
 Bruner, Eleanor Inez, H, fr.....Dairy
 Bruns, Robert Albert, CE, so.....Sandy
 Brunson, Helen Leslie, H, sp.....Maplewood
 Brush, Leonard Gilmore, LD, fr.....Albany
 Bruyer, Helen Mary, SS, fr.....Corvallis
 Bubenik, Miles Charles, E, fr.....Milwaukie
 Buchanan, Ernest Eugene, ME, so.....Corvallis
 Buchanan, Gale Roland, F, fr.....Portland
 Bucher, Sherman Datus, F, fr.....Portland
 Buck, Cecil Samuel, ChE, sr.....Eugene
 Buck, Elton Martin, E, fr.....Grants Pass
 Buck, Stanley Norris, A, so.....Portland
 Buckingham, Frank Durward, A, fr.....
Monroe
 Buckingham, Keith Stanley, A, fr.....Monroe
 Buckley, Raymond Cecil, A, jr.....Newberg
 Buckner, Paul T. E, fr.....Portland
 Budke, Annette Williams, P, sr.....Corvallis
 Budke, Beulah Katherine, SS, so.....Dallas
 Budlong, Clara Ann, A, jr.....Whittier, Calif.
 Buehner, Philip, E, so.....Portland
 Buker, Jack Calvin, F, fr.....Portland
 Bull, Melva Fae, SS, sr.....Summerville
 Bullard, William Ellsworth, P, so.....
Gold Beach
 Bullis, Lee Spencer, SS, fr.....Medford
 Bullis, Robert Orland, A, so.....Corvallis
 Bullwinkle, Jr., Ben, ME, so.....Portland
 Buman, James Beyer, P, so.....Portland
 Bump, Dorothy Bersha, H, fr.....Brooks
 Bump, Margaret Fern, H, jr.....Portland
 Bundy, Dean Floyd, F, fr.....Powers
 Bunker, Anna Burnette, SS, jr.....Corvallis
 Bunn, Donna Marion, LD, fr.....Corvallis
 Bunnell, Wendell Ellis, F, jr.....Portland
 Bunton, Donna Louise, H, so.....
Caldwell, Idaho
 Burchard, Lois I., H, sr.....Corvallis
 Burchell, Edward L., Ed, jr.....Corvallis
 Burck, Ellen, H, so.....Portland
 Burco, Nancy, SS, fr.....Portland
 Burford, James William, F, fr.....Portland
 Burgess, James D., LD, fr.....Toledo
 Burgess, Lloyd Albert, CE, jr.....Redmond
 Burggraf, Eleanor Lorene, H, so.....
Lowden, Wash.
 Burghardt, Althea Fay, AA, so.....Boring
 Burke, Delbert Walter, Ed, so.....Beaverton
 Burke, Isabel Marie, SS, jr.....Portland
 Burkholder, Kenneth Arthur, F, sr.....Portland
 Burks, Samuel David, CE, so.....Bonneville
 Burns, Dale E., F, jr.....Corvallis
 Burns, Henry Lee, ChE, sr.....Corvallis
 Burns, Jr., John Stuart.....Corvallis
 Burns, William Nelson, Sc, sr.....Corvallis
 Burr, Ferrill Olsen, F, so.....Susanville, Calif.
 Burr, Frank Roberts, SS, jr.....Portland
 Burris, Mary Ethel, H, so.....Chanute, Kan.
 Burrows, Georgia Phyllis, SS, so.....Portland
 Bursik, John Charles, A, so.....Roseburg
 Burch, Carl Floyd, SS, so.....Portland
 Burton, Charles Albert, Ed, fr.....
Klamath Falls
 Burton, Clifford Woodrow.....Albany
 Burton, Elsie Joanne, H, so.....Modoc Point
 Burwell, Jr., David Clark, F, fr.....
East Berlin, Conn.
 Busch, John Elliott, A, so.....Oregon City
 Busch, Keith Nelson, E, fr.....Hillsboro
 Busenbark, Kathryn, LD, fr.....Roseburg
 Bushnell, Vernon Clifford, A, gr.....Corvallis
 Busse, Margaret Bernhardine, SS, jr.....
Corvallis
 Butcher, Bernard Lee, A, so.....
Canoga Park, Calif.
 Butcher, Robert Oliver, EE, jr.....
Lovell, Wyo.
 Butler, Alfred O., SS, so.....Portland
 Butler, Dale Ozburn, Ed, so.....Seaside
 Butler, Jesse Nichols, P, jr.....Corvallis
 Butler, Juanita Ellen, P, so.....
San Luis Obispo, Calif.
 Butler, Marlow Dole, EE, so.....Independence
 Butler, Orval G., LD, so.....Milwaukie
 Butler, Robley Allen, ChE, jr.....Bull Run
 Butte, Dorothy Maxine, H, so.....Salem
 Buxton, Don L., A, jr.....Corvallis
 Buxton, Florence Jean, H, fr.....Portland
 Buxton, Ivah Louise, Ed, so.....Portland
 Buxton, Robert Edward, IA, sr.....Corvallis
 Byers, Irwin Lyle, ME, so.....Wendling
 Byington, Kenneth Frances, ChE, so.....
Philomath
 Byrd, Alvin Howard, F, so.....Sandy
 Byrd, Maurice Melvin, BA, fr.....Sandy
 Cabanag, Arcade B., A, so.....Eugene
 Cabanis, Beverly Rowland, Ed, jr.....
Pine Ridge
 Cadmus, Walter George, A, so.....Portland
 Cady, Ralph Harlin, P, fr.....Arlington, Wash.
 Caffall, Rex, F, fr.....Portland
 Cahill, James, A, jr.....Adel
 Cahill, Maxine, H, fr.....Tillamook
 Cain, Maxine Virginia, SS, fr.....Westlake
 Cairns, Mary Josephine, H, so.....Portland
 Caisse, Kenneth Michael, LD, fr.....Salem
 Calderwood, Ruth G., H, fr.....Warrenton
 Caldwell, Gale Gourley, E, fr.....Albany
 Caldwell, William Ardel, E, jr.....Milton
 Calhoun, James Franklin, J, fr.....Portland
 Callahan, Jr., Wheeler, A, so.....Portland
 Callahan, Joe, F, sr.....Alturas, Calif.
 Callaway, James Ralph, A, sr.....
Long Beach, Calif.
 Callaway, Lenora Mae, LD, so.....Corvallis
 Cameron, Elizabeth Alice, H, gr.....Corvallis
 Cameron, Evelyn Marie, SS, so.....
Multnomah
 Cameron, Marjorie Molly, SS, fr.....
Grants Pass
 Campbell, Albert, A, so.....Prairie City
 Campbell, George Otto, Ed, gr.....Portland
 Campbell, Mary Jane, H, so.....Portland
 Campbell, Robert Clinton, E, fr.....Portland
 Campbell, Robert Greenlee, F, fr.....Fairview
 Campbell, Jr., Robert John, ChE, jr.....
Enterprise
 Campbell, Walter Howard, F, sr.....
Prairie City
 Canada, Alfred Heston, EE, so.....Portland
 Carey, Leland Ralph, SS, so.....Portland
 Carkin, Vernon Eugene, E, fr.....Salem
 Carl, H. Gordon, ChE, fr.....Salem
 Carl, Manton Arthur, A, jr.....Hubbard
 Carl, Marion Eugene, ME, sr.....Hubbard
 Carl, Wallace John, A, so.....Arago
 Carlich, John Lewis, F, sr.....Portland
 Carlin, Herbert Deyo, Ed, so.....Corvallis
 Carlson, Carl O. L., P, fr.....Portland
 Carlson, Clifford Victor, E, fr.....
Winchester Bay
 Carlson, Howard Roger, IA, so.....Portland
 Carlson, John Eldred, LD, fr.....Baker
 Carlson, Joyce A., H, fr.....Ione
 Carlson, Lloyd Astor, F, fr.....Oakland
 Carlson, Robert F., F, sr.....Corvallis
 Carmody, Dennis Michael, ChE, fr.....Portland

- Carnahan, Clyde Benjamin, ChE, jr.....
 Roseburg
 Carnegie, John Archibald, F, jr..... Albany
 Carnegie, Orris Alvin, CE, sr..... Albany
 Carnes, Carol, Ed, jr..... Roseburg
 Carnes, Howard Francis, ME, sr..... Roseburg
 Caraine, Ona M., SS, sr..... Condon
 Carothers, Bette, H, so..... Corvallis
 Carothers, Norma Elizabeth, SS, fr.....
 Oregon City
 Carpenter, Darwin Kirk, LD, fr..... Monroe
 Carruth, Donald Oliver, EE, so..... Portland
 Carson, Harry, P, fr..... Salem
 Carson, Homer Eugene, F, sr..... Corvallis
 Carson, Jane Elenore, SS, fr..... Portland
 Carson, Victor S., EE, sr..... Corvallis
 Carter, Milton Joseph, A, jr..... Pendleton
 Carter, Myrtle Mae, H, fr..... Corvallis
 Carter, Robert Stuart, LD, so..... Portland
 Case, Jeffrey Burton, AA, fr..... Portland
 Cason, Harold Gordon, BAD, fr..... Vernonia
 Carching, Helen Marie, H, fr..... Roseburg
 Cate, Dorthea, SS, fr..... Redmond
 Cate, Stewart J., P, so..... Baker
 Catlin, Merle, LD, so..... Portland
 Catts, Vernon C., LD, so..... Woodburn
 Causey, George Bigham, LD, so..... Salem
 Cavanaugh, Louise Pearl, LD, fr..... Portland
 Cavanagh, Jerry Joseph, CE, so.....
 Oregon City
 Cavanaugh, Richard Benedict, F, fr.....
 Los Vegas, New Mexico
 Cellers, Stanley William, A, so..... McMinnville
 Chadwick, Donald Littrell, A, so..... Portland
 Chadwick, Shirley Belle, H, so..... Portland
 Chamberlain, Keith Marion, A, gr..... Mosier
 Chamberlin, Carl Hal, CE, sr..... Portland
 Chamberlin, Mary Hope, H, sr..... Corvallis
 Chambers, Dorothy Bridget, H, fr.....
 Oregon City
 Chambers, Douglas William, A, fr..... Salem
 Chandler, Betty Mildred, H, sr..... Eugene
 Chandler, Charles Herbert, A, fr..... Baker
 Chaney, Davis Ribble, IA, fr..... Coquille
 Chaney, Howard, LD, so..... Marshfield
 Chaney, Richard O., LD, fr..... Corvallis
 Chapman, Clara Jane Bot, sr..... Portland
 Chapman, Helen Elizabeth, AA, so..... Portland
 Chapman, Ralph Aubrey, LD, so..... Portland
 Chapman, Wayne Ellis, IA, fr..... Long Creek
 Charboneau, Melvin, LD, fr..... Portland
 Charleston, Ralph Norman, F, so..... Portland
 Charters, Clyde Raymond, EE, so..... Portland
 Chase, Alton P., A, so..... Portland
 Chase, Eugene, E, fr..... Dufur
 Chase, Janet LaVelle, H, fr..... Eugene
 Chatfield, Hope Hamilton, Jr, sr..... Portland
 Chausse, Burnette Paul, EE, jr.....
 Pocatello, Idaho
 Cheatham, Mildred Janet, SS, fr.....
 Klamath Falls
 Chedelin, Vernon Hendrum, ChE, gr.....
 Milwaukie
 Chellis, Lawrence True, E, sr..... Corvallis
 Chenoweth, Oscar Ivan, L, D, so.....
 McMinnville
 Cherry, Howard LaGrande, Sc, sr..... Corvallis
 Cherry, Jean Loraine, H, so..... Corvallis
 Chesbrough, Warren Templeton, F, fr.....
 Greenacres, Wash.
 Chi, Hsiu Hui, Bot, gr..... Shantung, China
 Chisholm, Howard Langford, A, so..... Astoria
 Chivers, Harold Joseph, SS, fr..... Portland
 Chow, Yeu Wing, A, gr..... Canton, China
 Chown, Frank Dewey, SS, fr..... Portland
 Christensen, Allen, LD, fr.....
 Spanish Fork, Utah
 Christiansen, Alma, BAD, fr..... Portland
 Christensen, Jack Walter, A, so..... Marshfield
 Christensen, Merle Loring, F, so..... Marshfield
 Christensen, Rose Eunice, H, so..... Marshfield
 Christensen, Chester Lee, A, so..... Heppner
 Christenson, Howard Wayne, ME, sr.....
 Portland
 Churchman, Maxine Adele, LD, fr..... Corvallis
 Claggett, Alvin Boyd, A, jr..... Salem
 Clampitt, Lorraine Barbara, H, so.....
 Milwaukie
 Clark, Bernard Dale, Ed, jr..... Corvallis
 Clark, Bill Irving, A, so..... Burbank, Calif.
 Clark, Darwin Henry, F, so..... Bend
 Clark, Day Fairfield, BAD, fr..... Portland
 Clark, Dorothy Grace, H, fr.....
 Claremont, Calif.
 Clark, Earl Henry, F, fr..... Oakridge
 Clark, Elgie Margaret, H, so..... Portland
 Clark, Frank Harrison, LD, fr..... Portland
 Clark, Gerald Dale, CE, jr..... Corvallis
 Clark, Grace Catherine, LD, so..... Corvallis
 Clark, Harland H., F, so..... Murphy
 Clark, Harry Edwin, A, jr..... Dayton
 Clark, Jessie Lorraine, H, fr..... Murphy
 Clark, Joseph Frank, F, so..... Portland
 Clark, June Joan, H, so..... Portland
 Clark, Lester Walter, ChE, fr..... Dayton
 Clark, Marguerite Florence, H, fr.....
 Hood River
 Clark, Marie Sarah, SS, so..... Freewater
 Clark, Marion Rose, LD, so..... Portland
 Clark, Prosser E., A, sr..... Portland
 Clark, Robert J., F, fr..... Gold Hill
 Clark, Robert LaGrande, A, sr..... Portland
 Clark, Robert Ralph, A, gr..... Corvallis
 Clark, Rodney, Arthur, EE, so..... Corvallis
 Clark, Virgel Leroy, F, fr..... Gold Hill
 Clark, William Felton, P, fr..... Corvallis
 Clarke, Bill, BAD, fr..... Portland
 Clarke, Flora Kelsie, SS, so..... Corvallis
 Clary, Nanette Elizabeth, SS, fr..... Portland
 Alaska, Hortense Margaret, H, so..... Eugene
 Clasper, Matthew, A, jr..... Portland
 Classen, Aloysius Joseph, ChE, so..... Stayton
 Claterbos, Jr., Harry Louis, E, fr..... Coquille
 Clausen, Cornelia, SS, so..... Broadbent
 Claussen, Frederick Betz, EE, sr..... Portland
 Clay, Victor S., ME, so..... Harrisburg
 Cleator, Betty Bertrand, AA, jr..... Portland
 Cleghorn, Elizabeth, LD, so..... Klamath Falls
 Clemens, Arthur Benjamin, ME, so..... Salem
 Clemens, Clifton T., IA, sr..... Corvallis
 Clemmons, Arlene Nada, Ed, so..... Hood River
 Clemmons, Frank, BAD, so..... Hood River
 Clemmons, Howard Harold, SS, fr.....
 Hood River
 Clemons, Cecil Fay, E, fr..... Athena
 Cleveland, Anson Henry, A, fr..... Corvallis
 Cleveland, Wendell Howard, A, fr..... Heppner
 Clevenger, Scott Philip, A, so..... Terrebonne
 Clifford, Enid Claudine, Ed, so..... Portland
 Cline, Ethel Anita, Ed, jr..... Portland
 Clinton, Homer William, ChE, so..... Corvallis
 Clinton, Leland Jack, F, jr..... Coquille
 Cloake, Wallace Henry, EE, so..... Roseburg
 Coates, William Stanley, A, so..... Tillamook
 Coats, Ida Margaret, H, so..... Rufus
 Coble, Quentin R., E, fr..... Sherwood
 Cochran, Joanna, H, so..... Oregon City
 Cockran, Louis Samuel, A, fr..... Corvallis
 Cochran, Rosemary, H, fr..... Corvallis
 Cockefair, Mary Louise, H, sr.....
 Madison, Wis.
 Cockrum, Harry Gus, A, so..... Portland
 Cody, Charles Ernest, LD, sp..... Corvallis
 Coe, Everett Lee, E, fr..... Corvallis
 Coe, George Robert, Bot, sr.....
 Sacramento, Calif.
 Cofer, Howard Carlos, A, so..... Portland
 Cole, James Arthur, ME, so..... Salem

- Curry, Delbert William, A, fr.....Flora
 Curtiss, Frederic Deaver, LD, so.....Portland
 Cutlip, Lorenzo Gordon, A, fr.....North Bend
- Daggett, William Guy, LD, so.....Gladstone
 Dahl, Harold Anthony, F, gr.....Troutdale
 Dahl, Kenneth Ward, A, so.....Silverton
 Dailey, Wilbert Francis, F, so.....Reedsport
 Dallaire, Mary Delphine, H, fr.....Medford
 Dallas, Catherine Louise, H, jr.....Salem
 Damerell, Woodrow, F, sr.....La Grande
 Dana, Roger Ernest, ChE, so.....Corvallis
 Danforth, Alan Haskell, Ed, so.....
 Stanford Univ., Calif.
- Daniel, LaMonte Elliot, E, fr.....Portland
 Daniel, Jr., William Joseph, A, so.....Portland
 Daniels, Harold Alec, EE, jr.....Portland
 Danielson, Ephraim Alfred, A, gr.....
 North Platte, Neb.
- Dannen, Eugene V., A, jr.....Shedd
 Dannen, Marshall Wayne, A, so.....Shedd
 Darby, James Denman, ChE, sr.....Roseburg
 Darley, Lloyd P., E, gr.....Madoel, Calif.
 Darling, Charles Mortimer, F, so.....Tiernan
 Darling, Dorothy Ann, SS, fr.....Portland
 Darnielle, Patricia Arlene, SS, fr.....
 The Dalles
- Darst, John Paul, P, so.....Corvallis
 Dasch, Carol Geneva, H, jr.....Salem
 Dasch, Helen Eleanor, H, fr.....Salem
 Dasch, Jack C., F, fr.....Salem
 Davey, Russell Benjamin, F, jr.....Salem
 David, Marvin Curtis, F, so.....Portland
 Davidson, Louise Andonia, SS, fr.....Monroe
 Davidson, Richard Hector, A, jr.....
 Alhambra, Calif.
- Davidson, Robert Harley, A, fr.....Shedd
 Davies, Jerald M., ChE, so.....The Dalles
 Davies, Kenneth Gordon, AA, fr.....Portland
 Davis, Allyn Taylor, LD, sp.....Portland
 Davis, Alvah M., A, fr.....Corvallis
 Davis, Anna Marjorie, Ed, sr.....Corvallis
 Davis, Audrey Jeanette, LD, fr.....Corvallis
 Davis, Bob, EE, jr.....Corvallis
 Davis, Ethel Gertrude, SS, fr.....Corvallis
 Davis, Fred Allen, SS, jr.....Salem
 Davis, George B., A, jr.....Ontario
 Davis, Henry Levi, P, so.....Montague, Calif.
 Davis, Hubert Leighton, A, so.....Corvallis
 Davis, Jack Clyde, Ed, fr.....Sumner, Wash.
 Davis, John Emerson, Ent, gr.....Corvallis
 Davis, Lewis Burch, ME, jr.....
 Stockton, Calif.
- Davis, Myron Carl, A, gr.....
 Stafford Springs, Conn.
- Davis, Richard Motte, Ed, so.....Corvallis
 Davis, Robert Fletcher, LD, fr.....Portland
 Davis, Rupert Noble, A, so.....Prineville
 Davis, Samuel James, F, so.....Arcata, Calif.
 Davis, Sanford Elroy, LD, fr.....Salem
 Davis, Thomas Marsh, ME, fr.....Portland
 Davis, Tom Jefferson, A, so.....Jamieson
 Davis, Wayne Russell, A, fr.....Pendleton
 Davis, William Bruce, ChE, jr.....Portland
 Davolt, Dorothy Gene, H, fr.....Corvallis
 Dawson, Adrian C., ChE, so.....Lorane
 Dawson, Charles Laughery, Ed, gr.....
 Corvallis
- Dawson, Donald James, Ed, jr.....Joseph
 Dawson, Jr., George F., E, fr.....Joseph
 Dawson, Harry Edwin, Ed, sr.....Joseph
 Dawson, Lawrence Jerome, LD, fr.....Yachats
 Dawson, Lloyd Preston, E, fr.....Yachats
 Dawson, Muriel Elizabeth Lane, H, sr.....
 Corvallis
- Dawson, William Ernest, F, so.....
 Susanville, Calif.
- Day, Jr., Ralph C., F, so.....Portland
 Deal, Jean Leona, Ed, so.....Philomath
- Deal, Mildred Evelyn, Ed, sr.....Philomath
 Dean, Catherine Harriet, H, fr.....
 Payette, Idaho
- Dean, Clyde, Robinson, ME, sr.....Portland
 Dean, Virginia, LD, so.....Portland
 Dearfield, Elizabeth Ann, H, gr.....Corvallis
 DeCamp, Richard Edward, F, so.....
 Milwaukie
- Decatur, Kenneth Steven, F, fr.....Salem
 Dehne, Laverne M. J., H, fr.....Fort Rock
 Dehne, Venita D. V., H, so.....Fort Rock
 Dehne, Wilber Emmitt, F, fr.....Springfield
 dela Fontaine, Lawrence F., F, fr.....Portland
 de Lancey, Lawrence Marl, ChE, fr.....
 Corvallis
- DeLano, Howard Russell, F, jr.....
 Oregon City
- DeLap, Norma Marion, Ed, fr.....Corvallis
 DeLapp, Louis Austin, IA, fr.....Bend
 De Lateur, Elizabeth Anna, H, so.....
 Hoquiam, Wash.
- DeLong, Dolores Mae, H, sr.....Portland
 DeLong, Lawrence Merton, ChE, sr.....
 Portland
- Delzell, John Lester, F, jr.....Corvallis
 Delzell, Thelma Doreas, Ed, so.....Turner
 Deming, Kenneth Justice, Ed, so.....
 Oregon City
- DeMoss, Claranel Bernice, LD, fr.....
 Corvallis
- Dempsey, Ralph William, F, sr.....Rickreall
 DeNeffe, Frederick Mason, SS, so.....Portland
 Denhem, Vernel E., LD, fr.....Turner
 Denley, Loraine E., LD, fr.....Multnomah
 Densley, Jean, H, fr.....Richland
 Denton, Everett Raymond, ME, jr.....Eugene
 Denton, John Hartig, P, sr.....Ashland
 Denton, William Nixon, P, so.....Ashland
 Denyer, Emma Mae, H, sr.....Turner
 Denyer, Russell Hall, EE, so.....Turner
 De Prez, Robert Newton, SS, fr.....Salem
 Deschamps, Betty King, H, jr.....Corvallis
 Deschamps, Ray, A, gr.....Corvallis
 Detering, Carl William, ChE, so.....Portland
 Dethman, Robert Allen, LD, fr.....Hood River
 Devaney, Genevieve Lucy, SS, sr.....Corvallis
 Devaney, McDonald Clement, SS, fr.....
 Corvallis
- DeVine, Donald Frederick, E, fr.....Hubbard
 Devlin, Donald Eugene, A, jr.....Portland
 DeWitt, Jean Elizabeth, H, jr.....Portland
 Dexter, Lewis Laverne, Ed, fr.....Umatilla
 Dey, George Louis, F, fr.....Lorane
 DeYoung, James William, F, jr.....Portland
 Dickey, Donald C., A, fr.....Monmouth
 Dickey, Robert Benjamin, A, so.....
 Forest Grove
- Dickey, Thayer, R., E, fr.....Junction City
 Dickinson, Ervin Lee, F, fr.....Toledo
 Dickinson, John Edsel, ME, so.....Medford
 Dickman, Henry Charles, A, fr.....Portland
 Dickson, Frederic H., EE, so.....Albany
 Dickson, Louis McKisic, A, jr.....Albany
 Dickson, Thelma Lucille, SS, so.....Albany
 Dietrich, Louis Reynold, ME, sr.....Portland
 Dietze, Lillian Amanda, H, fr.....Lakeview
 Dietzman, Harvey Fletcher, A, jr.....Salem
 Dillard, Louis Allen, SS, so.....Roseburg
 Dillinger, Gordon Jacob, F, so.....
 Altadena, Calif.
- Dillon, Ira G., ChE, fr.....Corvallis
 Dillon, Selma Rydberg, SS, so.....Corvallis
 Dillow, Joseph Clinton, EE, jr.....Portland
 Dimick, John B., A, jr.....Hubbard
 Dimick, Keene Paul, Ch, gr.....
 Daly City, Calif.
- Director, Nathan Norman, Ph, jr.....Portland
 Dixon, Bettyjane, A, so.....Roseburg
 Dixon, Claudia Leslie, Ed, jr.....Corvallis

- Dixon, Janey Marie, Ed, so. Klamath Falls
 Dixon, Margaret Elizabeth, SS, so. La Grande
 Dixon, Wilfrid Joseph, Sc, sr. Portland
 Doane, John Jackson, F, so. Creswell
 Dockery, Ruth Idele, SS, fr. Portland
 Dodd, Merle Albert, LD, fr. Junction City
 Dodge, Elizabeth Maryl, LD, so. Canyonville
 Doerfler, Wallace Joseph, A, so. Salem
 Doherty, Dale Donald, P, so. Freewater
 Doherty, Lawrence Philip, A, jr. Lexington
 Dolan, James Patrick, E, fr. Corvallis
 Dolan, Jr., Sam, SS, so. Corvallis
 Dole, Hollis Mathews, LD, so. Grants Pass
 Dombroski, Robert John, SS, fr. Aberdeen, Wash.
 Domnisse, Fred Edward, SS, jr. Portland
 Donahay, Michael Harold, F, so. Oakland, Calif.
 Donaldson, Ivan John, A, jr. Maupin
 Donaldson, Marion May, H, so. Corvallis
 Donert, Patricia Douglas, H, fr. Portland
 Donovan, Robert Warren, E, fr. Portland
 Dooley, Edmund James, SS, sr. Albany
 Dorn, Katherine, H, so. Kelseyville, Calif.
 Dorran, Randolph, A, sr. Helix
 Doty, Donald Earl, A, fr. Corvallis
 Doty, Lucile Irene, SS, sp. Corvallis
 Doty, Myron Everett, ChE, fr. Portland
 Dougherty, Raymond Howard, F, so. Medford
 Douglas, Aron Luke, P, so. Athena
 Douhan, Carl Franklin, BAd, fr. La Grande
 Douhan, Margaret Elizabeth, Sc, jr. La Grande
 Dow, Kenneth William, LD, fr. Great Falls, Mont.
 Dowd, Jr., Morris Edwin, EE, so. Lebanon
 Downing, June Luella, H, fr. Portland
 Doyle, Robert William, F, fr. Portland
 Dozler, Norbert, LD, so. Aumsville
 Drake, Donald E., Ed, jr. Heppner
 Drake, Donald Lincoln, E, fr. Shelton, Wash.
 Drake, Ray Wilbert, A, so. Malin
 Drake, Robert C., LD, sp. Corvallis
 Drake, Thompson Ervin, IA, fr. Coquille
 Drake, Wilbur Victor, Ed, sr. Medford
 Drakely, George Thomas, ME, jr. Salem
 Draper, Richard S., SS, jr. Portland
 Dresser, Jean Caroline, SS, so. Hood River
 Driggs, Mary Lois, H, jr. Salem
 Drinkner, Mary Elizabeth, LD, so. Portland
 Drinkwater, Billy Smith, A, so. Burns
 Drlca, Karl Francis, BAd, so. Portland
 Dudley, Darle William, ME, jr. Salem
 Duerst, Aileen M., SS, so. McMinnville
 DuFresne, Benjamin Oliver, EE, so. Roseburg
 Dugan, Kenneth E., LD, fr. Gardiner
 Dully, Evelyn Mildred, SS, so. Portland
 Dumka, Jr., Joseph, E, fr. Arrowwood, Alberta, Canada
 Dumont, Maxene Mac, H, fr. Corvallis
 Duncan, Hazel Lucille, H, so. Ontario
 Duncan, Ivan Merwin, G, sr. Burns
 Duncan, John William, A, jr. Montebello, Calif.
 Duncan, Julia, SS, so. The Dalles
 Duncan, Robert, ChE, so. Cove
 Duncan, Ruth, H, fr. Forest Grove
 Duncan, William Mac, ME, so. Cove
 Duncan, William Winthrop, SS, so. Pasadena, Calif.
 Dunham, Dorothy Jean, H, so. Portland
 Dunkin, Mary Elizabeth, SS, so. Portland
 Dunlap, Jack Elliot, LD, so. Portland
 Dunlap, Richard Clayton, F, fr. Multnomah
 Dunlop, Catherine Julie, Bot, gr. Eugene
 Dunn, Joy Bainbridge, AA, jr. Klamath Falls
 Dunn, Leland Luverne, E, so. Eugene
 Dunn, Leslie, H, so. Piedmont, Calif.
 Dunn, Lester Clayton, F, so. Corvallis
 Dunn, Robert Charles, ChE, jr. Portland
 Dunnavin, Ernest Barney, IA, so. Myrtle Creek
 Dunnavin, Ray Earl, E, fr. Myrtle Creek
 Dunne, Marian Lucille, H, sr. Portland
 Dunning, Ruth Charlotte, SS, jr. Pendleton
 Durand, Mary Frances, H, fr. Forest Grove
 Durbin, Fred William, LD, so. Corvallis
 Durbin, Sol, ME, so. Corvallis
 Durkee, Vera Jean, LD, so. Provo, Utah
 Durr, John D. A, sr. Beaverton
 Dutton, Earl Donald, A, so. Fossil
 Dutton, Rhoda Maxine, SS, so. Portland
 Duus, Bonney Ross, A, fr. Maupin
 Dyal, Sarah Creecie, Bot, gr. Ithaca, N. Y.
 Dykeman, Dorothy Lou, Ed, gr. Castle Rock, Wash.
 Eagle, Marjorie Loretta, SS, fr. Merrill
 Eakin, Eleanor Lou, SS, so. Oakland, Calif.
 Eakin, Robert Edward, Ch, gr. La Grande
 Earnheart, Sarah Katherine, LD, fr. Pendleton
 Earp, Edwin Ellsworth, SS, sr. Albany
 Eason, Harold Paul, A, so. Eugene
 Eason, Mary Virginia, LD, fr. Salem
 Eason, Stearns D., ChE, sr. Salem
 Easterly, Clyde Alden, A, fr. Hood River
 Eastling, Genevieve Matie, H, sr. Roseburg
 Easton, Archie Wayne, P, so. Portland
 Eastwood, Frank Nelson, A, jr. Westminster, Calif.
 Eaton, Cathryn May, SS, sr. Salem
 Ebeling, Dick Winfield, E, fr. Portland
 Eby, Robert Earl, E, fr. Portland
 Eckman, Lucille Evelyn, SS, so. Corvallis
 Eckman, Mildred Lillian, H, sr. Corvallis
 Eddy, Henry Delmar, ChE, so. Portland
 Edgington, Jesse Crawford, A, fr. Sisters
 Edin, Nils A., F, jr. Corvallis
 Edmiston, Floyd H., F, sr. Willamina
 Edmonds, Helen Marion, H, sr. Corvallis
 Edwardes, Sue Idell, H, sr. Corinth, N. Y.
 Edwards, Ardle John, F, fr. Lebanon
 Edwards, Bertrude Bernice, SS, so. Independence
 Edwards, James Calvin, SS, jr. Corvallis
 Edwards, Irving L., A, fr. Florence
 Egger, Marianne Elizabeth, SS, fr. Beaver
 Eggman, Forrest Ervin, A, fr. Boring
 Ehelebe, Carl F., F, jr. Portland
 Eicher, George John, A, so. Bremerton, Wash.
 Eikrem, Svante, E, fr. Portland
 Eilers, John Frederick, A, jr. Aurora
 Ek, Emil Edward, AA, so. Astoria
 Eklund, Virginia Constance, H, so. Portland
 Elgin, George Franklin, P, fr. Corvallis
 Elgin, Robert Carlton, BAd, fr. Salem
 Ell, Ben Roy, A, so. Portland
 Elle, Bernice Ruth, Ed, jr. Dallas
 Elle, Bruce Lloyd, Ph, so. Portland
 Elle, George O., A, sr. Milwaukie
 Elligsen, Fred, F, fr. Seal Rock
 Ellingson, Bob, BAd, so. Klamath Falls
 Ellingson, Donald Mathew, SS, fr. Klamath Falls
 Elliott, Dortha May, H, fr. Canyonville
 Elliott, Edmond Neal, A, so. Lakeview

- Elliott, Lee Winifred, H, fr. Oakland, Calif.
 Elliott, Robert Anderson, F, so. Pasadena, Calif.
 Elliott, Sidney Henry A, jr. Redmond
 Ellis, James Medley, F, sr. Portland
 Ellis, Ralph John, F, so. Beagle
 Ellis, Ray Forge, F, so. Berkeley, Calif.
 Ellis, William Dale, A, fr. Richland
 Elmer, Edward M. IA, so. Halfway
 Elmgren, Roy C., F, sr. Portland
 Elmsner, Ivan Ray, A, so. Sherwood
 Elston, Chester, ME, so. Hood River
 Ely, Ernest Miller, F, fr. Powers
 Emberson, Channing Burton, A, fr. Oakland, Calif.
 Emery, Frances Maxine, SS, fr. Corvallis
 Emil, Chris, F, so. Portland
 Emily, Barbara Helen, H, jr. Portland
 Endicott, Harry J., A, sr. Springfield
 Engle, Douglas Thorton, ME, so. McMinnville
 English, Charles Joseph, LD, fr. Portland
 Ennes, June Elizabeth, SS, fr. Rhododendron
 Enschede, Barbara Ruth, H, fr. Hillsboro
 Enz, Clark States, LD, fr. Corvallis
 Epperson, George Marion, LD, fr. Klamath Falls
 Eppinger, Helen, LD, so. Myrtle Creek
 Epplett, Louis Edward, LD, so. Milwaukie
 Erickson, Alice Dagmer, SS, fr. Portland
 Erickson, Carl Ralph, SS, fr. Portland
 Erickson, Donald Lindsey, Ch, gr. Longview, Wash.
 Erickson, V. Robert, E, fr. Portland
 Erickson, Vernon Carl, BAD, so. Carlton
 Ericson, Donald Leroy, SS, so. Portland
 Ericson, Dorothy Thelma, H, fr. Portland
 Ervin, Frank Joseph, E, fr. Philomath
 Eskola, Charles Raymond, SS, so. Astoria
 Esselstrom, Claude Harrison, ChE, so. Reedsport
 Esson, Ronald Gillette, P, jr. Corvallis
 Estberg, Norman, EE, sr. Portland
 Estey, Doris-Rae, H, fr. Vernonia
 Etter, Jack Elbert, A, so. Pilot Rock
 Etter, Mildred Irene, H, sr. Pilot Rock
 Ettinger, Ray Lester, A, so. Medford
 Eustice, Jeannette Oliver, Bot, jr. Yamhill
 Evans, Arlyn Wayne, A, jr. Mosier
 Evans, Jack Sylvester, LD, so. Corbett
 Evenden, Dorothy Elsie, Z, so. Corvallis
 Evenson, Oberlin Jerome, BAD, fr. Clatskanie
 Eyolfson, Urlah Myrle, SS, so. Portland
 Fairclo, Marjorie Alice, H, fr. Klamath Falls
 Fairley, Carlyle Bertrum, Ed, fr. Portland
 Fales, Frank Weck, Ch, sr. Palo Alto, Calif.
 Fall, Harry Walling, ME, so. Portland
 Fancher, Jr., Hal, A, jr. The Dalles
 Farance, Ellim Orval, EE, so. Portland
 Farley, James J., A, fr. Heppner
 Farley, Joel Fred, EE, sr. Corvallis
 Farmer, Bruce Crowley, LD, fr. Milwaukie
 Farnsworth, Patricia, LD, fr. Ontario
 Farnsworth, Robert, Ch, so. Ontario
 Farrell, Marian Jane, H, jr. Portland
 Farrell, Philip Ward, A, sr. Gateway
 Farrell, William King, A, jr. Gateway
 Farrow, William Henry, ChE, sr. Corvallis
 Farwell, Kenneth Butterick, P, sp. Amity
 Faucette, William Alexander, Bac, sr. Roseburg
 Faus, Reo Rae, EE, sr. Merrill
 Faxon, Glen S., Ed, so. Albany
 Fehler, Clair LeRoy, SS, fr. Corvallis
 Fehrenbacher, Evelyn Josephine, H, fr. Troutdale
 Fehrenbacher, Henry Robert, Ch, so. Troutdale
 Feigenson, Jr., William Harry, LD, so. Portland
 Feike, Alys Belle, H, so. Portland
 Feikert, Daniel H., E, fr. Portland
 Feikert, Helen Herriott, H, gr. Corvallis
 Feldstein, Cyril, Ph, gr. San Francisco, Calif.
 Felker, Barbara Louise, H, fr. Portland
 Felker, Betty, H, jr. Portland
 Feller, Charles Haig, ChE, fr. Marshfield
 Fellows, Dean Claude, F, fr. Portland
 Felton, Glenn Wilber, A, so. Dayton
 Felts, Loyal Moore, Sc, sr. Portland
 Felzenn, Mary Jean, H, fr. Corvallis
 Fendall, Marjorie Lee, LD, so. Forest Grove
 Fendall, William Gray, J, so. Corvallis
 Fenger, Arnold Carl, A, so. Boring
 Fenner, John Benjamin, SS, so. Portland
 Fenner, Keith Peck, A, gr. Corvallis
 Fensler, Robert Wilson, A, fr. Tule Lake, Calif.
 Fenwick, Elizabeth, SS, fr. Hood River
 Ferguson, Mary Lucille, H, so. Corvallis
 Ferguson, Wayne Carlile, P, sr. Union
 Ferrell, Betty Lou, SS, so. Portland
 Ferris, Gordon Robert, LD, fr. Cosmojolis, Wash.
 Ferris, Kathryn Leola, LD, fr. Portland
 Ferron, Jack Edward, IA, so. Corvallis
 Field, Donald Edgar, LD, fr. Medford
 Field, Harvey Dee, BAD, fr. Medford
 Fifer, Helen Bess, H, gr. Portland
 Fildes, Kenneth Robert, F, fr. Scappoose
 Fillmore, Morton, F, fr. Salem
 Findley, Harry Quimby, SS, so. Pasadena, Calif.
 Finegan, Blanche Elizabeth, Ed, so. Cornelius
 Finkbeiner, Jack Elgin, ME, so. Portland
 Finklea, Raymond Archer, ChE, jr. Warner, Okla.
 Finley, Marvin Harold, Ed, fr. Tigard
 Fioretti, Charles, F, so. Parkdale
 Fisch, Ted, A, so. Milwaukie
 Fischer, Pauline Margaret, H, so. Hillsboro
 Fish, Claire Beverly, H, so. Glendale, Calif.
 Fisher, Annabelle Palmer, H, sr. Roseburg
 Fisher, Charles Richard, F, sr. La Grande
 Fisher, Donald Moore, ChE, so. Portland
 Fisher, G. Alan, Z, jr. Portland
 Fisher, James Albert, A, so. Corvallis
 Fisher, John Keplinger, Sc, sr. La Grande
 Fisher, William Henry, EE, sr. Medford
 Fisk, John Stanley, A, fr. Milton
 Fisk, Wayne Norris, A, jr. Prairie City
 Fitch, Jr., Chester, LD, fr. Medford
 Fitzgerald, Duane Stanley, F, so. Coquille
 Fitzgerald, Gerald Arthur, F, fr. Gold Hill
 Fitzgerald, Wilfred Harold, ChE, jr. Astoria
 Fitzpatrick, Karen Elizabeth, SS, fr. Albany
 Flavelle, Brian Woolley, AA, so. Corvallis
 Flavelle, Robert Lynn Watson, LD, fr. Corvallis
 Fleming, Hugh B., LD, so. Jennings Lodge
 Fleming, Mac Lee, A, fr. Fairview
 Fletcher, Norman, A, gr. Salem
 Fletcher, William Henry, A, fr. Enterprise
 Fliedner, William Louis, F, jr. Portland
 Flint, Marjorie Louise, H, so. Grants Pass
 Flint, Marybel R., LD, fr. Beaverton

- Flitcraft, George Clarkson, ChE, fr..... Klamath Falls
 Floberg, Ralph Donald, F, so..... La Grande
 Floten, Jr., Carl Gustave, A, so..... Coquille
 Flynn, John III, E, fr..... Portland
 Flynn, Margaret Teresa, SS, so..... Lakeview
 Foley, Edward Michael, E, fr..... Portland
 Fong, Daniel King, E, fr..... Portland
 Forbes, Betty, LD, so..... Portland
 Forbes, Jr., Lucius Elder, LD, so.....
 Monmouth
 Ford, Dean Wallace, F, fr..... Medford
 Ford, Elmer Turner, SS, so..... Sparks, Nev.
 Ford, Lois Catherine, SS, fr..... Medford
 Ford, Thayle Morgan, A, so..... Medford
 Forrest, Lila, H, fr..... Prairie City
 Forester, Jessie Elizabeth, LD, fr..... Lebanon
 Forster, Nellie J. C., Ed, fr..... Lebanon
 Forster, Thomas Robert, ME, sr..... Portland
 Foster, Burt Stevenson, F, fr..... Portland
 Foster, Carol, H, sr..... Arcata, Calif.
 Foster, Catherine Grace, SS, so..... Portland
 Foster, Charles Lauren, F, jr.....
 San Jose, Calif.
 Foster, Malcolm Eugene, A, fr..... Ashland
 Foster, Theone Vivian, SS, so..... Dallas
 Fout, Constance Auzerais, LD, fr.....
 Palo Alto, Calif.
 Fowells, Joe, G, jr..... Portland
 Fowler, James William, LD, so..... Salem
 Fowler, Robert Grey, A, jr..... Medford
 Fowler, William Donald, P, jr..... Portland
 Fox, Eugene Bryant, LD, so..... Corvallis
 Fox, Henry Clayton, A, fr..... Imbler
 Fox, Maurice Kelly, F, sr..... Portland
 Fox, Milton Mearle, LD, so..... Salem
 Fox, Morris David Richard, A, fr..... Lebanon
 Fox, Nelson Henry, Ed, gr..... Portland
 Fox, Orrin Thomas, A, gr..... Lakeview
 Foxford, Laurence William, LD, fr..... Bend
 Frakes, Jacqueline Stevenson, LD, so.....
 Portland
 Frakes, Maurice Gilbert, A, sr..... Ontario
 France, Emilie Margaret, LD, so..... Corvallis
 Francis, Elenore Carolyn, LD, so..... Portland
 Francis, Marjorie Elizabeth, SS, fr.....
 Portland
 Frank, Charlotte Elizabeth, H, so.....
 Portland
 Franklin, Earl Raymond, A, sr..... Corvallis
 Frankze, Natalie Leona, Ed, jr..... Newport
 Fraser, Delmer, EE, so..... Otis
 Fraser, Dorothy Irene, AA, so..... Moro
 Fraser, Gordon Omar, A, jr..... Moro
 Fraser, Paul Anthony, A, sr..... Moro
 Fraser, Robert William, A, so..... Portland
 Frazee, Theodore Neville, EE, sr..... Albany
 Frear, Dorothy May, SS, jr..... Roseburg
 Frederickson, Andrew Oscar, A, sr.....
 Portland
 Fredrickson, Frances Louise, SS, sr.....
 Corvallis
 Freed, Henry William, F, fr..... Hood River
 Freed, Minor Muter, E, fr..... Portland
 Free, Don Gordon, Ed, so..... Portland
 Freeland, Charles D., F, sr..... Portland
 Freeman, Claude Norman, E, fr..... Portland
 French, Frances Louise, SS, fr.....
 Prairie City
 French, Helen M., Ed, jr..... Corvallis
 French, L. Cloudsly, A, jr..... Corvallis
 French, Robert Pease, E, fr..... Portland
 Fretwell, Lloyd G., F, so..... Portland
 Frichtel, Robert D., A, gr..... Corvallis
 Friedli, Carl Edwin, LD, so..... Multnomah
 Friedly, Cathryn Mae, SS, so..... Pendleton
 Friedman, Howard Jerome, F, so.....
 Los Angeles, Calif.
 Friedrich, Alvin Bernard, A, so..... Mulino
 Fries, Charles Henry, Ed, so..... Portland
 Fromherz, Florence Agnes, H, sr..... Lebanon
 Fronk, Jr., Edwin Alexander, EE, jr.....
 Eugene
 Frost, Carl F., Z, jr..... Portland
 Frost, Esther Petrea, H, sr..... Portland
 Froude, Carl Julius, LD, fr..... Portland
 Fry, Dick Charles, F, jr..... Portland
 Fugit, Raymond F., ChE, jr..... Pendleton
 Fujii, Howard Thomas, A, gr.....
 Weiser, Idaho
 Fujii, Mary Sumie, H, sr..... Nampa, Idaho
 Fujii, Tatsuo Ray, E, fr..... Dee
 Fujinaka, George Tatsuo, A, sr..... Portland
 Fulkerson, Jack Fisher, Ed, so..... Corvallis
 Fullenwider, Harriet Eleanor, H, jr.....
 Carlton
 Fuller, Gladys Edna, H, fr..... Portland
 Fuller, Hardick Harold, E, fr..... Corvallis
 Fuller, Junette Louise, SS, fr..... Corvallis
 Fuller, Mary Esther, SS, fr.....
 Palo Alto, Calif.
 Fulton, David Crichton, EE, so..... Portland
 Funk, Aaron Cornelius, Ed, sr..... Corvallis
 Gabie, Lee, F, jr..... Portland
 Gable, Stansbury, E, so..... Corvallis
 Gabriel, James Bernard, F, so..... Portland
 Gahlsdorf, Maxine Alma, SS, so..... Salem
 Galbraith, Marion James, F, so..... Medford
 Galbreath, Thelma L., H, fr..... Sherwood
 Gales, Lawrence Martin, F, so..... Bend
 Gales, Margery G., SS, sp..... Corvallis
 Gallagher, Jr., James Andrew, CE, so.....
 Corvallis
 Gallagher, Jr., John Hubert, CE, sr.....
 Portland
 Gallagher, Kenneth Arthur, CE, so..... Salem
 Gallagher, Mary Priscilla, SS, jr.....
 Sacramento, Calif.
 Gallagher, Thomas Lynn, A, so..... Corvallis
 Gallagher, Virginia, H, sr..... Portland
 Gallien, Jean Burton, H, so..... Portland
 Galligan, Georgia C., SS, so..... Hood River
 Galligan, Mary Louise, H, so.....
 Chula Vista, Calif.
 Gallo, Tom Lewis, F, so..... Cottage Grove
 Gamer, Gretchen Marion, Ed, sr..... Salem
 Gamwell, James Whipple, SS, so..... Powers
 Gangle, Lawrence Christian, F, jr.....
 Sherwood
 Gantt, Carol P., AA, so.....
 Santa Monica, Calif.
 Gardner, Dan S., CE, jr..... Portland
 Gardner, Robert Archie, A, so..... Salem
 Gardner, Royal Willard, IA, so..... Hillsboro
 Garner, Virgil Maurice, A, sr..... Albany
 Garnjobst, Henry, SS, so..... Corvallis
 Garoutte, Colen Pomeroy, F, so.....
 Culp Creek
 Garrison, Vera E., SS, so..... Nyssa
 Gaskins, William Frederic, LD, fr..... Corvallis
 Gaston, Mary Ellen, H, so..... Jewell
 Gaston, Mary Ellenora, H, fr..... Jewell
 Gaston, Robert William, A, fr..... Jewell
 Gates, Clarice Lucille, SS, so..... Portland
 Gauthier, William D., Ed, fr..... Cove
 Gaylord, Eleanor Holbrook, H, so..... Portland
 Gearhart, John B., CE, so..... Myrtle Point
 Gearhart, Richard Charles, ChE, sr.....
 Portland
 Geddes, Janet Dale, H, fr..... Portland
 Gehring, Fred Richard, F, so..... La Grande
 Gehrs, Louise Alta, SS, jr..... Portland
 Geil, Anita June, SS, so..... Corvallis
 Geil, Louis Richard, F, so..... Corvallis
 Gekeler, Roy Edwin Maurice, Ch, jr.....
 La Grande

- Gruetter, Jr., Walter, F, so.....Portland
 Gubser, Cecil Ennis, A, so.....Oswego
 Gubser, Dorothy Mae, H, so.....Oswego
 Guenther, E. Lynn, A, sr.....Hillsboro
 Guenther, Lloyd M., ChE, fr.....Hillsboro
 Guerber, Norman L., A, fr.....Corvallis
 Gulovson, Virginia Ruth, SS, so.....Brothers
 Gunderson, Melvin Fergus, EE, so.....Corvallis
 Gunderson, Norman, A, fr.....Bremerton, Wash.
 Gunkel, Harold Edmond, F, fr.....Burns
 Gustafson, Charles, Ed, jr.....Portland
 Gustafson, Gordon David, LD, fr.....Portland
 Guy, Frank L., BAD, so.....Dallas
 Haack, Gordon William, P, sr.....Portland
 Haag, John William, A, fr.....Warrenton
 Haag, Louisa Hope, H, fr.....Corvallis
 Haage, Helen Elizabeth, LD, so.....Forest Grove
 Haasch, Ralph Gevert, F, so.....Freewater
 Hachler, Frank Eugene, F, fr.....Maupin
 Hack, Raymond Linton, P, so.....Multnomah
 Hackenbruck, John Anthony, A, so.....The Dalles
 Hackett, Robert Nelson, ME, sr.....Hood River
 Haddock, Austin Edward, F, fr.....Sprague River
 Hageman, Dorin Elizabeth, Ed, jr.....Albany
 Hagen, Rachel LaVerne, LD, fr.....Pendleton
 Hagg, Russell Harry, A, fr.....Eugene
 Haggerty, Curtis Lisle, LD, fr.....Portland
 Hahn, Mary Laura, H, so.....Multnomah
 Hahn, Robert Eugene, Ch, jr.....Corvallis
 Haho, Sylvia Irene, H, so.....Portland
 Hakala, Rudolph John, F, so.....Portland
 Hakkerup, Arthur Larsen, LD, fr.....Trail
 Hale, Gordon Hayes, F, so.....Noti
 Haley, Iola Louise, H, fr.....Malin
 Haley, James Frederick, EE, jr.....Seaside
 Haley, Kent Lambert, LD, so.....Marshall, Missouri
 Haley, Lucile Lothrop, SS, fr.....Portland
 Hall, Heath Vale, F, sr.....Salem
 Hall, Jack Irving, EE, sr.....Schenectady, N. Y.
 Hall, Mary Parmelee, P, sr.....Clatskanie
 Hall, Lowell Lafayette, A, fr.....Richland
 Hall, Norman Elmon, ChE, fr.....Portland
 Hallberg, Donald Oscar, A, fr.....Sebastopol, Calif.
 Hallmark, William Lewis, E, fr.....Cove
 Halverson, John Booth, F, jr.....Eugene
 Hamilton, Alice Billie, E, so.....Portland
 Hamlin, Virginia May, H, fr.....Arlington
 Hammack, Ross Robert, E, fr.....Lostine
 Hammond, Jr., Herbert L., F, so.....Portland
 Hampshire, John, CE, so.....Grants Pass
 Hampson, Donald Stuart, A, so.....Bend
 Hampson, Dorothy Arline, H, fr.....Portland
 Hampton, Robert Stephen, EE, so.....Pendleton
 Hampton, William Harold, Ed, so.....Portland
 Hancock, Margaret Lee, H, fr.....New Meadows, Idaho
 Hand, Robert Don, Ed, jr.....Corvallis
 Haneberg, Melvin, A, so.....Sandy
 Hanley, Kathryn Elizabeth, A, fr.....Seattle, Wash.
 Hann, John Herbert, F, fr.....Portland
 Hanna, Hugh Pomeroy, A, sr.....Independence
 Hanna, I. Lavelle, Bac, jr.....La Grande
 Hanna, Kathryn Elizabeth, SS, so.....Corvallis
 Hannam, James Leo, Bac, gr.....Portland
 Hansen, Alma Louise, H, fr.....Portland
 Hansen, Charles E., A, so.....Eugene
 Hansen, Erma Caroline, P, so.....Prineville
 Hansen, George Mathew, F, jr.....Portland
 Hansen, George Stanley, E, fr.....Long Creek
 Hansen, John, A, so.....Portland
 Hansen, LeRoy Robert, A, gr.....Norman, Neb.
 Hansen, Martha Ellen, LD, fr.....Portland
 Hansen, Robert William, LD, fr.....Salem
 Hanson, Clifford Jack, ChE, fr.....Portland
 Hanson, Elinor Louise, H, so.....Corvallis
 Hanson, Forrest Raymond, F, sr.....Corvallis
 Hanson, John Stanley, IA, so.....Lakeview
 Hanson, LeeRoy Smith, Ed, so.....Independence
 Hapke, Leon, F, fr.....Portland
 Hardebeck, Genevieve Bernice.....Portland
 Harden, Roy W., F, sp.....Portland
 Hardman, Glen Howard, A, so.....Independence
 Hardman, Margaret Roberta, H, fr.....West Vancouver, B. C.
 Hardy, Ella Margaret, H, fr.....Portland
 Harford, McKinney Roland, LD, fr.....Arlington
 Hargood, Adeline Beatrice, H, fr.....Portland
 Hargrove, Chester Jack, SS, so.....Corvallis
 Harmer, Rita Adele, H, so.....Portland
 Harmon, Jack Thomas, F, fr.....Eugene
 Harness, Jr., Carl Conrad, ChE, fr.....San Diego, Calif.
 Haroun, Albert Nathan, ChE, fr.....Portland
 Harper, Jessie Audrey, H, gr.....Junction City
 Harper, Jim Arthur, A, so.....St. Helens
 Harper, Thomas J., A, jr.....Junction City
 Harrang, Arnold Kenneth, A, so.....Foster
 Harriman, Bill, A, fr.....Lakeview
 Harrington, George High, F, sr.....Oregon City
 Harris, Irwin Cecil, Ed, fr.....Corvallis
 Harris, James Ellis, F, so.....Warren
 Harris, Mal E., F, jr.....Glendale, Calif.
 Harris, Marvin Sylvan, EE, so.....Portland
 Harris, Max Earl, ME, so.....Westport
 Harris, Robert Gardner, ChE, jr.....Roseburg
 Harris, Robert Leslie, ChE, fr.....Roseburg
 Harris, Russell James, A, fr.....Salem
 Harris, Ruth Fields, H, so.....Corvallis
 Harris, William Henry, BAD, fr.....Hermiston
 Harris, Willotta Ellen, H, fr.....Willamina
 Harrison, Fred O., Ed, so.....Astoria
 Harrison, Lyle, F, so.....Corvallis
 Harrison, Wallace, BAD, fr.....Portland
 Harry, George Yost, A, so.....Portland
 Harstad, Dorothy Louise, H, jr.....Freewater
 Hart, Thomas Mathew, E, fr.....Nehalem
 Hartley, Gordon Ernest, F, so.....Corvallis
 Hartman, Jeanne, Ed, fr.....Dallas
 Hartzog, David Henry, A, jr.....Lakeview
 Harvey, Dale, F, so.....Oakland
 Harvey, Jerry B., SS, so.....Portland
 Harvey, Margaret Jean, P, so.....Klamath Falls
 Harwood, Lucille Jane, SS, so.....Corvallis
 Hashitani, Roy R., A, jr.....Nyssa
 Hatch, Jennie June, H, jr.....Falls City
 Hatch, John Loring, CE, jr.....Falls City
 Hatfield, Arlie Laurence, Ch, jr.....Corvallis
 Hathaway, Grace Arvilla, SS, jr.....Corvallis
 Hauswirth, Armin O., Ed, so.....Albany
 Havenner, Joseph E., E, fr.....Corvallis
 Haviland, Glenn A., Ed, jr.....Carlton
 Hawkes, Carl Lough, F, gr.....Corvallis
 Hawkes, Helen Mary Hetesater, H, so.....Corvallis
 Hawkins, Isabel Abigail, LD, so.....Seattle, Wash.
 Hawley, Joaquin Philip, LD, fr.....Eugene

- Haworth, Evelyn Mae, Ed, fr..... Parma, Idaho
Haworth, Virginia Maxine, SS, so.....Portland
Haws, Wallace N., F, so.....Susanville, Calif.
Hay, Betty, H, so.....Portland
Hay, Gordon Colin, F, fr.....San Jose, Calif.
Hayden, Alice Lanore, H, fr.....Estacada
Hayden, Emmett Bush, P, fr.....Klamath Falls
Hayden, James Edward, E, fr.....Ontario
Hayes, James M., LD, fr.....Sacramento, Calif.
Hayes, Thomas Burke, EE, sr.....Pendleton
Hayes, Jr., Thomas Lloyd, E, fr.....Portland
Haygood, Myrl Arland, F, sr.....Chitwood
Hayman, Merton Frederick, F, jr.....Portland
Haynes, William Harold, SS, so.....Astoria
Hazeltime, Irving Billy, A, jr.....Canyon City
Heacock, Mary Pauline, H, so.....Boring
Healy, Eileen, H, sr.....Worland, Wyo.
Healy, Robert James, ME, jr.....Portland
Heard, Frances Marion, H, so.....Haines
Heartwell, James Charles, Ed, sr.....Long Beach, Calif.
Heaton, Maryjane, H, fr.....Hood River
Hector, Milton Thomas, IA, so.....Corvallis
Hedden, McKinley Charles, IA, so.....Elkton
Hedlund, Gladys Emma, H, sr.....Brownsville
Heerd, Martin, A, jr.....Portland
Hegeberg, Irene Ella, SS, so.....Portland
Heidrich, Roberta Jane, H, jr.....Sprague River
Heimerdinger, Robert Eugene, LD, fr.....Lebanon
Heinemann, Mitchell Walter, LD, fr.....Portland
Heinonen, Philmore Alfred, P, fr.....Amity
Heintz, Jr., Oscar, F, sr.....Portland
Heintzelman, Stuart Winfield, F, so.....Glendale, Calif.
Heinz, Vinnetta Ellen, SS, fr.....Silverton
Held, Bernice Jenette, SS, fr.....Corvallis
Helenius, Elmer Harold, LD, fr.....Portland
Holland, Marvin LeRoy, F, jr.....Yoncalla
Holland, Olger Gunnar, SS, jr.....Yoncalla
Helms, Robert Delin, A, fr.....Grants Pass
Helt, George Edgar, EE, so.....Portland
Hemingway, John Stewart, E, fr.....Astoria
Henderer, Charles Wade, F, fr.....Elkton
Henderson, Francis Myron, F, so.....Corvallis
Henderson, Robert W., A, sr.....Hermiston
Henderson, Robert William, SS, so.....Portland
Henderson, William Stanley, LD, fr.....Marshfield
Hendrickson, Marlin, F, so.....Clatskanie
Hendry, Roderick Kirkland, A, jr.....Newport
Henrichs, Lloyd Vernon, A, so.....Moro
Henrichs, Maxine Rosemary, SS, sr.....Moro
Henrickson, Herman Peter, E, fr.....Grants Pass
Henry, Frank Robins, P, jr.....Bandon
Henry, Gilbert Edward, SS, so.....Portland
Henry, Jimmie Anders, F, jr.....Anaheim, Calif.
Henry, Rupert James, LD, fr.....Medford
Herburger, Robert Darrell, A, fr.....Canyon City
Hergert, Jake, A, so.....Portland
Hering, Carl, ChE, jr.....Portland
Heringer, Lester Steven, A, fr.....Clarksburg, Calif.
Heriza, Elizabeth Louise, SS, fr.....Baker
Herman, Mary Virginia, H, so.....Portland
Herrala, Carlo Oscar, E, fr.....Portland
Herrman, Albert William, Ch, gr.....Corvallis
Herron, Barbara Spencer, H, so.....Eugene
Hershey, DeeVeere Leonard, A, so.....Corvallis
Hessig, Harold Herbert, F, sr.....Corvallis
Hessler, Lenora, H, sr.....Dayton
Heter, John Lawrence, ChE, jr.....Salem
Heym, Donald Earle, EE, jr.....Portland
Hiatt, Herbert Fahy, ME, sr.....Corvallis
Hiatt, Virgil Gerald, Ch, gr.....Portland
Hicks, Helen Frances, SS, fr.....Portland
Hicks, Wilda Elizabeth, H, fr.....Junction City
Hicok, Francis, F, so.....Corvallis
Higbee, V. Byron, A, fr.....Tillamook
Higgins, Donald Blaine, IA, jr.....La Grande
Higgins, Harold F., Ed, so.....Corvallis
Higgins, John Richard, LD, fr.....Baker
Higgs, Harold DeWitt, SS, sr.....Burns
Highland, Richard William, LD, so.....Bandon
Hildebrandt, Arnold Emil, A, so.....Sheridan
Hill, Carolyn Jane, SS, fr.....Medford
Hill, Dorothy Cavanaugh, Ed, sr.....Portland
Hill, Harry Pershing, E, fr.....Oswego
Hill, James Edward, F, jr.....Portland
Hill, John L., E, fr.....Baker
Hill, Kenneth P., IA, sr.....Corvallis
Hill, Mary Isabelle, H, fr.....Pendleton
Hill, Robert Eugene, CE, sr.....Vale
Hill, Robert Munger, Ed, so.....Hood River
Hill, Robert Norman, CE, so.....Townsend, Wash.
Hill, Russell, A, so.....Brighton
Hillison, Orval A., A, so.....Portland
Hills, Jasper Bill, LD, fr.....Jasper
Hillway, Bayard Walter, A, sr.....Sheridan
Hilpert, John Meier, CE, sr.....Bethlehem, Penn.
Himmelwright, Alice Jane, SS, fr.....Enterprise
Himmel, Glenn Ernest, E, fr.....Salem
Hinkle, Dorothy Agnes, SS, so.....The Dalles
Hinkle, Janet Elizabeth, SS, jr.....Portland
Hinricks, Shirley Vivian, SS, fr.....Hood River
Hinton, Alvah Tommy, E, fr.....Monroe
Hirstel, Robert, BAD, so.....Portland
Hirter, Bernice Oral, H, so.....Dundee
Hoag, Leo Elmer, A, so.....Prospect
Hoagland, Jesse Whitfield, E, fr.....Reedsport
Hobbs, Elizabeth Anne, LD, so.....Cornelius
Hocken, John Allyn, BAD, so.....Corvallis
Hockersmith, Keith Neil, A, so.....Corvallis
Hockley, Jr., Claude Clement, CE, so.....Portland
Hodes, Lewis, ME, jr.....Portland
Hodges, Jr., Nelson Andrews, F, fr.....Hollywood, Calif.
Hodgin, Sylvia Lee, H, jr.....La Grande
Hof, Suzanne, H, sr.....Pasadena, Calif.
Hofeldt, Vaughn Harold, F, jr.....Portland
Hoffman, Cathrin A., SS, sr.....Vernonia
Hoffman, Elbert Neil, A, sr.....Ontario
Hoffman, Henry Crawford, LD, fr.....Portland
Hoffman, John Edmond, LD, fr.....Portland
Hoffman, Phil, LD, fr.....Portland
Hoffmeister, Don Evans, SS, so.....Portland
Hofmann, Walter Carl, E, fr.....Portland
Hoisted, Eugene Albert, F, fr.....Portland
Hoggan, Patricia, Ed, so.....Portland
Holaday, Mary Elizabeth, Ed, sr.....Corvallis
Holaday, Ora Rozella, LD, so.....Corvallis
Holcomb, Fred William, BAD, fr.....Philomath
Holcomb, George Noble, A, fr.....Richland
Holcomb, Holly Vernon, Sc, jr.....Vernonia
Holcombe, Robert Carter, A, fr.....Portland
Holdman, Robert Ellsworth, LD, so.....Portland
Holland, Henry Arthur, Ed, fr.....Silverton
Holland, Woodrow Wilson, F, so.....Eugene
Hollenbeck, Ervilla May, Ed, gr.....Corvallis

- Hollenbeck, Leighton Eldridge, F, fr.....
Portland
- Hollenbeck, Lester Wallace, Ch, gr.....
Portland
- Hollenbeck, Yvonne, H, so.....
Corvallis
- Holley, Lois Kathryn, SS, sr.....
Corvallis
- Holley, Mary Jeannette, SS, jr.....
Portland
- Holley, Jr., Robert Aubrey, A, gr.....
Los Angeles, Calif.
- Holley, William Chipman, CE, sr.....
Klamath Falls
- Holliday, F. Emerson, CE, so.....
Mulino
- Hollingsworth, Bob Hannan, LD, fr.....
Corvallis
- Hollingsworth, Guilford LeRoy, EB, so.....
Eugene
- Holloway, Harry H., BAD, fr.....
Portland
- Holloway, Robert Clark, A, gr.....
Portland
- Hollstein, Jean Wilson, IA, fr.....
Salem
- Holmberg, Edwin Knapp, A, fr.....
Canby
- Holmes, Annie, LD, fr.....
Portland
- Holmes, Fred Carter, F, fr.....
Berkeley, Calif.
- Holmes, Phillip, CE, so.....
Philomath
- Holstrom, Everett Wayne, F, jr.....
Westfir
- Holt, Betty Jane, H, so.....
Pendleton
- Holt, Howard Blom, Ed, so.....
Corvallis
- Holzmeier, Louise, SS, sr.....
Dundee
- Homan, Gerald, P, jr.....
Enterprise
- Hoopes, Wilbur J., A, fr.....
Cottage Grove
- Hoover, Elean Merle, Ch, jr.....
Portland
- Hoover, Lawrence Merrill, CE, sr.....
Hood River
- Hoover, Marvin Harley, A, fr.....
Lebanon
- Hopp, Norvalee Cavell, SS, fr.....
Portland
- Hopper, Robert L., F, fr.....
Fossil
- Hornby, Ruth Edwards, Ed, sr.....
Corvallis
- Horne, Thelma Elizabeth, H, gr.....
Pilot Rock
- Horning, Vernon Keith, P, so.....
Sutherlin
- Horton, Jean Inez, H, fr.....
Portland
- Hosken, Ruth, SS, fr.....
Portland
- Hoskins, Marion George, A, sr.....
Dundee
- Hosmer, Kenneth Leavitt, P, fr.....
Portland
- Hotchkiss, Beatrice Mabel, H, fr.....
Lakeview
- Hotchkiss, Donald P., A, so.....
Lakeview
- Houdek, Otto, Ed, jr.....
Corvallis
- Houghlum, Kathleen Genieve, H, so.....
Eugene
- Houk, Marie L., Ed, so.....
Perrydale
- House, Robert James, A, fr.....
Berkeley, Calif.
- Houston, Helen Geraldine, SS, so.....
Klamath Falls
- Howard, Jr., Joe William, A, fr.....
Terrebonne
- Howard, Maxine Eleanor, H, so.....
Eugene
- Howard, Richard Benjamin, LD, fr.....
Monroe
- Howitz, George Packey, F, sr.....
Corvallis
- Howden, Lloyd George, A, so.....
Olex
- Howe, Charles Melvin, F, fr.....
Milwaukie
- Howe, George Charles, ME, jr.....
Portland
- Howe, Maxine Vivienne, H, so.....
Portland
- Howell, Bessie Opal, H, so.....
Forest Grove
- Howell, Shirley Jean, LD, fr.....
Clackamas
- Howells, Allan Hewes, A, so.....
Albany
- Howland, James Chase, CE, sr.....
Oregon City
- Hoyer, William H., A, jr.....
Portland
- Hoyt, Irving Howard, EE, so.....
Portland
- Hoyt, Kathleen Robertson, H, jr.....
Portland
- Hsiao, Ts'ai Yu, Ent, gr.....
Shangtung, China
- Hubbard, C. Andresen, Ent, gr.....
Forest Grove
- Hubbard, Kenneth C., CE, so.....
Dundee
- Hubbard, Leon V., A, fr.....
Dundee
- Hubert, Douglas Ernest, ME, so.....
Portland
- Huddleston, Laura Elizabeth, H, sr.....
Corvallis
- Huddleston, Opal Frances, SS, so.....
Dayton
- Hudson, Margaret Kaster, SS, sr.....
Salem
- Hudson, Robert L., F, sr.....
Pendleton
- Huey, James Olen, F, fr.....
Pendleton
- Huif, Harold Scott, LD, so.....
Beaverton
- Huffman, Beverly Jaxine, LD, fr.....
Enterprise
- Huggins, William Herbert, E, fr.....
Corvallis
- Hughes, Albert Marion, Ch, gr.....
Salem
- Hughes, Alice Eletha, LD, fr.....
Tillamook
- Hughes, Clyde, P, so.....
Eugene
- Hughes, Jay, F, jr.....
Chiloquin
- Hughes, Thomas Howard, A, so.....
Corvallis
- Hull, Frank Williams, SS, jr.....
Medford
- Hull, Joseph William, F, jr.....
Hydesville, Calif
- Hull, Jr., Thomas N., ME, so.....
Brookings
- Hulquist, Robert Grenell, A, so.....
Corvallis
- Hulse, Bruce Thomas, LD, fr.....
Sherwood
- Hult, John Luther, Ph, so.....
Portland
- Humphrey, Irma Ruth, Ed, so.....
Pilot Rock
- Humphrey, Virginia, Ed, so.....
Pilot Rock
- Hundere, Alf, ME, sr.....
Seaside
- Hundere, Elsa Bergliot, H, fr.....
Seaside
- Hungerford, Dorothy Small, H, fr.....
Portland
- Hunt, Calvin Lawson, LD, fr.....
Klamath Falls
- Hunt, Clarence Norman, A, so.....
Corvallis
- Hunt, Donald Blackwell, LD, fr.....
Klamath Falls
- Hunt, Jack Horace, F, fr.....
Coquille
- Hunt, Mary Elizabeth, H, sr.....
Eugene
- Hunt, Robert Warren, A, so.....
Klamath Falls
- Hunter, Alexander Paton, LD, so.....
Everett, Wash.
- Hunter, Floyd William, E, fr.....
Portland
- Huntington, Jr., Collis Philip, P, so.....
Marshfield
- Huntington, Lucile, H, jr.....
Yoncalla
- Huntley, Willard Harper, F, so.....
Hollister, Calif.
- Hurley, Ivoline Alice, H, fr.....
Portland
- Hurst, Alta Marcille, SS, jr.....
Ontario
- Husehy, Elsworth Nelson, SS, so.....
Portland
- Huston, Doran A., CE, sr.....
Corvallis
- Hutchens, Donald Bryce, P, fr.....
Corvallis
- Hutchens, Ronald Fred, IA, sr.....
Corvallis
- Hutchens, Ronald Hildreth, F, fr.....
Klamath Falls
- Hutcherson, Edwin T., F, so.....
Riverside, Calif.
- Hutchins, Benjamin Prescott, Ed, so.....
Portland
- Hutchins, John R., IA, jr.....
Albany
- Hutchinson, Alfred Charette, LD, fr.....
Pendleton
- Hutchinson, Arthur Elberg, A, jr.....
Pendleton
- Hutchinson, Charles Eldon, A, sr.....
North Powder
- Hutchinson, James Lyle, A, so.....
Helix
- Hutchinson, John H., F, fr.....
Days Creek
- Hutchinson, Muri Walter, LD, so.....
Days Creek
- Hutchinson, Thomas Dale, E, fr.....
Helix
- Hutchison, Oliver Keith, F, so.....
Pilot Rock
- Hyatt, Russell Frank, A, so.....
Baker
- Hyland, Beatrice Anne, LD, fr.....
Eugene
- Hynes, Alberta Reagh, H, gr.....
Portland
- Hyslop, George L., A, sr.....
Corvallis
- Hyslop, William Wallace, SS, so.....
Corvallis
- Iiams, Edna Margaret, SS, sr.....
Corvallis
- Ingle, Dolena Vae, H, so.....
Corvallis
- Ingle, Jeannette, SS, so.....
Corvallis
- Ingle, Robert Carlton, SS, so.....
Corvallis
- Inglis, Jean, H, jr.....
Stayton
- Ingram, LeRoy O., Ed, fr.....
Lebanon
- Ireland, Delwin Dale, F, fr.....
Corvallis
- Ireland, Glen Paul, A, so.....
Forest Grove
- Ireland, Wilna Lee, SS, jr.....
Portland
- Irish, Arthur Edward, F, so.....
Willamette
- Irish, Robert William, A, jr.....
Corvallis

- Irvine, John W., CE, sr. Corvallis
 Isaacs, John Dove, ChE, jr. Rockaway
 Isaacson, Martha Elizabeth, SS, fr. Pendleton
 Isler, Eleanor, P, fr. Portland
 Isted, Maurice Raymond, F, so. Bend
 Iversen, Edwin Louis, A, sr. Burlingame, Calif.
 Iwatsuki, Harry Yutaka, A, so. Hood River
 Jackson, June Norrine, H, fr. Prairie City
 Jackson, Lloyd Russell, A, sr. Union
 Jackson, Margaret Armstrong, H, jr. Corvallis
 Jackson, William Ceamore, P, fr. Corvallis
 Jacob, Gottlieb Alexander, E, fr. Portland
 Jacobs, Joseph Henry, ME, so. Reedsport
 Jacobsen, Harold Norman, A, so. Astoria
 Jacobson, Alice Carolyn, SS, fr. Corvallis
 Jacobson, Helen Florence, H, sr. Portland
 Jacobson, Henry John, EE, so. Portland
 Jacobson, Jack, CE, so. Florence
 Jacoby, Barbara Claire, SS, fr. Toledo
 Jacoby, Gainey Edward, EE, so. Creswell
 Jacoby, Harry David, IA, so. Creswell
 Jacquemin, Francis Paul, F, fr. Los Angeles, Calif.
 Jaehn, Wilbur August, ChE, fr. Baker
 James, Kenneth, A, so. Portland
 Jamieson, Ian Barr, ME, so. Condon
 Jamieson, Jean M., SS, so. Condon
 Janik, Stanley C., ChE, so. Hullt
 Janssen, Edward Martin, E, fr. Beaverton
 Jantzer, Lewis Lester, F, so. Trail
 Jantzer, Stanley Edward, E, fr. Azalea
 Janzen, Frank Martin, Ed, sr. Corvallis
 Jarvinen, Ellen, H, sr. Astoria
 Jefferson, John Laurence, F, sr. Upland, Calif.
 Jefferys, Donald Goman, Mus, fr. Albany
 Jelsma, Walter, LD, so. Grand Rapids, Mich.
 Jendrzejewski, V. Helen, H, so. Hermiston
 Jendrzejewski, Walter John, A, sr. Hermiston
 Jenkins, Leland Merlin, F, fr. Toledo
 Jensen, Christopher, A, jr. Salem
 Jensen, Donald Fred, BAD, fr. Portland
 Jensen, Frances, H, sr. Corvallis
 Jensen, Leroy William, Sc, sr. Portland
 Jensen, Robert W., A, jr. Portland
 Jester, Curtis M., F, so. Portland
 Jewett, Leonard George, ChE, sr. Portland
 Jewett, Leslie Gene, H, so. Portland
 Jewett, Robert Vincent, ChE, so. Portland
 Jewett, Jr., Stanley Gordon, A, jr. Portland
 Joehnke, Frederick Edward, A, so. Canby
 Johannsen, Frederic Carl, SS, fr. Lebanon
 Johannsen, Richard Henry, EE, sr. Lebanon
 Johannson, Arnold James, Ed, jr. Portland
 Johanson, Merle Rozell, Ed, fr. Portland
 Johanson, Margaret Louise, SS, fr. Portland
 Johnson, Alfaretta Clara, H, gr. Antigo, Wis.
 Johnson, Alphonse Alexander, F, so. Marshfield
 Johnson, Arlene Frances, LD, fr. Corbett
 Johnson, Arnold John, P, fr. Silvertown
 Johnson, Barbara Ann, H, jr. Arcata, Calif.
 Johnson, Betty Karn, H, so. Eugene
 Johnson, C. Edmund, E, fr. Portland
 Johnson, Carl Peter, E, fr. Eugene
 Johnson, Carolyn Etmco, Ch, gr. McMinnville
 Johnson, Charles Clair, Ed, so. Corvallis
 Johnson, Chester George, A, fr. Portland
 Johnson, Clarence Richard, Ch, gr. Tacoma, Wash.
 Johnson, Donald Robert, A, jr. Portland
 Johnson, Earl Edwin, P, so. Carlton
 Johnson, Elliot Carl, A, so. Portland
 Johnson, Elmer Axel, BAD, fr. Klamath Falls
 Johnson, Emily Miller, LD, so. Portland
 Johnson, Ernest Marvin, ME, so. Condon
 Johnson, Esther Loraine, H, fr. McMinnville
 Johnson, Florence Marjorie, H, so. Portland
 Johnson, Floyd, F, fr. Klamath Falls
 Johnson, Fred Richard, IA, so. Corvallis
 Johnson, George Glen, E, jr. San Diego, Calif.
 Johnson, Grant Theodore, F, fr. McMinnville
 Johnson, Helen Gertrude, H, fr. Corvallis
 Johnson, Imogene D., Ed, so. Moro
 Johnson, Janice Louise, H, fr. Oakland, Calif.
 Johnson, Joe Bonner, A, jr. Wallowa
 Johnson, John Brunolf, ME, so. Portland
 Johnson, John Edgar, A, jr. Wallowa
 Johnson, John Harold, E, fr. Portland
 Johnson, Joseph Hartwell, CE, so. Portland
 Johnson, June, H, fr. McMinnville
 Johnson, Karl Richard, Ch, gr. La Grande
 Johnson, Mabel Cleo, AA, so. Corvallis
 Johnson, Malcolm Julius, A, fr. Garden Home
 Johnson, Margaret Seargeant, H, so. Salem
 Johnson, Marjorie Eileen, H, so. The Dalles
 Johnson, Marjorie Mayo, SS, so. Myrtle Creek
 Johnson, Martha Elizabeth, SS, fr. Portland
 Johnson, Mary Katherine, H, jr. Corvallis
 Johnson, Mary Jane, SS, so. La Grande
 Johnson, Merle L., F, so. Carlton
 Johnson, Olaf Henry, E, fr. Yamhill
 Johnson, Orville Charleston, CE, so. Newberg
 Johnson, Ralph W., G, so. Enterprise
 Johnson, Robert Ludwig, P, fr. Oregon City
 Johnson, Robert R., ChE, so. Enterprise
 Johnson, Roberta Alice, H, sr. Portland
 Johnson, Valdemar Peter, CE, so. Corvallis
 Johnson, Walter Edward, E, fr. Tacoma, Wash.
 Johnson, Walter Robert, F, sr. Portland
 Johnston, Herbert Raymond, EE, gr. Corvallis
 Johnston, James Virgil, SS, jr. Portland
 Johnston, Jesse Ross, P, so. Parma, Idaho
 Johnston, John Mitchell, A, fr. Portland
 Johnston, Paul Miller, E, fr. Nyssa
 Johnston, Thomas Austin, E, fr. Klamath Falls
 Johnstun, Jess A., E, fr. Rainier
 Jolma, Sadie Isabelle, Sc, so. Portland
 Jones, Bruce D., CE, so. Portland
 Jones, Dick Chinn, F, so. Pasadena, Calif.
 Jones, Dwight Leslie, EE, jr. Milwaukie
 Jones, Evan Ennis, F, sr. Eugene
 Jones, Frances Louise, H, fr. Eugene
 Jones, Francis Rohan, LD, fr. Powers
 Jones, Jennette Davies, H, fr. Klamath Falls
 Jones, Lawrence Edward, CE, so. Albany
 Jones, Robert Dean, A, sr. Corvallis
 Jones, Robert Merle, ChE, fr. Gresham
 Jones, Jr., Roy T., F, fr. South Pasadena, Calif.
 Jones, Wilbur William, IA, jr. Klamath Falls
 Jones, William Shirley, ME, sr. Corvallis
 Jordan, John Robert, BAD, fr. Portland
 Jordan, Kenneth Trew, F, fr. Portland

Jordan, Russell Wooten, ME, so.....	Medford
Jorgensen, Henry, SS, so.....	Corvallis
Jorgensen, Lloyd Willis, A, so.....	Portland
Joseph, Charles Norman, P, so.....	Corvallis
Joseph, Emile Casper, ChE, so.....	Corvallis
Jossy, Donald Wayne, A, jr.....	Portland
Jossy, Earle Fred, A, sr.....	Portland
Joubert, Andora Caroline, E, fr.....	Portland
Jowdy, William John, A, so.....	Rainier
Joy, Phyllis Stella, LD, fr.....	Portland
Joyce, James Woodbury, A, fr.....	Portland
Judy, Marie Lucille, SS, so.....	Baker
Junor, Mary Jane, H, so.....	Portland
Justice, George James, A, fr.....	Enterprise
Kachelhoffer, Victor Fernald, IA, fr.....	Corvallis
Kadau, Jack, P, jr.....	Aumsville
Kageyama, Mikie, Ed, jr.....	Hood River
Kageyama, Molly Mariko, SS, fr.....	Hood River
Kahn, William Martin, Ch, sr.....	Portland
Kahr, Russell Schreeck, A, fr.....	Beaverton
Kaleshnik, Ray Frank, ChE, sp.....	Portland
Kalibak, William Martin, A, so.....	Portland
Kallander, Rudolph Martin, F, jr.....	Portland
Kaloostian, George H., Ent, fr.....	Fresno, Calif.
Kamm, Carolyn, SS, so.....	Portland
Kane, Edward V., BAD, so.....	Portland
Kaputof, John George, Ed, sr.....	Portland
Karvonen, Lila Doris, H, jr.....	Portland
Kay, Barbara Aileen, SS, fr.....	Ashland
Kealiher, James Earl, BAD, fr.....	Sandy
Keasey, Raymond L., SS, fr.....	Corvallis
Keasey, Richard Alden, CE, jr.....	Portland
Kebbe, Chester Edwin, A, sr.....	Mohler
Keck, Dennis Clifford, ME, so.....	Nyssa
Keck, Newton Herbert, E, fr.....	Portland
Keckler, Velma Scott, H, sr.....	Corvallis
Keenan, Lester Mackenzie, LD, fr.....	Portland
Keeney, Ivan Floyd, Sc, sr.....	Ashland
Keep, Byron William, F, so.....	Portland
Keep, Virginia, H, so.....	Portland
Kelby, Joseph M., F, so.....	Ashland
Keller, Dick Fredrick, SS, fr.....	Corvallis
Kellett, Orme Sterling, A, sr.....	Vancouver, Wash.
Kelley, Harry Milton, F, so.....	Coquille
Kelley, James Winfield, Sc, so.....	Astoria
Kelley, Richard R., CE, jr.....	Portland
Kelley, Stanley Robert, ME, sr.....	Portland
Kellogg, Bernice Stetzel, H, gr.....	Albany
Kellogg, Billie Virginia, SS, so.....	Marshfield
Kellogg, Robert Farrar, CE, jr.....	Portland
Kelly, Arthur Richard, E, fr.....	Corvallis
Kelly, Jack G., A, jr.....	Cottage Grove
Kelly, Joyce Adair, P, fr.....	Lebanon
Kelsey, Vance Ray, Bac, so.....	Portland
Keltner, Francis Thomas, CE, jr.....	Coquille
Kelty, Tom, LD, fr.....	Albany
Kelty, William Wesley, Ed, gr.....	Corvallis
Kem, Thomas Omer, P, so.....	Cottage Grove
Kemp, Vincent Donald, CE, jr.....	Klamath Falls
Kempka, Jozef, A, gr.....	Shierniewice, Poland
Kendrick, Olive Helene, A, so.....	Queens Village, N. Y.
Kendrick, Patricia Alberta, A, fr.....	Queens Village, N. Y.
Kennedy, Georgia Jacobs, LD, fr.....	Corvallis
Kennedy, Norman James, F, fr.....	Tillamook
Kennedy, Richard B., A, jr.....	Portland
Kennedy, Jr., Thomas Barrett, E, fr.....	Portland
Kennedy, Virgil Dean, A, so.....	Dayville
Kennedy, William Francis, Ed, so.....	Corvallis
Kennell, Ella Irene, AA, so.....	Portland
Kenneth, Emily Mae, H, sr.....	Astoria
Kennick, Loretta Teresa, SS, fr.....	Corvallis
Kenny, Glen William, IA, so.....	Moro
Kenny, M. Anita, H, so.....	Moro
Kenny, Robert Earl, EE, so.....	Idlevld Park
Kent, Ruth E., SS, fr.....	Corvallis
Keppel, William Henry, EE, so.....	Portland
Kerby, Devere E., F, fr.....	Waldport
Kernan, William Norman, F, so.....	Portland
Kerns, James William, A, sr.....	Klamath Falls
Kerns, John Paul, A, so.....	Klamath Falls
Kerr, David Hugh, F, sr.....	La Porte City, Iowa
Kerr, Helene Janice, SS, so.....	Portland
Kerr, Jack William, Ed, jr.....	Corvallis
Kerron, Richard Allan, EE, so.....	Portland
Kershaw, Keith, A, jr.....	Corvallis
Kessler, Herman I., E, sp.....	Corvallis
Kessler, Richard Harry, LD, fr.....	Monroe
Ketcham, Florence Vivian, Mus, fr.....	Grandview, Wash.
Khanmai, Mohamad Aslam, A, gr.....	Peshawar, India
Kibbe, Marjorie Louise, H, jr.....	Portland
Kickbusch, Evelyn Zeta, H, fr.....	Springfield
Kidby, Clifford Frederick, SS, jr.....	Lebanon
Kidby, Harold Alfred, CE, sr.....	Lebanon
Kienle, Colcord John, IA, fr.....	Corvallis
Kierulff, John Lorenz, ME, so.....	Portland
Kies, Lucille Marie, Ed, fr.....	Portland
Kile, George David, A, fr.....	Milwaukie
Kilpatrick, Albert Stanley, LD, fr.....	Oswego
Kim, Chai Hoon, A, gr.....	Koo Hang Villag, Korea
Kimball, Lucille, Ed, fr.....	Seaside
Kimes, Barbara Foster, H, so.....	Summer Lake
Kimes, Newman Robert, A, so.....	Summer Lake
Kimmel, Betty, Ed, sr.....	South Pasadena, Calif.
Kimmel, Karl Frederick, P, fr.....	Riddle
Kimmey, Francis Edward, A, so.....	Corvallis
Kinney, Ray Ivan, F, gr.....	Corvallis
Kincaid, Frank, F, sr.....	Portland
Kincaid, Leslie W., A, so.....	Ashland
King, Clyde Wendell, CE, so.....	Alvadore
King, Evelyn Louette, SS, jr.....	Portland
King, Rhea Norton, F, fr.....	Hepner
King, Robert Lionel, E, fr.....	Portland
King, Robert Marshall, F, sr.....	Oregon City
King, Ruth Frances, LD, fr.....	Corvallis
Kingsley, Dale Marion, A, so.....	Eugene
Kingsriter, Nina Lorraine, LD, so.....	Astoria
Kinnear, Marjorie Glendine, H, jr.....	Milton
Kinney, E. Jan, H, so.....	Roseburg
Kinney, Eileen May, SS, fr.....	Eugene
Kinney, Walt William, Ed, jr.....	Portland
Kirby, Charles Joseph, F, sr.....	Pendleton
Kirby, Ralph Wendall, A, jr.....	Hood River
Kirby, William Benton, E, fr.....	Scio
Kirk, Dale Earl, A, so.....	Payette, Idaho
Kirk, Jack Eugene, F, so.....	Monroe
Kirkpatrick, Howard William, F, so.....	Portland
Kirkwood, Mary Elizabeth, H, fr.....	Gresham
Kirkwood, Robert Bruce, ChE, so.....	Portland
Kirsch, Ernest J., A, so.....	Maupin
Kirsch, Theodore Timothy, A, jr.....	Maupin
Kisselburgh, Jim Alexander, A, fr.....	Los Angeles, Calif.
Kiyohiro, Leo Yuki, P, gr.....	Portland
Kiyokawa, Emi, H, fr.....	Hood River
Kleffman, Jean, H, so.....	Corvallis
Klein, Charles Boswell, Ed, fr.....	Seattle, Wash.
Klein, Leonard Martin, ME, sr.....	Medford

- Lee, Ching Ning, Ed, gr.....Canton, China
 Lee, Frank, EE, so.....Portland
 Lee, Jin Mook, A, gr.....Seoul, Korea
 Lee, Mable G., SS, fr.....Corvallis
 Lee, Virginia Cadence, Ed, so.....Roseburg
 Lee, Virginia Vera, H, fr.....Hood River
 Leedy, Ralph Gordon, LD, fr.....Brooks
 Leehman, Walter Herman, A, fr.....Lakeview
 Leemann, Caryl Mary, H, so.....Lakeview
 Leekley, James Russell, A, sr.....Lake Grove
 Leever, William Hamilton, LD, so.....Ashland
 Legrand, Kathryn May, H, sr.....Corvallis
 Lehman, Robert Alban, LD, fr.....
 Los Angeles, Calif.
 Leikvold, Howard Gronna, IA, fr.....
 Sarles, N. D.
 Leinassar, Jorma M., LD, fr.....Astoria
 Leininger, Marian A., SS, sr.....Corvallis
 Leisman, Dick Mather, BAD, fr.....Willamette
 Lemon, Berlan, LD, fr.....Corvallis
 Lemons, Clifton Wayne, A, jr.....John Day
 Lenau, Reaburn Duvall, CE, so.....Portland
 Lengele, LaRoyce Elizabeth, LD, so.....
 Corvallis
 Leonard, Evelyn Mae, SS, jr.....Medford
 Leonard, Lucille, Ed, so.....Corvallis
 Leonard, Ruth Anna, SS, so.....Tye
 Lesh, Daniel William, ME, so.....Glendale
 Leshner, William Donald, ChE, so.....Portland
 Leslie, George Adalord, F, so.....Portland
 Leslie, Robert Taber, Ed, so.....Klamath Falls
 LeTourneau, John Edward, F, sr.....Portland
 Leung, Yuk Mean, A, gr.....Canton, China
 LeVee, William Monroe, A, sr.....Corvallis
 Levin, William Baldwin, ChE, so.....Portland
 Levitt, Vivian Viola, SS, fr.....Junction City
 Lewis, Basil Herman, F, so.....Powers
 Lewis, Charles Stewart, F, fr.....
 Columbus, Ohio
 Lewis, David Jordan, CE, jr.....Corvallis
 Lewis, Fred Boydston, A, so.....Rickreall
 Lewis, Ira Mark, LD, fr.....Aumsville
 Lewis, James Clement, A, gr.....
 Lewisville, Minn.
 Lewis, Marion Thelma, J, fr.....Portland
 Lewis, Marjorie, H, so.....Portland
 Liebe, Avis Maxine, LD, fr.....Oak Grove
 Lien, Roy Harold, Sc, gr.....Portland
 Lierman, Elmer H., A, fr.....Independence
 Lillig, Everett Houston, E, fr.....Portland
 Lilly, James Lloyd, A, so.....Caldwell, Idaho
 Lindken, Carl Leon, Ch, so.....Woodburn
 Lindenbaum, Jacob, ChE, so.....Klamath Falls
 Lindgren, Margaret Dora, H, fr.....Corvallis
 Lindsey, Ted Roy, LD, fr.....Medford
 Lindsay, Ernest Marvin, A, fr.....Shedd
 Lindseth, Kleva June, AA, fr.....Monroe
 Lindner, Jack Lawrence, SS, jr.....Portland
 Lindsten, Alvin, F, so.....St. Helens
 Linklater, Bernice Elaine, LD, so.....Portland
 Linton, Irene Mae, SS, sp.....Corvallis
 Linton, Lynn R., BAD, fr.....Corvallis
 Lipscomb, Jr., Benjamin Ormond, BAD, fr.....
 Corvallis
 Lipscomb, Gladys Holden, H, jr.....Corvallis
 Lisbakken, Robert Ben, E, fr.....Portland
 Lister, Edward Hiram, A, fr.....Grants Pass
 Littrell, Lois Jane, LD, fr.....Marshfield
 Liu, Ben Yam, Sc, sr.....Portland
 Liu, Tsui-Chieh, Bot, gr.....Shantung, China
 Lloyd, Philip Arthur, E, fr.....Portland
 Locey, Phyllis Mae, SS, so.....Corvallis
 Lockie, Milton Jack, SS, fr.....Portland
 Lockren, Esther Sigrid, Ed, fr.....Corvallis
 Lockren, Helen Shirley, Ed, so.....Corvallis
 Loe, Edna Mae, H, so.....Corvallis
 Loehr, Betty Ann, H, fr.....Portland
 Lofland, Adrian Mason, A, so.....Medford
 Loftis, Ellen Wright, H, so.....Corvallis
 Logan, Leonard B., F, sr.....Portland
 Lombard, Colmar Delroy, IA, so.....Portland
 Lommen, Neil Stanley, A, so.....Mohler
 Long, Floyd Edwin, A, so.....Pendleton
 Long, Helyn Louise, P, so.....Bend
 Long, Jay B., A, jr.....Corvallis
 Long, Murel Allen, A, sr.....Malin
 Long, Ronald Carson, BAD, so.....Albany
 Long, W. Dixon, Ed, sr.....Corvallis
 Longueville, Bob A., IA, so.....Sisters
 Looker, Eleanor Johnson, H, fr.....Portland
 Loomis, Charles Gailord, F, so.....Corvallis
 Loomis, Floyd William, IA, so.....Portland
 Loomis, Hazel Arlene, H, so.....Corvallis
 Looney, Jack Lewis, A, so.....Tangent
 Looney, Virginia Ruth, SS, fr.....Tangent
 Loop, Paul Allen, ChE, so.....McMinnville
 Loosley, Marie Eulalia, H, fr.....Fort Klamath
 Lord, Charles Maurice, F, gr.....Corvallis
 Lord, L. William, SS, fr.....Portland
 Lord, Richard Harry, ChE, so.....Portland
 Loron, Carl A., Ch, jr.....Silverton
 Loughary, Muriel Ann, H, fr.....Boise, Idaho
 Loughead, Harold Vernon, Ent, jr.....
 Ontario, Calif.
 Lovell, Edward Raymond, A, so.....
 Long Beach, Calif.
 Lovin, Robert Joseph, Ch, jr.....Portland
 Lowery, Thomas Wallace, E, fr.....Jewell
 Lowry, William Clayton, A, so.....Portland
 Lowry, Robert Wayne, ME, jr.....Medford
 Lowry, Wallace Dean, Sc, jr.....Medford
 Luehrs, Richard Edmund, P, so.....Ontario
 Lui, Chung Kwai, Ph, gr.....Canton, China
 Lum, John Walter, LD, fr.....Astoria
 Lundahl, Milton D., LD, fr.....Portland
 Lundberg, Elsie Madeline, SS, so.....Portland
 Lundeen, Arthur Victor, A, fr.....Boring
 Lusby, Alice Marie, P, so.....Eugene
 Luther, Frank Louis, A, so.....Portland
 Lyman, Hazel Irene, H, so.....Enterprise
 Lynch, Charles Gilbert, BAD, so.....Salem
 Lynch, D. Lester, F, gr.....Portland
 Lyon, Homer G., F, so.....Salem
 Lyon, Stanton Edmur, F, jr.....Portland
 Lyon, Virgil C., F, fr.....Bend
 McAllister, Eileen Mary, SS, so.....Portland
 McArthur, Jean Annette, LD, fr.....
 Cupertino, Calif.
 McAuley, Milton Kenneth, F, fr.....
 Klamath Falls
 McBee, Richard Harding, Ch, sr.....Eugene
 McBeth, John Denna, A, fr.....Forest Grove
 McBride, Dean Blanchard, Ed, gr.....Portland
 McBroom, Frances Mariel, LD, so.....
 Portland
 McBurney, Edward H., ChE, jr.....Mulino
 McCall, Doras Francis, E, fr.....Portland
 McCalley, Bob B., ME, so.....Portland
 McCallister, Alan Finley, CE, so.....Corvallis
 McCallister, Robert Delmar, E, fr.....Astoria
 McCambridge, John Robert, A, so.....Vale
 McCarthy, Clarke, ChE, so.....Marshfield
 McCauley, Marion Robert, ChE, so.....
 Hood River
 McClain, James Harold, ChE, jr.....Portland
 McClendon, Bernard, F, sr.....O'Brien
 McClintock, Robert Milton, E, fr.....Portland
 McClun, Charles James, CE, so.....Ontario
 McComb, Denver Price, F, so.....Portland
 McComb, Fremont, F, sr.....Portland
 McConnell, Agnes Elizabeth, H, fr.....
 Portland
 McConnell, Robert Bruce, F, jr.....Portland
 McCord, Doris Eleanor, H, so.....Chico, Calif.
 McCord, Ona Elaine, SS, jr.....Oakland
 McCormack, Maynard Henry, F, so.....
 Roseburg

- McCormick, Emmett Patrick, EE, sr.....Vale
 McCormick, John Allan, A, sr.....Portland
 McCormick, Virgil, F, fr.....Hillsboro
 McCormack, W. Terry, A, jr.....Eugene
 McCracken, George S., A, sr.....Corvallis
 McCrae, Kathleen Jean, H, sr.....Monmouth
 McCready, Betty-Sue, Ed, fr.....Corvallis
 McCreery, Dorothy May, SS, so.....Portland
 McCully, Martha Jane, Sc, sr.....Hood River
 McCurdy, Howard Earl, Ch, sr.....Portland
 McDougall, Thomas Arnold, ME, so.....Beaverton
 McElhinny, Jean Elizabeth, H, jr.....Salem
 McElroy, Oma May, P, sr.....McMinnville
 McEwen, Charlotte Ann, H, fr.....Riverside
 McEwen, Lloyd, A, sr.....Nyssa
 McEwen, Orville S., A, so.....Nyssa
 McFadden, Wainard Stephen, Ed, jr.....Corvallis
 McFarland, William, ME, jr.....Corvallis
 McFarling, Kenneth William, CE, jr.....Portland
 McGilchrist, Isabel Scott, H, fr.....Salem
 McGill, Anie Pauline, SS, so.....Ontario
 McGilvery, Robert Warren, LD, fr.....Coquille
 McGinnis, James Lewis, ChE, fr.....Spokane, Wash.
 McGinnis, Margaret Frances, LD, fr.....Corvallis
 McGinty, Marcus Edward, A, so.....Portland
 McGowan, Carl James, E, fr.....Lebanon
 McGreer, Virginia Josephine, SS, fr.....Portland
 McGreer, William Thomas, F, sr.....Redmond
 McGrew, Esther Frances, H, sr.....Portland
 McGrew, Raymond P., P, sr.....Portland
 McGuire, Jack Stanley, E, fr.....Bend
 McGuire, Kathryn Ellen, SS, so.....McMinnville
 McHone, James Richard, A, fr.....Salem
 McKamey, Roberta, H, fr.....Portland
 McKay, Douglas, BAD, fr.....Salem
 McKay, Muriel Pool, H, fr.....Troutdale
 McKay, Myrtle Margot, H, so.....Vancouver, B. C.
 McKean, John Wesley, A, sr.....Roseburg
 McKee, Eleanor Edith, SS, so.....Portland
 McKee, Myrl Leroy, P, fr.....Eugene
 McKee, Robert, E, fr.....Portland
 McKee, William Myron, Ch, gr.....St. Paul, Minn.
 McKelvey, Sylvan, F, fr.....Corvallis
 McKenna, James Francis, F, so.....San Diego, Calif.
 McKenzie, Nadyne, H, so.....Adams
 McKenzie, Roderick Tullock, A, so.....Port Orford
 McKeown, Fern Jane, SS, so.....Corvallis
 McKinlay, Philip France, LD, fr.....Salem
 McKinney, Earl Stephen, Ed, fr.....Amity
 McKinney, Henry Harding, EE, jr.....Baker
 McKinney, William Preston, A, sr.....Wasco
 McLain, Clarence Leo, Ed, fr.....Myrtle Creek
 McLain, Mildred Fern, SS, so.....Wallowa
 McLaughlin, Robert, BAD, so.....Corvallis
 McLean, Allan Dunbar, ME, so.....Portland
 McLean, Charles Mason, LD, so.....Oregon City
 McLean, Edward H., F, sr.....Medford
 McLellan, Daniel Joseph, CE, so.....Salem
 McLellan, Sara Jean, J, fr.....Salem
 McLeod, Kenneth Neil, Ch, gr.....Corvallis
 McMahan, Robert Earl, A, sr.....Corvallis
 McManus, Leonard Murray, BAD, so.....Portland
 McMaster, C. Louise, LD, fr.....Oakland, Calif.
 McMillan, Frederick Russell, EE, so.....Corvallis
 McMindes, Margaret Rae, SS, so.....Astoria
 McMinn, Margaret Ellen, H, fr.....Oakland, Calif.
 McMurdo, Bernard Hager, LD, so.....Heppner
 McMurphy, Carl J., A, gr.....Palo Alto, Calif.
 McNary, David Capp, A, fr.....Colusa, Calif.
 McNeely, Berle R., BAD, fr.....Gold Beach
 McNeil, Fred George, SS, so.....Halsey
 McNulty, Eugene, F, fr.....Woodburn
 McPartland, James Neilan, A, so.....Richland
 McPherson, Frank W., F, jr.....Astoria
 McPherson, John Dee, P, sr.....Albany
 McQuarrie, Ernest Barclay, LD, fr.....Portland
 McRae, Jr., Forhes W., E, fr.....Burns
 McRay, Harriett Ann, LD, fr.....Myrtle Point
 McReynolds, Austin, D., F, sr.....Ashland
 McWhorter, Paul Vernon, E, fr.....Coquille
 McWhorter, Lois Anne, H, so.....Corvallis
 McWilliams, James DeWitt, A, sr.....Corvallis
 MacDaniels, Betty Queen, H, jr.....Portland
 Macdonald, Ian Donald, Z, sr.....Milwaukie
 MacDonald, Joseph Briton, CE, jr.....Corvallis
 Mack, Charles Woodrow, LD, fr.....Canyon City
 MacKay, Harry Fraser, CE, sr.....Portland
 MacKay, Jean E., H, so.....Portland
 Macke, Barbara, SS, jr.....Shelton, Wash.
 MacKenzie, Janet Elizabeth, H, so.....Homedale, Idaho
 Mackenzie, Wilma M., Ed, sr.....Portland
 Mackey, James Emil, F, so.....Portland
 Blue, Lawrence Wade, A, so.....Astoria
 Mackie, Jean Isobel, SS, so.....Portland
 Mackin, Harold Arthur, SS, sr.....Cottage Grove
 MacLean, James A., ChE, jr.....Portland
 MacLean, Randall Cowan, A, fr.....Berkeley, Calif.
 MacLeod, Heather, H, so.....Long Beach, Calif.
 MacMillan, Jane Elizabeth, SS, so.....Portland
 Macpherson, Jr., Hector, Ch, so.....Albany
 Macpherson, Jack Gumeson, ChE, fr.....Portland
 MacRobert, Robert LaZelle, SS, so.....Portland
 Madden, Myrno Arthur, F, so.....Lonerock
 Madison, Dale Dewey, EE, so.....Corvallis
 Madison, Robert Max, E, fr.....Grand Ronde
 Madsen, Anna Mathildia, LD, fr.....Portland
 Maeda, Milton, EE, sr.....Portland
 Magill, Lloyd Gilbert, ChE, so.....Silverton
 Magnuson, Ralph Eugene, A, so.....Sheridan
 Mahan, Frederick, A, jr.....Tillamook
 Mahon, Juanita Maria, SS, fr.....Cannon Beach
 Mahoney, Joseph Edward, LD, fr.....Portland
 Maier, Oscar Walter, A, so.....Wheat Ridge, Colo.
 Main, Charles Lorence, IA, so.....Portland
 Maize, Martha Ellen, H, sr.....Willetts, Calif.
 Major, Betty Jane, LD, fr.....Palo Alto, Calif.
 Makinson, Cloyd B., A, so.....Halfway
 Maloney, Omer Joseph, CE, so.....Portland
 Maltby, Wilbur William, A, fr.....Alsea
 Mammano, Samuel Joseph, A, gr.....Corvallis
 Mandic, Frank Joseph, Ed, so.....Los Angeles, Calif.
 Maneely, Margaret Elizabeth, H, fr.....Corvallis
 Manley, Dorothy Mary, SS, fr.....Corvallis
 Manley, Harold Leonard, CE, so.....Los Angeles, Calif.
 Mann, Elwyn Fremont, F, jr.....Salem
 Mann, Jackie LaVerne, A, so.....Portland
 Mann, Margaret Mary, H, so.....Medford
 Mannheim, Robert Julian, SS, jr.....Bend

- Manning, Juanita Chaney, Ed, gr.....Corvallis
 Manning, Manford James, E, fr.....Corvallis
 Marble, Harold Arthur, ME, so.....Hermiston
 March, June May, H, sr.....Corvallis
 Marcy, Ben Hall, ME, so.....Portland
 Marcy, Donald Eugene, Z, so.....Portland
 Markley, Merle H., A, sr.....Hood River
 Marks, Francis Joseph, CE, sr.....Portland
 Marks, Leslie Jack, A, fr.....Imnaha
 Marquis, Mary Alice, Ed, jr.....Portland
 Marsden, Douglas Jeremiah, EE, so.....Molalla
 Marsh, Mary Elizabeth, H, fr.....Lookingglass
 Marsh, Thomas Parker, Ch, gr.....Portland
 Marshall, Larry Thomas, F, fr.....Vernonia
 Martin, Charles William, EE, jr.....Portland
 Martin, Dorothy Kathryn, H, fr.....Eugene
 Martin, Douglas John, ME, so.....Corvallis
 Martin, Hollis Glee, SS, jr.....Salem
 Martin, Jack, CE, sr.....Hermiston
 Martin, Jack Constantine, E, fr.....Newport
 Martin, Jack Philip, F, fr.....Gold Hill
 Martin, James Allen, SS, fr.....Portland
 Martin, Richard Eldon, Ed, sr.....Hermiston
 Martin, Violet Ida, SS, jr.....Westport
 Martin, William Douglas, ME, so.....Newport
 Martin, Winifred Louise, H, jr.....Cutler City
 Martin, Yvonne Margaret, SS, so.....Bend
 Mason, Gerald Ellis, A, jr.....Salem
 Mason, John William, F, so.....Beaverton
 Mason, Melvin Elmer, F, fr.....Yamhill
 Massey, Helen Marie, H, jr.....Portland
 Massey, Ona Mae, SS, so.....Klamath Falls
 Massey, Walda Belle, SS, sr.....Corvallis
 Masson, Wilfred Victor, A, so.....Mt. Vernon
 Masters, Forrest Edmund, F, fr.....Corvallis
 Mathes, Jr., Adolphe Joseph, ChE, fr.....
Portland
 Mathews, Ernest Everett, A, jr.....Portland
 Mathews, Keith Wayne, CE, so.....Salem
 Mathews, Willis Woodrow, LD, so.....
Tillamook
 Mathisen, June Charlotte, SS, fr.....Hillsdale
 Mathisen, Leonard Martin, A, jr.....Hillsdale
 Matlock, William Budd, CE, jr.....Tillamook
 Materi, Roy Robert, Sc, sr.....Portland
 Matthaei, Margaret Beulah, H, so.....
Tacoma, Wash.
 Matz, Homer Fred, ChE, so.....Portland
 Maus, Calvin Donald, F, so.....Thurston
 Maxwell, Margaret Ethel, H, sr.....Portland
 May, Stanley Woodrow, F, fr.....Grants Pass
 Mayer, Joella Anna, H, so.....Lebanon
 Mayer, Lawrence William, IA, sr.....
Helena, Mont.
 Mead, Dorothy Ellen, H, so.....Corvallis
 Mead, Helen Amber, H, so.....Wallowa
 Meador, Raymond Hugh, ChE, so.....
Oregon City
 Meagher, Cecelia Frances, SS, fr.....Portland
 Meagher, Winnifred, SS, so.....Portland
 Mealey, Keith, EE, so.....Gresham
 Medlock, Jr., Frendy Dee, E, fr.....Gaylord
 Mee, Robert Sanford, SS, fr.....Portland
 Meeker, Everett, LD, fr.....Vernonia
 Meeker, Herbert Wade, LD, so.....Portland
 Mehlhaf, Richard William, A, fr.....Portland
 Meier, Harold Samuel, IA, so.....Corvallis
 Meier, Herbert John, IA, sr.....Corvallis
 Meiners, Henry Cito, ChE, sr.....Portland
 Meius, Hilda Mildred, SS, jr.....Dundee
 Melis, Alphons Richard, A, sr.....Mist
 Melis, Charles Knowles, A, fr.....Vernonia
 Melson, Lewis Byron, CE, sp.....Salem
 Melvin, Louis Chester, LD, so.....Portland
 Mendenhall, Bob Lewellyn, BAD, fr.....
Portland
 Menig, Margaret Faye, H, jr.....Portland
 Menig, Mary Jane, H, sr.....Portland
 Menkenmaier, Beatrice Frances, A, so.....
Fort Rock
 Mercer, Carl I., LD, so.....Rainier
 Mercer, Franklin Bruce, E, fr.....Condon
 Mercer, James Irvin, Ed, so.....Marcola
 Mercer, Maurice Edwin, G, jr.....Salem
 Mercer, Nedra F., SS, jr.....Condon
 Mercer, Robert Fressler, CE, so.....Condon
 Merewether, Fremont Walter, F, so.....
Willamina
 Mergentime, Max, Ch, gr.....Brooklyn, N. Y.
 Merkle, Mary Jane, H, so.....Portland
 Merriss, Martin Daniel, Sc, so.....Portland
 Merryfield, Mildred Minor Berkeley, H, jr.....
Corvallis
 Merryman, Arthur Dittmar, Ed, sr.....Corvallis
 Mersdorf, Frank Steiner, F, fr.....Eugene
 Mershon, Carroll McBride, A, so.....Corvallis
 Mershon, James Lyle, ME, gr.....Corvallis
 Mesler, Franklin Merrill, A, so.....
Gaspport, N. Y.
 Metcalf, Cecelia Edith, H, so.....Corvallis
 Metcalf, Laurence R., CE, sr.....Hood River
 Metcalf, Lois Elaine, H, gr.....Corvallis
 Metzger, Marjorie Noreen, H, sr.....Salem
 Metzler, Marian Crandell, SS, fr.....Beaverton
 Meyer, Donald Dale, ME, jr.....Portland
 Meyer, Franklin Allen, BAD, fr.....
Chicago, Ill.
 Meyer, Margaret Marie, H, fr.....Dundee
 Meyer, Ruth Angeline, Ed, gr.....Corvallis
 Meyer, William Fredrick, Ch, sr.....Corvallis
 Meyer, William George, EE, so.....Dundee
 Meyers, Margaret Jean, H, fr.....Portland
 Michael, Robert Ray, EE, so.....Junction City
 Micka, Georgia Mae, H, fr.....Main
 Mickel, Gilbert T., ChE, jr.....Mt. Angel
 Miers, Edward John, E, fr.....Portland
 Mikesell, Keith Leon, E, fr.....Portland
 Miles, Carter Earl, A, fr.....Oregon City
 Miles, Clark Walter, Sc, sr.....Portland
 Millak, Madge, SS, fr.....Portland
 Millar, Robert Darwin, A, sr.....Portland
 Millard, Homer Carl, A, jr.....Scotts Mills
 Millard, Kenneth Fred, F, fr.....Alsea
 Miller, Aaron, Ch, sr.....Portland
 Miller, Barbara Belle, H, fr.....Salem
 Miller, Carol Dudley, A, so.....Harrisburg
 Miller, Dale Lawrence, ME, so.....Portland
 Miller, Dorothea Louise, SS, fr.....Clatskanie
 Miller, Ellen Walton, H, so.....Portland
 Miller, Fred Earnest, LD, fr.....Junction City
 Miller, Harley Ray, E, fr.....Wallowa
 Miller, Jack Raif, BAD, jr.....Portland
 Miller, James Garfield, Ed, jr.....Portland
 Miller, Jane Evelyn, SS, so.....Portland
 Miller, Katherine Estella, H, so.....Salem
 Miller, Mabel Jean, LD, fr.....Hood River
 Miller, Marolyn Dale, A, so.....Berwyn, Ill.
 Miller, Phillip Earl, E, fr.....Stayton
 Miller, Phyllis Ann, H, fr.....Eugene
 Miller, Ronald Thomas, E, fr.....Portland
 Miller, Roy Willard, LD, fr.....Fossil
 Miller, Sarah Earnheart, LD, fr.....Pendleton
 Miller, Stanley Lester, LD, fr.....Corvallis
 Miller, Susan Rosenstock, H, so.....Corvallis
 Miller, Thelma Agnetta, Ed, sr.....The Dalles
 Miller, Wallace J., A, gr.....Hood River
 Miller, William Patrick, E, so.....Portland
 Mills, Allen Fred, A, so.....Cove
 Mills, Ila, SS, so.....Salem
 Mills, Jacqueline B., H, so.....Corvallis
 Mills, Jene Earl, F, sr.....Zig Zag
 Mills, Marjorie Ann, SS, so.....Corvallis
 Mills, Victor Blackford, ME, jr.....Portland
 Milne, Bessie, H, sr.....Corvallis
 Milne, Elizabeth Ann L., SS, so.....La Grande
 Milne, Evangeline, Ed, sr.....Corvallis

- Newhouse, Everett Howard, P, jr. Portland
 Newhouse, Neil William, E, fr. Portland
 Newman, John Graham, E, so. Long Island, N. Y.
 Newman, Kenneth Raycraft, A, gr. Hoosac, Turnell, Mass.
 Newman, Richard Joseph, EE, jr. Long Island, N. Y.
 Newport, Earl Milton, P, so. Tangent
 Newsom, Gail Stuart, ME, jr. Halsey
 Nibler, Gerald, A, sr. Aurora
 Niblock, Russell Ambler, F, so. Scappoose
 Nichols, Addeen, H, jr. Lebanon
 Nichols, Beulah B., Ed, fr. Heppner
 Nichols, Ivan Kaye, G, sr. Oregon City
 Nichols, Leonard Dean, A, fr. Nyssa
 Nicholson, Delbert Peyton, F, fr. Fossil
 Nicholson, Esther Emaline, H, so. Portland
 Nicholson, Lillian LaVaughn, SS, jr. Portland
 Nicholson, Russel Albert, A, so. Corvallis
 Nickachiou, Mary, SS, fr. Portland
 Nickelsen, Martin Day, ChE, fr. The Dalles
 Nicol, Albert Peter, ME, sr. Corvallis
 Nicolaides, Mabel Elizabeth, H, fr. Philomath
 Nicolaison, Hans, A, sr. McMinnville
 Nicolescu, George Vernon, P, so. Richland
 Niebauer, Bette Mary, Bac, so. Oregon City
 Niederer, Eileen Louise, H, fr. Multnomah
 Niedermeyer, Erma Louise, LD, fr. Medford
 Nielsen, Lawrence Cottrell, LD, fr. Bend
 Nielsen, Tom Frederick, F, so. Whittier, Calif.
 Nielson, Roderick, A, fr. Bandon
 Nihil, Frank Michael, Ed, sr. San Francisco, Calif.
 Niles, Richard Downing, A, fr. Portland
 Nill, Martin William, LD, fr. Clarno
 Nilson, June Vivian, SS, jr. Portland
 Nippold, Justin Edward, LD, fr. Corvallis
 Nish, Marjorie Emma, H, sr. Mikkala
 Nisley, Joe Edward, ME, so. Roseburg
 Nixon, George A., ME, so. Corvallis
 Noble, Marvin Boone, A, sr. Corvallis
 Noce, Jack Madison, BAD, so. Portland
 Nock, Thomas Gilbert, ChE, sr. Baker
 Nomura, Elsie Kimiko, H, so. Portland
 Nordling, Barton Gustave, ME, so. Eugene
 Norman, Jean Elizabeth, SS, so. Portland
 Norman, Stanley Oscar, F, jr. Portland
 Northcraft, Herbert L., E, fr. Brockway
 Northrop, Paul Edward, ChE, fr. Portland
 Norton, Authene, H, gr. Berkeley, Calif.
 Norton, Constance M., H, sr. Corvallis
 Nosler, Mary Lou, SS, fr. Coquille
 North, Vivian E., H, so. Salem
 Nunamaker, James Robert, A, so. Hood River
 Nunnenkamp, William Edward, SS, jr. Portland
 Nye, Sara Margaret, H, jr. Coquille
 Nylander, Mildred Katharine, SS, so. North Bend
 O'Connor, Lowell LeRoy, Ed, jr. Portland
 O'Mealy, Burton F., CE, sr. Portland
 O'Neill, Thomas F., G, sr. Forest Grove
 Oathes, Lenard Murl, ME, so. Astoria
 Oeser, Arthur James, P, so. Chowchilla, Calif.
 Oetjen, Marie Emma, SS, jr. Corvallis
 Oifer, Frank Robert, E, fr. Portland
 Oglesby, Andrew Jackson, F, fr. Eugene
 Oglesby, Gladys Mae, H, gr. Corvallis
 Ohlsen, Harry, F, jr. Yoncalla
 Oium, Eleanor Augusta, SS, fr. Ashland
 Okada, Takako, H, jr. Tokyo, Japan
 Oldfield, George Murray, LD, fr. Milwaukie
 Oleman, Annabelle Mae, H, so. The Dalles
 Olesen, Edwin O., E, fr. Portland
 Oleson, Ruth Margaret, H, jr. Portland
 Oliphant, Fern Opal, SS, so. Portland
 Oliva, Geraldine Mary, SS, so. Rainier
 Oliver, Joe Coyton, A, so. John Day
 Olliver, Mary Louise, SS, sr. Albany
 Olsen, Edgar Howard, EE, jr. Portland
 Olsen, John William, ChE, jr. Baker
 Olson, Clara Jean, SS, jr. Talent
 Olson, Douglas Herman, ME, so. Portland
 Olson, Edwin Richard, A, jr. Corvallis
 Olson, Robert D., A, fr. Talent
 Olts, Charles Alfred, F, jr. Grants Pass
 Oman, Henry, EE, so. Milwaukie
 Onishi, George Toshio, A, so. Portland
 Oorthuys, Catherine Marie, SS, sr. Corvallis
 Orell, Bernard Leo, F, jr. Portland
 Orey, Millard, F, fr. Salem
 Ormandy, Mary Frances, H, fr. Portland
 Orner, Ray B., F, fr. Stirling City, Calif.
 Orr, James Clifford, Ed, so. Grants Pass
 Orr, Joan E., H, sr. Pendleton
 Osanik, Alec, G, so. Astoria
 Osborn, George Palmer, F, jr. Oregon City
 Osborne, Frederic Hurl, F, fr. Grants Pass
 Osborne, Gilbert B., A, fr. Tulelake, Calif.
 Ospovich, Bernard Abraham, E, fr. Portland
 Osterloh, Wilbur Marshall, BAD, jr. Beaverton
 Ostlind, Jack, F, so. Salem
 Ostrom, Harvey William, ME, jr. Astoria
 Othman, Ture Edward, ME, sr. Astoria
 Otis, Chester E., A, so. Corvallis
 Otley, Harold D., LD, fr. Drewsey
 Ott, Edna Ellen, H, sr. Hermiston
 Ottaway, George Hollis. Aurora
 Ottoman, Robert Lee, F, so. Medford
 Owen, Clara Josephine, SS, fr. Oswego
 Owens, Victor Gustiv, Ed, so. Dayville
 Packard, Mildred Lucy, Ed, gr. Corvallis
 Page, Lawrence Fremont, Ed, jr. Burns
 Painter, Dean Edgar, A, sr. Corvallis
 Palmberg, Walter Henry, Ed, so. Corvallis
 Palmer, Edith Neighbor, H, gr. Ontario
 Palmer, Juen Erla, P, fr. Klamath Falls
 Palmer, Marcellus A., F, jr. Corvallis
 Palmer, Marion Walter, Ed, fr. Corvallis
 Palmer, Maxine Angeline, H, fr. Ontario
 Panero, Frances Louise, SS, so. Delano, Calif.
 Panziera, James Titus, ME, so. Salinas, Calif.
 Pardey, Herman Joseph, EE, so. Aurora
 Parent, James Fred, A, fr. Freewater
 Paris, Andrew John, F, fr. Salem
 Paris, Daniel A., F, fr. Sheridan
 Parker, Dean Nelson, A, sr. Multnomah
 Parker, Dorothy, LD, fr. Portland
 Parker, Elizabeth Rose, Ed, so. Ontario
 Parker, Harry Birdette, A, so. Corvallis
 Parker, Lillian Josephine, LD, fr. Woods
 Parker, Paul M., ME, so. Corvallis
 Parker, Ralph Evans, BAD, so. Portland
 Parker, Robert Edward, A, fr. Corvallis
 Parkhurst, Elma Vera, H, fr. Eugene
 Parks, Alton Lloyd, F, so. Newport
 Parks, Floyd Elwood, A, fr. Elgin
 Parks, Robert, ME, so. Portland
 Parman, Margaret Ann, H, fr. Condon
 Parmelee, William Goodell, Ph, so. Hood River
 Parmenter, Russell Dale, IA, so. Corvallis
 Parrish, Virginia Louise, LD, so. St. Helens
 Parsons, Alfred Waugh, CE, jr. Portland

- Powell, Helen Victoria, H, so.....Piedmont, Calif.
 Powell, James Wilson Eyre, EE, sr.....Portland
 Powell, Mary Lou, H, so.....Corvallis
 Powell, William Henry, LD, fr.....Weston
 Pratt, Jr., Edwin Hart, BAD, fr.....Corvallis
 Pratt, Emerson Trefren, Ed, sr.....Ashland
 Pratt, Ernest F., Ch, gr.....Redlands, Calif.
 Pratt, Frederick James, F, sr.....Arcadia, Calif.
 Pratt, Harland Leo, A, jr.....Corvallis
 Pratt, Keith Morris, A, so.....Corvallis
 Pratt, Ruth Ingham, H, so.....Portland
 Presley, James Witt, ChE, fr.....Portland
 Pressler, Claude D., EE, so.....Myrtle Point
 Prewitt, Gordon, Z, so.....Waldport
 Pribnow, Andy Walter, F, so.....Portland
 Price, Catherine, H, so.....Weston
 Price, Dorothy Alice, H, sr.....Corvallis
 Price, Margery Lee, H, so.....Glide
 Prickett, Earl Kenneth, F, so.....Silverton
 Prickett, Oradell Rose, H, so.....Silverton
 Prideaux, John Arthur, F, so.....Portland
 Prindle, Harold F., A, jr.....Corvallis
 Pritchett Robert James, E, fr.....Grants Pass
 Pritchett, Wilson Stanley, EE, so.....Vale
 Prohaska, Leslie Clarence, F, fr.....Portland
 Prouty, Marion Isobel, SS, so.....Warrenton
 Prouty, Ray Arthur, IA, so.....Astoria
 Pruess, Robert Clare, LD, so.....Grants Pass
 Pruitt, Irene, H, jr.....Merrill
 Pryor, John Hadley, Bot, gr.....Corvallis
 Pugh, Paul Richard, A, so.....Shedd
 Pulliam, Harold Keeley, ChE, fr.....Portland
 Purchase, Elnor Levina, H, so.....Pendleton
 Quigg, Margaret Mary, H, fr.....Hoquiam, Wash.
 Raasina, Roy Milton, ME, jr.....Astoria
 Rackstray, Leonard Twyman, G, jr.....Palo Alto, Calif.
 Rada, Eduard Louis, A, gr.....Mill City
 Radcliffe, Tom Heber, F, fr.....Klamath Falls
 Raddon, Peggy Ann, H, jr.....Portland
 Radford, William Ray, J, so.....Corvallis
 Radliff, Richard Allen, A, fr.....Hood River
 Ragsdale, Elbert, A, so.....Rickreall
 Rahn, James Joseph, Sc, sr.....Corvallis
 Raisko, Oliver Edward, Ed, sr.....Portland
 Raisig, Robert, ChE, jr.....Portland
 Ralph, Betty Margaret, H, jr.....Hermiston
 Ralph, Charlotte, LD, fr.....Hermiston
 Rampton, Leonard Hardy, F, gr.....Bountiful, Utah
 Ramsay, Richard Dale, F, fr.....Corvallis
 Ramsdell, Margaret Catherine, H, fr.....Lakeview
 Ramsdell, Millard Arthur, A, so.....Corvallis
 Ramsey, Frank, Ed, sr.....Aberdeen, Wash.
 Ramstack, Sylvester Charles, F, so.....Milwaukee, Wis.
 Randall, Howard Lester, EE, so.....Portland
 Randleman, Merle Jason, A, fr.....Myrtle Point
 Randrup, Charles William, F, jr.....Susanville, Calif.
 Rands, Norman Harold, SS, sr.....Portland
 Rankin, Lewis Myers, F, fr.....Eugene
 Ransdell, Helen Elizabeth, H, so.....Portland
 Rasaka, Lawrence John, A, jr.....Dayton
 Raschio, Dario Michael, Sc, sr.....Portland
 Raser, Jr., William Vincent, F, so.....Portland
 Rasmussen, Irene L., H, fr.....Junction City
 Rator, James Jerome, LD, so.....Canyonville
 Rattray, William E., BAD, sr.....Condon
 Rau, Eloise Emily, SS, jr.....St. Helens
 Rauch, August Henry, F, fr.....Echo
 Rauch, Mary Ashby, H, jr.....Portland
 Rawie, Orval Henry, F, so.....Albany
 Rawls, Frederick Franklin, LD, fr.....Corvallis
 Rawls, Joseph A., F, so.....Corvallis
 Ray, Betty, H, jr.....Alhambra, Calif.
 Raynor, Carl Woodrow, F, jr.....Camby
 Rea, Howard Worthington, Ed, fr.....Corvallis
 Read, Edward Vernon, P, fr.....Waldport
 Read, Howard Kenneth, F, fr.....Culver
 Ready, Jr., Leland, EE, so.....Portland
 Rearden, Donald S., Sc, so.....Corvallis
 Redelings, Elizabeth Abbott, H, sr.....San Diego, Calif.
 Redelings, Margaret Abbott, H, jr.....San Diego, Calif.
 Redetzke, Emmalene Clara, H, jr.....Forest Grove
 Redifer, Vernice A., SS, fr.....Florence
 Reed, Claude Russel, ChE, so.....Medford
 Reed, Elnora, SS, so.....Grants Pass
 Reed, Genevieve, H, gr.....Portland
 Reed, Hanford Herschal, F, fr.....Elgin
 Reed, Richard Hill, LD, fr.....Burns
 Reed, Robert Little, A, so.....Amity
 Reeder, Daniel Avery, A, so.....Adams
 Reeder, Othol Howard, A, jr.....Helix
 Reese, Bill Thomas Carvasa, BAD, fr.....Los Angeles, Calif.
 Reetz, Mary, SS, so.....Corvallis
 Reeves, Elizabeth, Sc, sr.....Oak Grove
 Reeves, Jr., Marion Homer, LD, fr.....Oak Grove
 Reher, Alvin Gilbert, A, so.....Portland
 Reiber, E. Knowlton, F, jr.....Falls City
 Reichen, Laura Esther, Ch, sr.....Portland
 Reichle, Rosa L., H, fr.....Portland
 Reichwein, Edmund James, EE, so.....Portland
 Reid, Barbara, H, so.....Hermiston
 Reid, Curtis, Ph, gr.....Corvallis
 Reid, Frank David, A, sr.....Rufus
 Reid, Lenora Veda, Ed, fr.....Rufus
 Reilly, Marjorie Patricia, H, jr.....Parkdale
 Reinhart, William Steiwer, A, fr.....Fossil
 Reinke, Richard Harold, A, fr.....Rainier
 Reitz, Emory Elbert, IA, sr.....Salem
 Reitz, Margaret, H, fr.....Salem
 Renney, Clinton William, A, so.....Astoria
 Revell, Dorothy Frances, Sc, sr.....Bonanza
 Revell, Russell W., CE, sr.....Bonanza
 Rewa, Helen, H, sr.....Portland
 Rexford, Francis Lewis, E, fr.....Corvallis
 Reynolds, Donald Dean, ME, jr.....Corvallis
 Reynolds, Everett Joseph, SS, so.....La Grande
 Reynolds, Jane, SS, so.....Portland
 Reynolds, Jean Elizabeth, SS, so.....Corvallis
 Reynolds, Lenore Billie, H, sr.....Portland
 Reynolds, Ralph Kerr, ChE, fr.....Portland
 Reynolds, Vernon Dale, A, fr.....Prairie City
 Rhine, Dale David, BAD, so.....La Grande
 Rhyneason, Edna Silverthorne, Ed, so.....Corvallis
 Rice, Albert Leslie, AA, so.....Corvallis
 Rice, Charles Henry, A, so.....Governor's Island, N. Y.
 Rice, Don Brooks, LD, fr.....Chiloquin
 Rice, Edna B., SS, sp.....Paulina
 Rice, Jack Morley, LD, fr.....Governor's Island, N. Y.
 Rice, Leonard Leroy, ME, sr.....McMinnville
 Rice, Leonard Walter, A, so.....Grants Pass
 Rich, Marjorie Eloise, A, fr.....Hubbard
 Richards, Charles Selwyn, F, so.....Salt Lake City, Utah
 Richards, Dortha Bernice, LD, so.....Portland
 Richards, Harry Wilber, CE, sr.....Molalla
 Richards, Helen Marie, SS, so.....Condon
 Richards, Ralph Sidney, A, fr.....Corvallis
 Richardson, Kenneth Charles, E, fr.....North Bend

- Richardson, Paul Wilson, A, fr.....Portland
 Richardson, Richard LeVoyle, ME, so.....Bend
 Richardson, William Wesley, Bot, sr.....Portland
 Richelderfer, David Riker, A, fr.....Wasco
 Richens, Janet, LD, fr.....Corvallis
 Richens, Kent J., E, fr.....Corvallis
 Riches, Waldo Ashmead, A, sr.....Turner
 Richmond, Bernadette, H, sr.....Gardiner
 Richmond, Robert Milan, ME, jr.....Gardiner
 Rickert, Jr., Edward Norman, CE, sr.....Newberg
 Rickey, Leroy Edward, CE, so.....Salem
 Rickman, Helen Louise, SS, fr.....Powell Butte
 Ridders, Jim, A, sr.....Albany
 Ridders, Maria Veronica, LD, fr.....Albany
 Riechers, Robert Henry, A, so.....Portland
 Rieder, Robert Edward, Ent, gr.....McMinnville
 Riggs, Doris Charlotte, LD, so.....Dallas
 Riggs, Margaret Cecile, H, fr.....Dallas
 Riggs, Maxine, H, sr.....Portland
 Riggs, William McDonald, F, sr.....La Follette, Tenn.
 Rigor, Laurence Cecil, LD, fr.....Corvallis
 Riley, Patricia Bernice, SS, fr.....La Grande
 Riley, Thomas Elmer, E, fr.....Portland
 Rinchart, Merle Lee, H, fr.....Portland
 Riney, Anthol Wayne, A, so.....Monmouth
 Ring, Clarice Maxine, SS, so.....Portland
 Ring, George Edward, LD, fr.....Marshfield
 Ring, James Willard, LD, fr.....Marshfield
 Ringe, Truxton, EE, so.....Portland
 Ringham, Maynard Lesley, Ch, jr.....Milwaukie
 Riordan, Jr., Emmet F., LD, fr.....Long Beach, Calif.
 Rissman, Bob Paul, A, so.....Astoria
 Ristig, James Fredrick, IA, so.....Portland
 Riswick, Donald Vincent, E, fr.....Astoria
 Ritchie, John Walter, Sc, jr.....Eugene
 Rittenour, Ralph Clifford, A, sr.....Portland
 Roake, William Earl, LD, fr.....Oregon City
 Robbins, H. Allen, EE, so.....McMinnville
 Roberts, Alfred Nathan, A, jr.....Corvallis
 Roberts, Edgar Darrell, ME, so.....Marshfield
 Roberts, John Scott, A, jr.....San Dimas, Calif.
 Roberts, Laura Lorene, SS, so.....Toledo
 Roberts, Richard Fowler, E, fr.....Rhododendron
 Roberts, Verlin Clare, IA, jr.....Corvallis
 Robertson, Bettie Jean, SS, fr.....Portland
 Robertson, Ian Findlay, SS, so.....Portland
 Robertson, James J., CE, sr.....Oswego
 Robertson, James Wilfred, EE, so.....Carlton
 Robertson, Janet Ruth, SS, fr.....Salem
 Robertson, June Lois, H, so.....Pine
 Robertson, Morris, SS, fr.....La Grande
 Robertson, William Barr, F, fr.....Portland
 Robinson, Allen, A, so.....Prineville
 Robinson, Chester Lane, A, so.....Tigard
 Robinson, Dan D., F, so.....Bend
 Robinson, Eugene L., BAD, so.....Corvallis
 Robinson, Evelyn Rose, SS, fr.....Portland
 Robinson, Marjorie Fern, H, sr.....Fullerton, Calif.
 Robinson, Robert Wheatley, F, fr.....Portland
 Robinson, Walter Stanton, BAD, so.....Warrenton
 Robison, Doris Jean, IA, jr.....Taft
 Robison, Lural Lee, SS, fr.....Taft
 Robison, Orie Wilfred, A, jr.....Corvallis
 Robley, Asa Austin, IA, jr.....Corvallis
 Robson, William Leslie, F, jr.....Portland
 Rochester, Thomas M., LD, so.....Portland
 Rockwell, Robert Wynn, A, fr.....Pilot Rock
 Rockwood, David Murdock, CE, jr.....Portland
 Rodieck, Eldon LeRoy, Ent, so.....Anaheim, Calif.
 Rodley, Irving Sverre, E, fr.....Lookingglass
 Roemhildt, Merton Howard, F, so.....Salem
 Rogers, David Hale, F, so.....Portland
 Rogers, Donald Leslie, BAD, fr.....Klamath Falls
 Rogers, Eldon John, EE, so.....Portland
 Rogers, Howard Foskett, F, sr.....Corvallis
 Rogers, James Evan, A, so.....Klamath Falls
 Rogers, James Francis, BAD, so.....Portland
 Rogoway, Shirley Johanna, H, fr.....Portland
 Rohde, Elizabeth Henriett, LD, fr.....Cottage Grove
 Rohn, Donald Carl, F, sr.....Weston
 Rolfsness, Dorothea, H, jr.....Portland
 Rolfsness, Stanley Cornelius, A, gr.....Portland
 Romano, Anthony Thomas, A, so.....Long Beach, Calif.
 Romig, Dale Vernon, LD, so.....St. Helens
 Romiti, Mary Marian, Ed, sr.....Corvallis
 Rondeau, Wilma Miller, H, gr.....Corvallis
 Rood, Frank B., A, so.....Marshfield
 Rood, George Witte, A, fr.....Marshfield
 Rooney, John Wilcox, E, fr.....Portland
 Root, Donald G., A, fr.....Medford
 Root, Robert W., A, sr.....Medford
 Rose, Doris Anne, H, fr.....Newport
 Rose, Frances Electa, Ed, so.....Pocatello, Idaho
 Rose, Francis Harold, EE, sr.....Oswego
 Rose, Robert Leon, Sc, sr.....Parkdale
 Rose, Samuel Lancaster, F, sr.....Portland
 Rose, Stanley McDonald, ChE, jr.....Portland
 Rosebraugh, Vernon H., CE, sr.....Aloha
 Rosensteil, Robert George, Ent, gr.....Corvallis
 Roser, Walter Lloyd, A, so.....Roseburg
 Ross, Charles Donald, ME, so.....Dallas
 Ross, Charles Muckle, A, gr.....Corvallis
 Ross, Harry Balford, LD, fr.....Powers
 Ross, Melvina, H, sr.....Corvallis
 Rossman, Elmer Chris, A, fr.....Rawlins, Wyo.
 Rounds, Norman F., BAD, so.....Corvallis
 Routh, Daniel Jack, E, fr.....Eugene
 Rova, Lolita Elizabeth, BAD, fr.....Astoria
 Rowan, Edward DeWitt, ME, so.....Portland
 Rowe, Kathryn Eldoris, Ed, sr.....Salem
 Rowe, Margery, LD, fr.....Corvallis
 Rowland, John Alvin, Ph, sr.....Eugene
 Rowland, John Bougher, ChE, sr.....Corvallis
 Rowland, Priscilla, H, gr.....Salt Lake City, Utah
 Roy, Robert Emmanuel, ME, jr.....Portland
 Royer, Manuel Harry, LD, fr.....Ontario
 Royse, Ray, LD, fr.....Tule Lake, Calif.
 Rudat, Julia Marguerite, H, so.....Brownsmead
 Rudesill, Doris Louise, SS, fr.....Portland
 Rue, Waldo, LD, fr.....Silverton
 Rueber, Nadine, LD, fr.....Stanfield
 Ruef, Mary Madelene, LD, fr.....Portland
 Ruegg, Robert George, F, jr.....Boring
 Ruggles, Judson Gilbert, LD, so.....Hood River
 Rugh, Robert Loyall, Mth, sr.....Eugene
 Rugland, Raymond, F, fr.....Beaverton
 Ruhkala, Roy Enock, F, fr.....Rocklin, Calif.
 Runckel, William Justus, Sc, so.....McCloud, Calif.
 Runyan, Marvin Willard, CE, so.....Mulino
 Rusk, Bert S., Ch, gr.....Salem
 Russell, Etta Belle, H, so.....Corvallis
 Russell, Eugene LeRoy, A, jr.....Falls City
 Russell, Joseph Phillips, F, jr.....Grants Pass
 Ruth, Jack L., CE, jr.....Eugene

- Rutherford, Charles Kenneth, A, so.....Bend
 Rutherford, Clarence Earl, F, so.....Eugene
 Rutherford, Mary Eleanor, LD, fr.....Corvallis
 Rutherford, John Alfred, ME, jr.....Portland
 Rutschman, Carl Ferdinand, A, so.....
 Monmouth
 Rutter, Rex Paul, BA, fr.....Albany
 Ruzic, Helen Mae, H, jr.....Salem
 Ryklanski, Lazar, Ch, jr.....San Mateo, Calif.
- Salisbury, Marion Clarence, LD, fr.....Burns
 Salo, Michael Eric, A, jr.....Burns
 Sampert, Herbert Conrad, F, so.....Portland
 Samsel, Dorothy Tennessee, SS, jr.....
 Hillsboro
 Samsel, James Richard, SS, so.....Hillsboro
 Samson, Charles P., F, sr.....Corvallis
 Samson, Georgena Pettingell, Ed, gr.....
 Corvallis
 Samson, Lavonne Mildred, H, so.....Portland
 Sand, Harold Eugene, BA, fr.....Portland
 Sandberg, James Edwin, ME, so.....Portland
 Sanders, Dorothy Louise, Ed, sr.....Albany
 Sanders, Fredrick A., Ed, fr.....Portland
 Sanders, George Henry, A, sp.....Albany
 Sandidge, Madeline Louise, H, fr.....Neskowin
 Sandoz, Ali June, F, so.....Corvallis
 Sandoz, Emile H., IA, jr.....Corvallis
 Sandoz, Fred J., F, so.....Corvallis
 Sandoz, Lois Marie, SS, so.....The Dalles
 Sandquist, Harry Rudolph, A, sr.....Roseburg
 Sands, Mary J., H, jr.....Corvallis
 Sandstrom, Robert, BA, fr.....Corvallis
 Sanford, W. Neuman, LD, fr.....
 Elbow Lake, Minn.
 Santoro, Lena, H, sr.....Beaverton
 Saremal, Hazel Arline, H, jr.....Milwaukie
 Sargent, Merrill Franklin, SS, so.....Portland
 Sargent, Walter Frank, F, so.....Gales Creek
 Sasaki, Thomas Toshio, EE, so.....Portland
 Sasser, Arthur Harold, F, so.....Canyon City
 Sasser, Robert Paul, SS, sr.....Fossil
 Sato, Lillian Mitsuko, SS, so.....Parkdale
 Sato, Mark Kinya, A, jr.....Parkdale
 Sato, Ray, A, so.....Parkdale
 Satterlund, Peter Bertell, A, fr.....Corvallis
 Saubert, Clifton Sidney, IA, so.....Florence
 Saunders, Elton S., F, so.....Halfway
 Saunders, Ernest Dow, A, so.....Warrenton
 Saunders, George Edward, A, so.....Eugene
 Saunders, Georgia Eileen, SS, so.....Corvallis
 Saunders, Ivan Lucian, ME, jr.....Corvallis
 Saunders, Maifair J., SS, fr.....Alvadore
 Sauter, Jean Margaret, H, fr.....Portland
 Savage, Billie, H, so.....Pendleton
 Savage, Dorothy Alice, H, so.....Portland
 Savage, Dorothy Elizabeth, SS, so.....Oswego
 Savage, Margaret Elizabeth, SS, so.....
 Cottage Grove
 Savage, Robert James, LD, so.....Portland
 Sawyer, Robert Howard, A, sr.....De Lake
 Sawyer, Wallace Alexander, LD, so.....
 Oswego
 Sawyer, Walter MacGregor, Sc, so.....Oswego
 Saxton, Albert W., AA, fr.....Corvallis
 Saxton, John Russell, E, fr.....Corvallis
 Sayer, J. Richard, EE, so.....Halsey
 Sayre, Robert Francis, F, fr.....Oakridge
 Scales, Edna A., SS, fr.....Portland
 Schaad, Carl W., A, jr.....Newberg
 Schaad, Lawrence Werth, A, fr.....Newberg
 Schaad, Loyd Otto, Bot, sr.....Newberg
 Schall, Mary Fay, H, so.....Ontario
 Scheetz, Victor, SS, fr.....Portland
 Scheifer, Edward Harold, A, sr.....Corvallis
 Schell, Charles Otto, A, so.....Ventura, Calif.
 Schell, Elizabeth Jean, LD, fr.....Corvallis
 Schell, Margaret, SS, jr.....Corvallis
 Schenck Albert James, LD, so.....Sherwood
- Schenk, Herman Daniel, F, so.....Portland
 Schermerhorn, Elizabeth Jean, H, so.....
 Forest Grove
 Scheurman, Birney O., H, sr.....Vernonia
 Schiewe, Eugene Carl, CE, so.....Portland
 Schlapkohl, Martha, H, sr.....Ontario
 Schlender, Alice Ethlynn, SS, so.....Corvallis
 Schmokel, Melvin Henry, CE, jr.....Portland
 Schneider, Francis Leo, A, fr.....Corvallis
 Schneider, Irvin J., P, jr.....Shaw
 Schneider, Phillip William, A, fr.....Corvallis
 Schobert, Charles Robert, ChE, fr.....Portland
 Schoeler, Marie Louise, H, so.....Corvallis
 Schoenborn, Arthur Frank, LD, so.....Mulino
 Schoenborn, Richard Henry, A, jr.....Mulino
 Schoenfeld, Benjamin Franklin, LD, fr.....
 Corvallis
 Schram, Frank Davis, IA, jr.....Coquille
 Schrepel, Florence Wilma, H, so.....Corvallis
 Schriver, Frank Parry, F, jr.....
 Sheridan, Wyo.
 Schroeder, Edward Allen, F, so.....
 Decatur, Ill.
 Schroeder, George Stephen, LD, fr.....
 Klamath Falls
 Schroeder, Jack J., LD, fr.....
 Long Beach, Calif.
 Schroeder, John Edward, F, so.....Mill City
 Schroeder, John Price, A, so.....Arago
 Schroeder, Lois Lillian, H, so.....Corvallis
 Schroeder, William, ChE, jr.....Marshfield
 Schube, William Walter, LD, fr.....Portland
 Schule, Thomas Grant, EE, so.....Portland
 Schuler, Mary M., H, so.....Hood River
 Schulmerich, Alvin Leroy, A, so.....Hillsboro
 Schulmerich, Carnes, A, fr.....Junction City
 Schultz, Eberle Hynson, EE, so.....
 Oregon City
 Schultz, George Carl, E, fr.....Oregon City
 Schulz, Paul Emil, F, fr.....Oregon City
 Schulz, Robert Donald, SS, jr.....Portland
 Schulz, Rosemae Marie, SS, so.....Portland
 Schumacher, Fred Louis, A, jr.....Portland
 Schumann, Charles Pershing, ChE, fr.....
 Baker
 Schwab, Arland Albert, Ed, so.....Silverton
 Schwab, M. Jo, LD, fr.....Astoria
 Schwabke, Harold Irwin, A, fr.....Imbler
 Scofield, John Earle, E, fr.....Eugene
 Sconce, Ralph Willard, ME, jr.....Portland
 Scott, Alfred Warren, A, fr.....Wallowa
 Scott, Byron Clarendon, LD, so.....Tangent
 Scott, Douglas McGill, A, fr.....Burns
 Scott, Floyd Winfield, F, sr.....Marshfield
 Scott, Gene William, F, so.....Tillamook
 Scott, Gordon Lowell, CE, so.....Corvallis
 Scott, J. Jay, A, fr.....Athena
 Scott, Phyllis, H, fr.....Lyons
 Scott, Roger, Ent, gr.....Etiwanda, Calif.
 Scott, William Ronald, ME, so.....Portland
 Scruggs, Louis Benjamin, A, so.....Beaverton
 Scudder, Robert Desborough, LD, so.....
 Corvallis
 Scullen, Ruby M., H, sr.....Corvallis
 Sears, Raymond Louis, A, fr.....Eugene
 Sears, Victor Wilson, E, fr.....Eugene
 Seberg, Frank, Joseph, E, fr.....Portland
 Seely, Lyman Everett, SS, sr.....Woodburn
 Seeley, Vernon Edgar, EE, sr.....Independence
 Seghetti, Libero, A, gr.....Eatonville, Wash.
 Sehl, Mona Elizabeth, SS, jr.....Oswego
 Selberg, Burton Claire, SS, so.....Portland
 Selby, Robert Perl, EE, so.....Corvallis
 Sellars, Dorothy Charlotte, H, fr.....Portland
 Selleck, James Reece, F, fr.....The Dalles
 Semmler, William H., F, so.....Portland

- Semon, Gretchen Louise, H, jr.....Klamath Falls
 Senders, Ralph S., SS, sr.....Albany
 Seppanen, Irja, Ed, so.....Portland
 Serafin, Peter Barry, F, so.....Glide
 Setala, Verner Arnold, EE, so.....Dayton
 Setzer, James Dallas, Sc, jr.....Portland
 Sexton, Frances Viola, H, so.....Pendleton
 Sexton, Harold W., CE, so.....The Dalles
 Seydel, Rodney Al, P, jr.....Corvallis
 Shafer, Viola Brainerd, H, jr.....Corvallis
 Shambrook, George Dixon, A, sr.....Roseburg
 Shapiro, Max, P, so.....Brooklyn, N. Y.
 Shattuck, Donald Lynn, E, fr.....Hillsboro
 Shaver, Virginia Lee, Ed, fr.....Portland
 Shaw, Charles Allison, ChE, fr.....Portland
 Shaw, Clayton Albert, F, fr.....Walla Walla, Wash.
 Shaw, Mary Jane, H, so.....Woodburn
 Shaw, Robert Cyril, LD, fr.....Portland
 Shaw, Robert Kermit, BAD, so.....Portland
 Shearer, Wilbur Thomas, F, fr.....Forest Grove
 Sheehy, Margaret Barron, A, so.....Portland
 Sheets, William Fredrick, G, jr.....Medford
 Sheldon, Russell Hal, A, so.....McMinnville
 Shelley, Kathryn Lucille, SS, so.....North Bend
 Shepard, Allan Leroy, LD, so.....Silverton
 Shepard, David Stanley, A, sr.....Salem
 Shepard, Ruth Lorayne, SS, so.....Salem
 Shepherd, Jack Edward, BAD, so.....Toledo
 Shepherd, Mary Louise, AA, jr.....Pomona, Calif.
 Sherer, Yates, LD, fr.....Tangent
 Sherman, Clyde Keener, CE, sr.....Klamath Falls
 Sherman, Roger Q., F, so.....Portland
 Sherwood, Jr., Aris M., AA, jr.....Newberg
 Sherwood, Catherine Eleanor, H, so.....Corvallis
 Sherwood, Henry, G, so.....Portland
 Sherwood, Stan Edgar, F, fr.....Burns
 Shetterly, Kenneth E., LD, fr.....Willamina
 Shields, Lela Lucile, H, fr.....Amity
 Shiley, William Arthur, F, so.....Multnomah
 Shinn, Bobbe, LD, fr.....Salem
 Shoemaker, Andrew Daniel, F, jr.....Baker
 Shoen, Leonard Samuel, LD, fr.....Corvallis
 Shogren, George McKenzie, A, gr.....Reno, Nevada
 Shook, Elizabeth Florence, H, so.....Halfway
 Shook, W. Leroy, A, fr.....Halfway
 Short, Charles Harry, SS, jr.....Portland
 Short, Dwight Leland, F, so.....Medford
 Short, Ruth Elizabeth, A, so.....Portland
 Short, Stuart Robert, LD, so.....Portland
 Shown, Jean Ensign, H, jr.....Milwaukie
 Shriner, Lois Frances, SS, so.....Estacada
 Shuck, Elma Marjorie, H, so.....Corvallis
 Shuck, Stella R., SS, jr.....Klamath Falls
 Shultz, Virginia Melinda, H, fr.....Portland
 Shumard, Arthur Walden, A, jr.....Weston
 Shy, George Milton, A, so.....Albuquerque, New Mexico
 Sickels, Harold Adrian, A, fr.....Halsey
 Sidey, Delphine Susan, H, so.....Portland
 Sieben, Herbert U., F, fr.....Clackamas
 Sieg, Norbert LeRoy, A, so.....Baker
 Siegenthaler, Raymond Frederick, SS, sr.....Portland
 Siegfried, Marian Steele, H, fr.....Multnomah
 Siegner, Constance Elizabeth, H, so.....Portland
 Siemens, David R., LD, fr.....Salem
 Sigovich, Marion Nicholas, ChE, jr.....Portland
 Silvertooth, Mildred Elizabeth, LD, fr.....Antelope
 Simkin, Robert Stuart, A, so.....Long Island, N. Y.
 Simkins, Leneve Marie, SS, sr.....Cottage Grove
 Simonds, Catherine Doris, H, jr.....Bonners Terry, Idaho
 Simonds, John Kendall, A, so.....Portland
 Simons, Adelia, LD, so.....Corvallis
 Simonsen, Ruth Eleanor, SS, fr.....Portland
 Simpson, Joe Fain, F, gr.....Monmouth
 Sims, Earl Rodney, A, so.....Metzger
 Sims, Pauline Elizabeth, SS, fr.....Portland
 Simson, Catherine M. Cave, H, gr.....Chico, Calif.
 Singer, Lewis Parmerlee, EE, sr.....Lincoln, Calif.
 Sires, Charles Roland, CE, so.....Portland
 Sitton, Dudley Lee, A, so.....Carlton
 Sitton, Gordon Russell, A, so.....Carlton
 Sjoblom, Erhard, ME, so.....Hood River
 Skeans, Harold Raymond, A, so.....Rainier
 Skegrod, Iva Marie, LD, so.....Portland
 Skibinski, John Francis, SS, so.....Portland
 Skinner, Thomas George, A, so.....Jordan Valley
 Skoog, Douglas Arvid, Sc, so.....Portland
 Skyles, Richard Kent, F, jr.....Astoria
 Slade, Arthur MacDonald, BAD, fr.....Vancouver, B. C.
 Slagsvold, Louise Ambjorg, SS, so.....Bend
 Slater, Daniel William, A, jr.....Tigard
 Slayton, Ed, P, fr.....Corvallis
 Slayton, Harriett Richards, H, sr.....Corvallis
 Sloan, Earl Dennis, SS, so.....Hines
 Slonecker, Howard James, F, sr.....Corvallis
 Slottee, John Norman, F, fr.....Astoria
 Sly, Robert E., CE, so.....Creswell
 Small, Jessie Margaret, H, jr.....Silverton
 Smart, James Scott, A, fr.....Salem
 Smiley, Cornelia Erlean, SS, jr.....Freewater
 Smiley, G. Elmer, A, sr.....Freewater
 Smith, Alan Theodore, ME, so.....Klamath Falls
 Smith, Anson Henry Pete, F, jr.....Portland
 Smith, Britt Magraw, ME, sr.....Milwaukie
 Smith, Catherine, SS, jr.....Albany
 Smith, Dan Lee, EE, jr.....Milwaukie
 Smith, Jr., Earl, BAD, fr.....Condon
 Smith, Edgar Wilson, LD, fr.....Condon
 Smith, Edward Donald, Bac, jr.....Portland
 Smith, Edward Doyle, SS, jr.....Corvallis
 Smith, Eileen, H, jr.....Portland
 Smith, Eldon Louis, LD, so.....Oregon City
 Smith, Elizabeth Stearns, Ed, jr.....Houlton
 Smith, Frances Bernice, H, so.....Lodi, Calif.
 Smith, Francis Hubbard, EE, so.....Baker
 Smith, George Delbert, A, so.....Unity
 Smith, George Leslie, CE, so.....Portland
 Smith, Getta Violet, BAD, so.....Albany
 Smith, Harry Orange, J, fr.....Kerby
 Smith, Helen Vivian, H, so.....Seaside
 Smith, Isabelle Elizabeth, H, fr.....Portland
 Smith, James Robert, F, so.....Monument
 Smith, James S., LD, fr.....Halsey
 Smith, Jay Rebhan, A, fr.....Eugene
 Smith, John Benjamin, F, jr.....Tiller
 Smith, Josephine Elaine, H, fr.....Corvallis
 Smith, Kenneth W., SS, so.....Los Angeles, Calif.
 Elle, Helen Loe, SS, so.....Dallas
 Smith, Lawrence Franklin, A, fr.....Portland
 Smith, Lee S., A, so.....Lakeview
 Smith, Leon, A, so.....Wasco
 Smith, Lewis Carlisle, ME, jr.....Newport
 Smith, Lois Ruth, H, fr.....Estacada
 Smith, Mabel F., AA, sp.....Corvallis
 Smith, Margaret Ellen, SS, fr.....Corvallis
 Smith, Marian Effie, H, fr.....Portland
 Smith, Mary Mead, H, so.....Newport

Smith, Merle Jesse, LD, fr.....	Salem	Stark, John Benjamin, Ch, gr.....	Corvallis
Smith, Merle Richard, LD, fr.....	Corvallis	Starker, Bruce, F, so.....	Corvallis
Smith, Merritt Wellington, IA, fr.....	Mill City	Starker, Charles Hammond, LD, fr.....	Jennings Lodge
Smith, Orall Maxine, SS, fr.....	Salem	Starnes, Margaret Venita, H, fr.....	Ashland
Smith, Raleigh Delmer, LD, so.....	The Dalles	Starr, Chris Helmer, A, jr.....	Amity
Smith, Ralph Floyd, F, fr.....	Corvallis	Stastny, Edwin James, A, sr.....	Malin
Smith, R. Dean, P, jr.....	Corvallis	Stastny, Walter Harold, A, jr.....	Malin
Smith, Ray Eston, LD, so.....	Albany	Staver, Frances, Ed, sr.....	Portland
Smith, Richard Edgar, ME, so.....	Milwaukie	Stayner, Richard Dale, Ch, jr.....	Portland
Smith, Robert Derwood, SS, so.....	Corvallis	Steagall, Jane, LD, fr.....	Portland
Smith, Robert Eugene, A, fr.....	Condon	Stearns, David Emery, F, so.....	Nampa, Idaho
Smith, Ruth Zona, Sc, sr.....	Portland	Stearns, Ruth Eleanor, H, jr.....	Portland
Smith, Thelma Pauline, SS, fr.....	Halsey	Stearns, Thomas James, F, fr.....	Bend
Smith, Theodore John, Ed, fr.....	Seattle, Wash.	Steen, Lowell W., A, sr.....	Milton
Smith, Viola M., Ed, sr.....	Mayville	Steffen, Edward Ashley, F, jr.....	Palo Alto, Calif.
Smith, Walter Hall, E, fr.....	Albany	Steidinger, Dean K., EE, so.....	Tillamook
Smith, William Perry, F, so.....	Seaside	Stein, Roy Wilfred, A, gr.....	Corvallis
Smouse, Kenneth James, CE, sr.....	Tone	Stein, William Albert, F, so.....	Portland
Smyth, Paul Braden, J, fr.....	Corvallis	Steinke, Clayton Ernest, E, fr.....	Salem
Snell, Edward Luther, F, so.....	Corvallis	Steinmetz, Rebecca Mary, Sc, so.....	Portland
Snider, Alva Vance, ChE, jr.....	Portland	Stellmacher, Mary Joyce, H, so.....	Albany
Snider, Orvill Edward, A, so.....	Aumsville	Stephens, Clifford Austin, F, jr.....	Corvallis
Snidow, George A., BAd, fr.....	Florence	Stephens, Edgar R., F, so.....	Hugo
Snyder, Allen Darrel, EE, so.....	Creswell	Stephens, William Laton, CE, jr.....	Klamath Falls
Snyder, Donald, EE, sr.....	Glendale	Stephenson, Floyd C., A, so.....	Corvallis
Snyder, Eleanor Margaret, SS, sr.....	Enterprise	Sterling, Elspeth Petrie, H, jr.....	Honolulu, Hawaii
Snyder, Erwin LeRoy, SS, fr.....	Creswell	Sterling, Leon, SS, so.....	Honolulu, Hawaii
Snyder, Fred Rupert, ME, so.....	Medford	Stevens, Clifford Kenneth, LD, fr.....	Corvallis
Snyder, Helen Elizabeth, LD, fr.....	Medford	Stevens, Courtenay Emil, F, gr.....	Boise, Idaho
Snyder, Herman Ben, ChE, so.....	Portland	Stevens, Eleanor Margaret, H, fr.....	Eugene
Sokolich, Anthony Daniel, F, so.....	San Pedro, Calif.	Stevenson, Margaret Arvida, SS, so.....	Corvallis
Soller, Fred William, LD, so.....	Portland	Stevenson, Margaret De, H, sr.....	Bandon
Soller, Jack Vincent, BAd, so.....	Portland	Stewart, Faye Hill, F, jr.....	Cottage Grove
Solterbeck, Claude Bernard, CE, so.....	Payette, Idaho	Stewart, Mabeth, SS, so.....	Corvallis
Sommer, Noel Fredrick, A, fr.....	Scio	Stewart, W. Henry, CE, jr.....	Albany
Sommerville, Thomas, CE, jr.....	Pasadena, Calif.	Stickler, Lee Robinson, F, jr.....	Enterprise
Sonnenberg, Ernest, SS, fr.....	Portland	Stidd, Charles Ketchum, ChE, fr.....	Portland
Sorensen, Helen Margaret, H, fr.....	Sisters	Stidd, Helen Jane, LD, fr.....	Portland
Sorvaag, Clarence Meier, EE, so.....	Portland	Stidham, Bill, Ed, so.....	South Pasadena, Calif.
Soule, Barbara Esther, H, so.....	Klamath Falls	Stier, Robert Jesse, ME, so.....	Portland
Soule, Vicenta F., H, so.....	Hoquiam, Wash.	Stiles, Alice Frances, A, jr.....	Corvallis
South, Evelyn, SS, fr.....	Portland	Stipe, Caroline H., H, fr.....	Portland
Spalding, Donald Parker, EE, so.....	Van Nuys, Calif.	Stitt, Donald Virgil, Ed, fr.....	Portland
Spears, Doris Helen, H, sr.....	Portland	Stockard, Clement Nat, P, so.....	Hermiston
Specht, Lyle Edward, A, fr.....	Silverton	Stockler, Clifford Alvin, Sc, sr.....	Parkdale
Spees, Esther Sophia, SS, jr.....	Philomath	Stockman, Charles Edward, CE, sr.....	Baker
Spence, Dorothy Leah, SS, so.....	LaGrande	Stockman, Robert Louis, CE, so.....	Baker
Spence, Luanne, H, so.....	Corvallis	Stoddard, Byron Henry, F, sr.....	Butte Falls
Spence, Virginia, H, sr.....	Enterprise	Stoddard, Calvin Clay, Sc, jr.....	Butte Falls
Spencer, Cyril E., E, fr.....	Marion	Stoddard, Francis Brigham, E, fr.....	Portland
Spencer, Eugene Howard, IA, so.....	Wasco	Stoddard, Vernon Nibley, A, so.....	La Grande
Spencer, Margaret Olive, LD, so.....	Halsey	Stoffer, Ralph Erwin, LD, so.....	Beaverton
Spicer, Geraldine Lena, H, sr.....	Portland	Stone, Louis Nelson, EE, jr.....	Molalla
Spielman, Arless Asman, A, gr.....	Alexandria, La.	Fulk, Donald William, SS, fr.....	Albany
Spieith, Harry Edwin, ME, so.....	Portland	Stone, Vachel, H, fr.....	Corvallis
Spike, Robert E., F, fr.....	Echo	Stoner, Marie, SS, so.....	Corvallis
Spitzer, William LaVant, E, fr.....	Portland	Stoops, Edward Franklin, EE, so.....	Portland
Spriggle, Allan Franklin, E, fr.....	Portland	Storli, Norma Myrtle, H, sr.....	Portland
Springer, Hartwell, F, sr.....	Dierks, Ark.	Storm, Arthur Erick, ME, sr.....	Portland
Spulnik, Joseph Bernard, Ch, gr.....	Corvallis	Stough, Wesley E., F, fr.....	Klamath Falls
Stafford, Charles S., BAd, so.....	Portland	Stout, Alice Mae, LD, so.....	Corvallis
Stage, Shirley Eileen, H, fr.....	Portland	Stout, Anne King, Ch, gr.....	Corvallis
Stahl, C. Arden, J, fr.....	Monroe	Stout, Roy Edgar, A, gr.....	Corvallis
Stahl, Ruth Marie, H, fr.....	Corvallis	Stout, Virginia, SS, jr.....	Glenns Ferry, Idaho
Stallard, Chester Owen, LD, fr.....	The Dalles	Stout, Wendell H., A, so.....	Portland
Stanaway, John Edward, F, fr.....	Corvallis	Stow, Virgil Francis, BAd, so.....	Junction City
Stanbery, Sue Robbins, Ch, gr.....	Portland	Stowell, Jane, H, fr.....	Cottage Grove
Stanbrough, Helen L., Ed, sr.....	Monmouth	Stowell, Ruth, H, so.....	Cottage Grove
Stanley, Clarence B., EE, so.....	Tillamook	Strack, Edwin Louis, A, sr.....	Portland
Stanley, E. Ruth, Ed, sr.....	Oceanside	Strait, Don Frederick, A, so.....	Newberg
Stanley, John Samuel, LD, fr.....	Portland	Strait, M. Lee, A, fr.....	Newberg
Staples, Joe Lockett, ME, gr.....	Ontario		

- Strange, Mildred Holmes, Ed, so.....Corvallis
 Stransky, Malcolm Winston, ME, gr.....Milwaukie
 Stratton, Ila Ann, H, fr.....Salem
 Strauss, Arthur L., A, jr.....Gold Hill
 Strauss, Irvin Richard, ME, jr.....Mosier
 Streib, Samuel John, A, jr.....Troutdale
 Streit, William Fraser, LD, so.....Portland
 Stretcher, Thomas Milton, E, fr.....Hillsboro
 Strong, Byron Wallace, LD, so.....Oakland
 Strong, Jack Cotton, A, fr.....Gresham
 Strong, Mary Virginia, LD, fr.....McMinnville
 Struck, Edna Eleanor, H, fr.....Hood River
 Stuart, Alice Jane, H, so.....Corvallis
 Stuart, Jacob Wade, P, so.....Corvallis
 Sturgeon, Edna Elizabeth, SS, so.....Portland
 Sturges, Robert McBride, IA, so.....Portland
 Subotnick, Leonard, LD, so.....Portland
 Sudtell, Oren Edwin, A, so.....Albany
 Sullivan, Carolyn Gaskins, H, gr.....Corvallis
 Sullivan, Charles Durward, LD, fr.....Burns
 Sullivan, James Arthur, A, so.....Corvallis
 Sullivan, Leslie, F, jr.....Hilgard
 Sullivan, Robert B., P, sr.....Portland
 Sullivan, Jr., Thomas William, E, fr.....Oregon City
 Summersett, Robert, CE, so.....Portland
 Sumner, Norman Robert, F, so.....Salem
 Sun, Tseng-min (Ruth), H, gr.....Shanghai, China
 Surdam, Elmer, F, jr.....Corvallis
 Suter, Doris Evelyn, Ed, sr.....Corvallis
 Sutherland, Richard, Ed, so.....Hillsboro
 Suttle, Mary Elizabeth, H, so.....Noti
 Sutton, Helen Sara, H, so.....Corvallis
 Swan, Norma Davis, H, so.....Corvallis
 Swanson, Eva Marie, H, so.....Ione
 Swanson, Frank Gilbert, Math, jr.....Troutdale
 Swanson, Gussie Carl, EE, jr.....Salmon, Idaho
 Swanson, Harry Ralph, F, so.....Astoria
 Swanson, Robert Emil, A, sr.....Galesburg, Ill.
 Swanson, Thomas Albert, Ed, sr.....The Dalles
 Swanson, Wendell Vernor, E, fr.....Baker
 Swarner, Lawrence Robert, A, jr.....Hermiston
 Swartsley, George Herbert, P, fr.....Ashland
 Sweetland, Earle Everett, P, so.....Portland
 Swenson, Chester, EE, so.....Swisshome
 Swenson, Clarence Gerhardt, E, fr.....Monmouth
 Swenson, T. Maxine, SS, sr.....Swisshome
 Swindall, Eldred McCoy, E, fr.....Eugene
 Swisher, Ely M., Ent, gr.....Sheridan, Mont.
 Syron, Darrel Leon, Sc, so.....Sheridan
 Szedlak, Carl Ernest, F, fr.....Scappoose
 Sze, Yen Po, ChE, gr.....Soochow, China
 Taber, Samuel Dietrick, ME, sr.....Los Angeles, Calif.
 Tabor, Andrew Joseph, F, fr.....Rainier
 Tadakuma, Clifford Akira, ChE, fr.....Portland
 Takalo, David Swain, LD, so.....Astoria
 Takami, Ralph, LD, so.....Portland
 Takasumi, Mas, A, sr.....Hood River
 Takasumi, Mitsuo, A, jr.....Hood River
 Talbot, Gilbert Francis, SS, so.....Grants Pass
 Talbot, Marjorie L., SS, fr.....Grants Pass
 Talich, Paul Henry, F, gr.....Bristow, Neb.
 Tarrant, Robert Frank, BA, so.....Portland
 Tarshis, Irvin, Sc, sr.....Portland
 Tarshis, Maurice Steinmetz, Z, gr.....Portland
 Tash, Herschel, Ed, fr.....Freewater
 Tatom, Marion N., SS, so.....Philomath
 Tatro, Francys Hazle, SS, fr.....Lakeview
 Tatum, Lofton, SS, fr.....Portland
 Taw, Margaret Ellen, LD, fr.....Portland
 Taylor, Bertram Sam, F, sr.....Corvallis
 Taylor, DeVere Ormond, Ed, so.....Alsea
 Taylor, Ernest Pollard, F, sr.....Portland
 Taylor, Helen Louise, LD, so.....Portland
 Taylor, Howard Everett, F, so.....Portland
 Taylor, Jay Eugene, Ch, so.....Stayton
 Taylor, Lois Delphine, Ed, sr.....Forest Grove
 Taylor, Mary Anne, SS, jr.....Lakeview
 Taylor, Norton Oscar, A, fr.....Klamath Falls
 Taylor, Richard Lord, IA, so.....Whitefish, Mont.
 Taylor, Theodore Leland, F, fr.....Medford
 Taylor, William Richard, CE, sr.....Portland
 Taylor, William Wilberforce, BA, so.....Salem
 Teats, Grant Wayne, F, jr.....Sheridan
 Teir, William, ChE, fr.....Rainier
 Telford, Donald H., A, gr.....Troutdale
 Telford, Marion Fayc, Ed, so.....Klamath Falls
 Tellefson, Kemble Hershner, A, sr.....Portland
 Templeton, Bill, P, sr.....Albany
 Tension, Ruth Eleanor, SS, fr.....Portland
 Tensen, Tiena Leona, SS, jr.....Nyssa
 Terjeson, Mildred Elizabeth, SS, so.....Pendleton
 Test, Jo Janelene, H, so.....Corvallis
 Thatcher, John Shephard, A, so.....Jerseyville Ill.
 Thatcher, Walter Raymond, A, so.....Maywood, Calif.
 Theis, Richard Bailey, A, fr.....Portland
 Theis, Robert Haller, F, so.....Portland
 Thierolf, Richard Burton, BA, fr.....Medford
 Thomas, Charlot, LD, so.....Corvallis
 Thomas, Jr., Dolph, LD, so.....Glendale, Calif.
 Thomas, Harold Alexander, F, gr.....Salem
 Thomas, Ida Swift, Ed, gr.....Corvallis
 Thomas, Marian Annette, SS, fr.....Portland
 Thomas, Starleigh Douglas, A, jr.....Corvallis
 Thompson, Clarence Garrison, Ent, so.....Corvallis
 Thompson, Daisy Alma, SS, fr.....Portland
 Thompson, Darrow M., F, jr.....Eugene
 Thompson, Doris Autry, H, so.....Moro
 Thompson, Douglas Lawrence, LD, fr.....Sitka, Alaska
 Thompson, Frank Koehler, ChE, gr.....Corvallis
 Thompson, Carl Lamont, EE, so.....Myrtle Point
 Thompson, Glenn Andrew, F, jr.....Salem
 Thompson, Jean, H, sr.....Corvallis
 Thompson, Kenneth Charles, F, fr.....Dora
 Thompson, Kenneth M., LD, fr.....Portland
 Thompson, Lucille, SS, jr.....La Grande
 Thompson, Lyle Clark, E, fr.....Portland
 Thompson, Robert Douglas, ChE, so.....Pendleton
 Thompson, Robert Neil, F, so.....Corvallis
 Thompson, William Wallace, A, jr.....Klamath Falls
 Thoreson, Norman Arnold, A, fr.....Cottage Grove
 Thorndike, Betty Ann, SS, so.....Medford
 Thornton, Glenn George, F, fr.....Allegany
 Thorsen, Erling Henry, Ed, gr.....Bellingham, Wash.
 Thorsen, James G., A, sp.....Portland
 Thorson, Roy Hiram, A, so.....Corvallis
 Throckmorton, Eleanor Jane, H, so.....Eagle Point
 Thurlow, Gladys Adela, LD, fr.....Portland
 Tibbutt, Ted Van, A, so.....Portland
 Tice, James George, ME, so.....Portland
 Tichborne, Marigene, H, sr.....Portland
 Timoney, Lloyd Brown, E, fr.....Rainier
 Tinkle, Oscar T., F, so.....Portland
 Tippner, Edwin, F, so.....Silverton

- Tipton, Thelma Gerene, SS, fr..... Klamath Falls
 Tittle, Claire Gordon, CE, jr..... Tillamook
 Todd, Arthur Phillips, F, fr..... Medford
 Todd, Vera Audrey, LD, so..... Portland
 Tolonen, Paul Osmo, F, sr..... Astoria
 Tom, Charles Allen, A, jr..... Rufus
 Tomich, Joe John, LD, fr..... Butte, Mont.
 Tomlinson, Jack Ashley, CE, so..... Hood River
 Toney, Marciel Aldine, BAd, fr..... Corvallis
 Topping, Ellen Virginia, SS, so..... Portland
 Torvend, Palmer Stanley, A, sr..... Silverton
 Totten, Byron Miller, Ph, so..... McMinnville
 Tourtellotte, Franklin Korell, LD, fr..... Portland
 Tower, Gordon Eugene, F, sr..... Salem
 Tower, Marjorie LaVelle, H, jr..... Salem
 Tower, Patricia Ann, H, fr..... San Diego, Calif.
 Townner, Edith Mildred, H, sr..... Portland
 Toyota, Tom, ChE, so..... Portland
 Trask, Irmal Elsie, LD, fr..... Hillsboro
 Trindle, Helen, H, so..... Salem
 Tripp, Dorothy Jean, SS, sr..... Portland
 Trommerhausen, Alfred, ChE, so..... Newberg
 Trouton, Robert Stuart, ChE, jr..... Portland
 Trowbridge, Shirley Mae, LD, so..... John Day
 Troxel, Alta Bell, H, fr..... Adams
 Trumble, Richard Hess, LD, fr..... Wenatchee, Wash.
 Tsoutsouvas, John Sam, A, so..... Santa Barbara, Calif.
 Tsu, Sih-tsi, A, gr..... Canton, China
 Tucker, Montford Earl, E, fr..... Canon City, Colo.
 Tucker, R. D., F, so..... Selma
 Tucker, Sybil Leone, Ed, gr..... Bellingham, Wash.
 Tully, Jr., Geoffrey Robert, EE, so..... Portland
 Tuomy, Jack Eugene, CE, jr..... Portland
 Turn, Sylvia Edith, SS, sr..... La Grande
 Turnbaugh, Lester LeRoy, A, fr..... Tulelake, Calif.
 Turner, Eldridge Kirkwood, Sc, sr..... Sacramento, Calif.
 Turner, Frank Arthur, E, fr..... Portland
 Turner, James Floyd, SS, fr..... Corvallis
 Turner, Kenneth Albertus, F, fr..... Wheeler
 Tweeddale, Allen L., EE, jr..... Portland
 Twomey, John Patrick, Sc, sr..... Bend
 Tyler, Charles Edward, F, jr..... Woodburn
 Tyler, Harold William, A, fr..... Portland
 Udell, Bert Wesley, F, so..... Portland
 Uhlig, Charles Howard, E, fr..... Klamath Falls
 Uhlman, John Harold, Ed, jr..... Portland
 Ulam, Jack, A, so..... Milo
 Urush, Alice Elizabeth, SS, fr..... Salem
 Upson, U. Larry, ChE, sr..... Portland
 Urban, Robert R., LD, so..... Corvallis
 Usher, James M., F, jr..... Modesto, Calif.
 Utter, Lucille Marie, H, fr..... Portland
 Vaillancourt, Donald Raymond, E, fr..... Portland
 Valpiani, Dominic Sante, EE, jr..... Houlton
 Van Blaricom, Lester Oscar, ChE, sr..... Corvallis
 Van Blaricom, Lloyd Eugene, Ch, gr..... Corvallis
 Vance, Roy Lewis, E, fr..... Burns
 Vancil, Donald Otis, E, fr..... Corvallis
 Vanderjack, Ruth Jeanne, A, fr..... Oswego
 Vandervort, Ralph Emerson, A, fr..... Hollywood, Calif.
 Vandiver, Ray, Ed, so..... The Dalles
 Vanelli, Nelio John, SS, so..... Portland
 Van Emon, Carl Allen, LD, so..... Klamath Falls
 Van Galder, James Wilbur, ChE, fr..... Portland
 Van Gorder, John Ralph, BAd, so..... Portland
 Van Pelt, Franklin Henry, IA, sr..... Salem
 Van Pelt, Richard, Ch, gr..... Salem
 Van Scoy, Anne, H, so..... Salem
 Van Woudenberg, Stephen Henry, A, sr..... Corvallis
 Varney, Theresa Mae, H, jr..... Firebough, Calif.
 Vatnsdal, Thomas Arthur, A, so..... Portland
 Vaughan, Tom, E, fr..... Pendleton
 Vaughan, Wesley LeRoy, ME, jr..... Corvallis
 Velde, Theodore M., Ed, fr..... North Bend
 Veldman, Dickson Raynard, E, fr..... Libby, Mont.
 Venator, John Douglas, F, so..... Lakeview
 Verling, George Edward, F, fr..... Lakeview
 Vernon, Mary Jane, SS, fr..... Huntington, Ind.
 Vertrees, Junius Daniel, A, so..... Corvallis
 Vice, Jack Hoy, A, so..... Powell Butte
 Vielhauer, Jack Henry, LD, so..... Portland
 Vincent, Percy Albert, F, so..... Santa Barbara, Calif.
 Vincent, Raymond Edward, F, so..... Jewell
 Vinson, Charley, A, so..... Astoria
 Vinyard, M. Glendolene, Ed, so..... Canby
 Virden, Eugenia, H, so..... Roseburg
 Voelker, Clifford H., Sc, sr..... Hillsboro
 Voget, Edith Faye, H, so..... Portland
 Vogland, John Oscar, SS, so..... Portland
 Vogt, Alfred Nathan, SS, sr..... Eugene
 Voit, Fred B., LD, so..... Corvallis
 Voit, Jessie Janet, SS, jr..... Corvallis
 Volkman, Ray Francise, LD, fr..... Great Falls, Mont.
 Von Scheele, Charlotte, H, fr..... Afognak, Alaska
 Vorheis, Martin Luther, LD, fr..... Medford
 Voss, Maridee Christene, H, so..... Albany
 Voss, Vern Wisner, IA, jr..... Albany
 Waby, Merle Willard, SS, jr..... Corvallis
 Wachte, William Maler, CE, jr..... Mill City
 Wade, Ralph Junior, F, sr..... Halsey
 Wagner, Ernest Lot, F, so..... Dorena
 Wagner, Kenneth B., BAd, fr..... Payette, Idaho
 Wagner, Raymond Lee, LD, so..... Corvallis
 Wagoner, Verda Daphne, H, so..... Pendleton
 Wahoske, James Beale, A, jr..... Portland
 Waid, Lloyd Alvin, F, so..... Ukiah
 Waite, Allan Howard, A, fr..... Cushman
 Waite, Stephen David, F, sr..... Toledo
 Wake, Selmer Olene, IA, sr..... Corvallis
 Wakefield, Rex, F, fr..... Eddyville
 Waker, Fred Anton, EE, so..... Portland
 Walker, Clyde Buchan, SS, so..... Corvallis
 Walker, Clyde Marvin, F, so..... Portland
 Walker, Dorothy Elizabeth, H, jr..... Portland
 Walker, Fred Clinton, CE, so..... Los Angeles, Calif.
 Walker, John Vanie, CE, so..... Klamath Falls
 Walker, Joney Julius, LD, so..... Portland
 Walker, Louis Lisle, F, sr..... Beaverton
 Walker, R. Emerson, EE, jr..... Beaverton
 Walker, R. Tenison, EE, jr..... Beaverton
 Walker, Robert Thornton, A, jr..... Corvallis
 Wall, Mignon Elizabeth, SS, sr..... Corvallis
 Wallace, Jr., Albert Louis, E, fr..... Portland
 Wallace, Arden Hamilton, Ed, jr..... Portland
 Wallace, Bonnie Gertrude, SS, so..... Portland
 Wallen, Arnold Fritz, F, jr..... San Francisco, Calif.
 Walrad, Ruth, Ed, jr..... Newport

- Walrod, Murray Gray, ChE, fr..... Kelowna, British Columbia, Can.
 Walsh, Irvin Henry, SS, so..... Portland
 Walter, J. Milo, F, sr..... Portland
 Walters, Jayne Albertine, J, so..... Portland
 Walters, John Stanley, F, so..... Parkdale
 Waltz, Floyd M., SS, so..... Salem
 Walwyn, Harry Newton, A, so..... Oswego
 Wanichek, Evelyn Louise, H, fr..... Bend
 Wanke, Geraldine May, SS, so..... Portland
 Ward, Alice M., Ed, sr..... Portland
 Ward, Jr., Clifford D., A, so..... Salem
 Ward, Hugh Wallace, Ed, jr..... Portland
 Ward, Ruth Whittier, Bac, jr..... Cottage Grove
 Warden, Lillian Margaret, H, so..... Lebanon
 Ware, Angus L., F, so..... Corvallis
 Warner, John Raymond, ChE, so..... Portland
 Warner, Martin, IA, fr..... Silver Lake
 Warner, Nathan Blair, SS, fr..... Albany
 Warnock, Jr., James Elmer, E, fr..... Innaha
 Warren, Charles Earl, F, so..... Salem
 Warren, Dara Brown, A, fr..... Arlington, Wash.
 Warren, DeWitt Phinease, A, so..... Corvallis
 Warren, Margaret Eilyn, SS, fr..... Los Angeles, Calif.
 Warren, Mary Evelyn, LD, fr..... Corvallis
 Warren, Ruth, LD, fr..... Corvallis
 Warren, Stuart Allen, ME, so..... Corvallis
 Warren, Vernon J., CE, so..... Corvallis
 Warrington, Letty Marsh, H, sr..... Corvallis
 Washburn, Helen Claire, SS, so..... Portland
 Washburn, John Paul, Ed, fr..... Corvallis
 Wasner, Margaret R., H, sr..... Portland
 Waterman, Barbara Elizabeth, SS, sr..... Corvallis
 Waterman, Robert Lincoln, E, fr..... Corvallis
 Waters, Andy James, A, so..... Moorpark, Calif.
 Watson, Charles William, E, fr..... Fossil
 Watson, John Simpson, F, jr..... Sacramento, Calif.
 Watters, Fred William, LD, fr..... St. Helens
 Watters, Tom Edgar, BAD, so..... Klamath Falls
 Watts, James William, F, sr..... Madras
 Watts, John, Ed, sr..... Burlingame, Calif.
 Way, Helen Marie, BAD, fr..... Salem
 Weatherford, Marion T., Ed, gr..... Corvallis
 Weatherly, Floyd Van Norden, LD, fr..... Multnomah
 Weaver, Alexander Cameron, ME, so..... Portland
 Weaver, Clayton Neet, F, sr..... Myrtle Creek
 Weaver, David O., F, so..... Roseburg
 Weaver, Frances Emily, LD, fr..... Myrtle Creek
 Weaver, Gilbert Norman, A, sr..... Myrtle Creek
 Weaver, LeRoy Eugene, Bot, gr..... Corvallis
 Weaver, Lester Ralph, A, jr..... Myrtle Creek
 Weaver, Max LeRoy, A, fr..... Crane
 Weaver, Raymond, IA, fr..... Corvallis
 Webb, Deane Harold, E, fr..... Portland
 Weber, Verna Rose, LD, fr..... Portland
 Weddell, William MacNalley, ChE, jr..... Portland
 Wedin, Walden W., A, so..... Gresham
 Weeks, Harold Herbert, LD, so..... Forest Grove
 Weigel, Winifred Irene, H, so..... Albany
 Weinhard, Carolyn Anne, H, fr..... Wallowa
 Weir, William Carl, A, so..... Lakeview
 Welborn, Gale Stuart, LD, fr..... Toledo
 Weldon, George Howard, A, jr..... Ontario, Calif.
 Wellington, Richard Osmotherly, Ed, sr..... Portland
 Wells, Frank Lilburn, ChE, fr..... Roseburg
 Wells, Harry Bentley, Ed, jr..... Heppner
 Wells, Laura Philbrick, H, jr..... Corvallis
 Wells, Jr., Lee Arrington, EE, so..... Roseburg
 Wells, Vera Lucile, H, so..... Corvallis
 Welsh, James Thomas, SS, so..... Portland
 Welty, Robert, EE, sr..... The Dalles
 Wendick, Joseph Peter, Ed, so..... Portland
 Wendt, Harlan Henry, A, so..... Baker
 Weniger, George Edward, IA, fr..... Corvallis
 Wentz, Foster Dean, F, so..... Portland
 Werner, Ben John, E, fr..... Toledo
 Werth, Donald Robert, A, so..... North Bend
 Wessela, Stillman Joseph, IA, sr..... Scottsburg
 West, Betty, SS, jr..... Reno, Nev.
 Bramhall, Kenneth Wilson, F, fr..... Troutdale
 West, Don Lawrence, A, so..... Klamath Falls
 West, Harold, ME, so..... Klamath Falls
 West, Jule Claire, SS, fr..... Klamath Falls
 West, Margaret Helen, SS, fr..... Klamath Falls
 West, Margaret Louise, H, jr..... Portland
 Westenskow, Garth Dean, ChE, so..... Imbler
 Wester, Howard, F, so..... Corvallis
 Westerfield, William Rogers, F, so..... Montclair, N. Y.
 Westersund, Frank Verner, A, so..... Pendleton
 Westersund, Fred C., A, so..... Pendleton
 Weston, Helen, H, fr..... Portland
 Weston, Marjorie Jean, SS, so..... Portland
 Weston, Rosamond Jane, SS, sr..... Grants Pass
 Wetherbee, Field, LD, so..... Corvallis
 Wethey, Katherine Jean, SS, fr..... Portland
 Wharton, Glenn William, AA, jr..... Roseburg
 Wheeler, Agnes Emma, H, so..... Corvallis
 Wheeler, Alvin Wilbur, A, gr..... Corvallis
 Wheeler, Grace Marie, H, fr..... Corvallis
 Wheeler, Oscar Charles, ChE, fr..... Freewater
 Wheeler, Robert Eugene, A, fr..... Pendleton
 Wheelon, Fred Claire, E, fr..... Portland
 Whetstone, Lloyd E., P, fr..... Lebanon
 Whipple, Charles, CE, sr..... Havre, Mont.
 Whipple, Margaret Ruth, A, gr..... Vancouver, Wash.
 Whitaker, Louis Eugene, Sc, sr..... Freewater
 Whitby, Herbert LeRoy, P, fr..... Corvallis
 Whitby, Isabel Margaret, H, fr..... Corvallis
 White, Bob Fredrick, A, so..... Salem
 White, Elizabeth Chelan, H, sr..... Portland
 White, Eunice Imogene, SS, fr..... Mt. Angel
 White, Jr., Henry Arthur, ChE, so..... Portland
 White, Jr., Herbert William, SS, fr..... Portland
 White, James Dixon, F, so..... Portland
 White, Paul J., F, so..... Indianapolis, Ind.
 Whitehouse, Eugene Wesley, P, sr..... Lakeview
 Whitelaw, Jean Macklin, H, sr..... Corvallis
 Whitfield, William Hughes, BAD, so..... Portland
 Whitney, Boyd Osman, A, jr..... Portland
 Whittaker, Muriel Mae, SS, jr..... Bend
 Whittmore, Mavis, LD, fr..... Portland
 Whitten, Clifford Leslie, F, sr..... Pongosa
 Whitten, Maryon, H, so..... Portland
 Whittig, Hazel Glenn, H, sr..... Caldwell, Idaho
 Whittle, Joseph William, ME, so..... Astoria
 Whitwell, Walter Monteith, A, jr..... Portland
 Wicks, Wayne Ethan, F, fr..... Eugene
 Widmer, Clair Adrian, BA, so..... Corvallis
 Widmer, Vivian Marie, H, jr..... Portland
 Wiedemann, Mildred, H, so..... Wilsonville
 Wiedemann, Paul Leo, CE, so..... Portland
 Wiener, Aaron Arnold, F, so..... Portland
 Wienert, John Conn, A, fr..... Airlie
 Wiese, Frederick Cyrus, Ed, gr..... Corvallis
 Wiese, Margaret Ann, H, jr..... Portland

Yerian, Walter George, BAd, so.....Portland
 Yocom, Herbert Austin, F, sr.....Myrtle Creek
 Yocom, Evelyn Lucille, H, so.....Estacada
 Yocom, Robert B., LD, fr.....Corvallis
 Yoder, Ray Arnold, F, fr.....Portland
 Yoder, William Vance, E, fr.....Hubbard
 Yokom, Evelyn Pearl, H, sr.....Mt. Vernon
 Yonge, Roy Chandler, E, fr.....Multnomah
 York, Gerald Robert, P, fr.....Baker
 York, James Lewis, F, sr.....Baker
 Younce, Earl Sanford, Ed, jr.....Portland
 Young, Barbara Jean, H, jr.....Twin Falls, Idaho
 Young, Dan William, A, jr.....Portland
 Young, Dorothy Jean, H, jr.....Sherwood
 Young, Fred Robert, E, fr.....Timber
 Young, Frederic Harris, Mth, sr.....Los Angeles, Calif.
 Young, Hardy S., A, jr.....Sherwood
 Young, Harry Allen, CE, jr.....Madras
 Young, Louis D., A, so.....Madras
 Young, Patricia Ann, SS, jr.....Medford
 Young, Shirley Lucille, H, jr.....Parma, Idaho
 Young, Wayne Adelbert, A, fr.....Seattle, Wash.

Youngblood, Ross Andrew, F, sr.....Corvallis
 Younger, Frederick Wilton, EE, jr.....Medford
 Youngstrom, Cecil Julius, A, sr.....Prineville
 Youse, Howard Ray, Bot, gr.....Corvallis
 Yu, Hsi-hsuan, H, gr.....Nanking, China
 Yumibe, Kiyoshi Roy, A, so.....Dee
 Yungeberg, Eugene Ross, E, fr.....Portland
 Zach, Lawrence William, F, so.....Mt. Angel
 Zak, Lottie, H, fr.....Corvallis
 Zbinden, John F., E, fr.....Merrill
 Zielinski, Qunetin Bliss, A, fr.....Corvallis
 Zilka, Thomas Jones, ME, so.....Portland
 Zimmerman, Ethel Faye, SS, so.....Chiloquin
 Zimmerman, Virginia Marcelline, LD, so.....Portland
 Zinser, Lois Ermina, SS, so.....Coburg
 Zitzer, Frederick, EE, sr.....Portland
 Zosel, Wallace Edward, LD, fr.....Portland
 Zumwalt, Donal Harold, A, so.....Sixes
 Zumwalt, Leslie Carl, A, so.....Sixes
 Zurbrick, Margaret Elizabeth, SS, so.....La Grande
 Zwick, John Wilfred, ME, sr.....Portland

Students in Summer Session and Post Session 1937

GRADUATE AND UNDERGRADUATE

Adams, George Edward.....Corvallis
 Ades, Jr., Robert.....Cincinnati, Ohio
 Agee, Winona Eva.....Albany
 Alcock, Irene Cathryn.....Ashland
 Aldrich, Helen.....Seaside
 Almedia, Ferne Clarice.....Dixon, Calif.
 Alnutt, Evelyn Anna.....Corvallis
 Anderson, Theron N.....Imbler
 Andrews, Mary Ellen.....Burley, Idaho
 Arant, Ruth Eleanor.....Forest Grove
 Arnold, W. Maxine.....Corvallis
 Arnott, David S.....Corvallis
 Bailey, Carrol A.....Fairfield, Calif.
 Bailie, Dorothy Harriett.....Klamath Falls
 Baker, Anna Gertrude.....Bend
 Baker, Luetta Mae.....Independence
 Baker, Molly Ann.....Grass Valley
 Baker, William Hudson.....Eugene
 Baldwin, Willis A.....Coalinga, Calif.
 Banpofier, Roy George.....Elko, Nevada
 Barnett, Elson Thomas.....Astoria
 Bates, Mercedes Allison.....Los Angeles, Calif.
 Baumbach, Ruth Fay.....Sandy
 Bauman, J. Gordon.....Council Bluffs, Iowa
 Bahers, Jeanne Ann.....Twin Bridges, Mont.
 Belknap, Dorothy Pauline.....Kings Valley
 Bell, Burton Charles.....Rickreall
 Bennett, Freida Mae.....Burlington Junction, Mo.
 Bennett, Lean Pearl.....Long Beach, Calif.
 Bennett, Orbra Helen.....St. Helens
 Bennett, Shirley.....Eugene
 Berg, Russell R.....Birkenfeld
 Bergman, Ruth.....Clatskanie
 Berkeley, Helen.....Honolulu, T. H.
 Bernard, Francis M.....Long Beach, Calif.
 Berreman, Beulah.....Walla Walla, Wash.
 Berry, Ralph O.....Santa Clara, Calif.
 Berry, Zora Elnora.....Independence
 Bestall, John Bolton.....Downey, Calif.

Bestler, Thelma Idell.....Tacoma, Wash.
 Billings, Blanche.....Imbler
 Bird, Floyd.....Corvallis
 Bishop, Dorothy Lamb.....Portland
 Bjorlie, Clarence Freeman.....Santa Clara Calif.
 Blackden, Ralph Silsby.....Sacramento, Calif.
 Blevins, John C.....Monmouth
 Blosser, Berylle Velna.....Corvallis
 Blow, Grace Hayward.....Corvallis
 Bodner, William S.....Corvallis
 Bofto, Eino A.....Maupin
 Bolton, Bonnie Jane.....Corvallis
 Bool, Edna Bell.....Monmouth
 Boyd, Carol Elizabeth.....Bend
 Boyer, Delmer F.....Willamina
 Braat, Doris Josephine.....Dayton
 Brandhorst, Marguerite LaRouche.....Corvallis
 Brandon, Dorothy Irene.....Corvallis
 Brandon, Margaret Eileen.....Corvallis
 Brandon, Ruth Emmaline.....Corvallis
 Brennan, Cecilia Elizabeth.....Portland
 Brenneman, Clarence E.....Albany
 Brewer, Blayne M.....Eugene
 Bridger, Helen Maw.....Mackay, Idaho
 Brown, F. Laverne.....Albany, Calif.
 Brown, Frances Mary.....Shedd
 Brown, Lois Elizabeth.....Corvallis
 Brown, Ross Kenneth.....Salem
 Brueck, Marian Brown.....King City, Calif.
 Bryant, Claude Hale.....Corvallis
 Buckalew, Norah.....Santa Barbara, Calif.
 Buckholts, Lillie Mae.....Duncon, Okla.
 Buckley, Isabella.....Cheyenne, Wyo.
 Bull, Melva Fae.....Summerville
 Bullard, Maurice Leslie.....Salem
 Bunker, Anna Burnette.....Corvallis
 Burch, Maybelle Mary.....Salem
 Burgess, Marion Carson.....Merced, Calif.

Burn, Frank Joseph.....Beaverton
 Burnett, Lucille Moser.....Lewiston, Idaho
 Burris, Mary Ethel.....Chanute, Kan.
 Burroughs, Julian DeForest.....Salem
 Burton, Mrs. Henrietta K.....Washington, D. C.
 Burton, Mary Elizabeth.....Silver Lake
 Busenbark, Helen.....Roseburg

Caldwell, Ernest Paul.....Lebanon
 Callaway, James Ralph.....Long Beach, Calif.
 Cameron, Elizabeth Alice.....Corvallis
 Campbell, Harvey John.....Newberg
 Campbell, Jessie E.....Cavalier, N. D.
 Campbell, William Robert.....Portland
 Canessa, Marjorie Marie.....Astoria
 Carnine, Ona M.....Condon
 Carothers, Selma Malinda.....Hubbard
 Carr, Marian Eujane.....Huntington Beach, Calif.

Carr, Stanley A.....Huntington Beach, Calif.
 Carson, Victor S.....Corvallis
 Cazier, Ora Lee.....Overton, Nevada
 Cesar, Catherine Minnie.....Corvallis, Mont.
 Chamberlin, M. Hope.....Corvallis
 Chapman, Wayne Haven.....Spokane, Wash.
 Cherry, Howard L.....Corvallis
 Chindgren, Ruth P.....Colton
 Choi, E. Soon.....Pyeng Yang, Korea
 Clark, Helen Margaret.....Portland
 Clark, Maybelle Rosemary.....Portland
 Clark, Vivian Corinne.....Salem
 Clarke, Clem C.....Butte Falls
 Clarke, Eugene V.....Bend
 Clawson, Alice C.....Lemoore, Calif.
 Clement, Sanford.....Astoria
 Coe, Frances Mary.....Portland
 Coffinger, Eugene L.....Phoenix, Arizona
 Coleman, Commyer Wallace.....Multnomah
 Coles, Lilia Pearl.....Saskatoon, Saskatchewan

Collins, Lenna D.....Cascade Locks
 Conley, David J.....Strathmore, Calif.
 Conroy, Kathryn Frances.....San Francisco, Calif.

Cook, James F.....Myrtle Creek
 Cornelius, Thelma R.....Corvallis
 Cowan, Anna W.....Sacramento, Calif.
 Cowles, John C.....Harlan
 Crawford, Willard N.....Corvallis
 Crews, Arthur G.....Los Angeles, Calif.
 Crist, Lucille.....Billings, Mont.
 Cross, Helene M.....Long Beach, Calif.
 Cunningham, Lyda Joanna.....Corvallis
 Curry, Keith Wilbur.....Camas, Wash.

Danielson, Esther Gertrude.....Marshfield
 Dart, C. K.....Eugene
 Darby, Earl Gilbert.....Manhattan, Kan.
 Davey, Hugh Priday.....The Dalles
 Davey, Mary Adelaide.....Mason City, Iowa
 Davies, Violet.....Tacoma, Wash.
 Davis A. Marjorie.....Corvallis
 Davis, G. Harland.....Ganado, Arizona
 Dawson, Charles Laughery.....Pacific Grove, Calif.

Day, Mrs. John M.....Watsonville, Calif.
 Day, Robert Edward.....Beaverton
 Dean, Ina Leone.....Portland
 Dean, Laura Taft.....Anaconda, Mont.
 DeBernardis, Amo.....Portland
 Dement, Aileen.....Myrtle Point
 Denyer, Emma Mae.....Turner
 DeSelle, Carroll Windsor.....San Jose, Calif.
 Dietz, Emma.....Elgin, N. D.
 Dimick, Merle Ellen.....Salem
 Dolezal, Anna Barbara.....Sprague River
 Doll, Charles A.....Klamath Falls
 Doughton, Preston F.....Dallas
 Douglas, A. J.....San Diego, Calif.

Douglas, Lucile Eaves.....San Diego, Calif.
 Druschel, Mildred Dorothy.....Portland
 DuBois, Zola S.....Imperial, Calif.
 Dunn, Arlene Byrd.....Corvallis
 Dunn, Elsie M.....Stockton, Calif.
 Dunn, Lloyd Thomas.....Seaside
 Dunne, Marian Lucille.....Portland

Eagle, Della E.....Merrill
 Eagle, Marjorie Loretta.....Merrill
 Earnheart, Lulu Ruth.....Pendleton
 Eason, Stearns.....Salem
 Eaton, Laura Bates.....Salem
 Ebell, Ethel Le.....Baker
 Eckern, Ramona Kathleen.....Portland
 Edwardes, Sue Idell.....Corinth, N. Y.
 Edwards, Hugh Wilson.....Monmouth
 Egelston, H. Clay.....Monmouth
 Engle, Melvin Miller.....Corvallis
 Erickson, Raymond.....Arcadia, Nebr.
 Erickson, Lars John.....Madera, Calif.
 Etter, Irene.....Pilot Rock
 Evans, Eric S.....Los Angeles, Calif.
 Evenden, Dorothy Elsie.....Corvallis
 Evers, Helen Frances.....Winfield, Kan.
 Everts, Albert Eugene.....Keno
 Exley, Clifford Elmer.....Colville, Wash.

Faxon, Glen S.....Albany
 Feldstein, Cyril.....San Francisco, Calif.
 Fehler, Clair LeRoy.....Corvallis
 Fehrenbacher, Henry R.....Troutdale
 Fendall, Bill Gray.....Corvallis
 Fifer, Helen Bess.....Portland
 Filker, Alexander George.....Portland
 Fisher, Annabelle Palmer.....Roseburg
 Fisher, Frieda Harriett.....Haines
 Fisk, Bert.....Orofino, Idaho
 Fitz, Lillian.....Santa Clara, Calif.
 Fitzpatrick, Dorothea Chaffee.....Callexico, Calif.

Fletcher, Florence Ann.....San Francisco, Calif.
 Flynn, Margaret Teresa.....Lakeview
 Foster, Sherman Albert.....Independence
 Foster, William Ward.....Camas, Wash.
 Fox, Rufus Leamon.....Milton-Freewater
 Frazier, Laurence Emerson.....Portland
 Frease, Helen Miriam.....Albany
 Freeman, Walter F.....Ontario
 French, Clara Calkins.....Mt. Vernon, Wash.
 Fromherz, Florence Agnes.....Lebanon
 Fulton, Cora.....Patterson, Calif.

Gaeden, Sister Mary Annella.....Mt. Angel
 Gaines, June Elizabeth.....Salem
 Galloway, Elizabeth.....Salem
 Galyen, Helen J.....Fargo, N. D.
 Gamble, Lura.....Hazen, Nevada
 Gerber, Viola.....Amboy, Wash.
 Gerbig, Helen Dorothy.....Redlands, Calif.
 Gilchrist, Katie Lucille.....Cottage Grove
 Gillaspy, James Richard.....Piedmont, Calif.
 Gingery, Anna Laura.....Glendale, Arizona
 Goeke, Eleanor A.....Spokane, Wash.
 Goode, Delmer Morrison.....Corvallis
 Goodsell, Frances Field.....Santa Cruz, Calif.
 Goodwin, Dorothy Julia.....Tempe, Arizona
 Goodwin, John B.....Clarkdale, Arizona
 Gowan, Enid L.....Corvallis
 Graf, Therese Anne.....Corvallis
 Green, Ferris Jane.....Portland
 Green, Katherine R.....Oakland, Calif.
 Gregory, E. Jean.....Longview, Wash.
 Guss, Bernice Johnson.....Corvallis
 Guiss, Helen McKinney.....Woodburn
 Gustafson, Helen Josephine.....Orland, Calif.
 Guafious, Arthur D.....Newport

Haan, Clarence M.....Ashland

Hahn, Bruce J.	Eugene	Krammerer, Esther E.	Corvallis
Haight, Margaret Mary	Portland	Karr, Nancy Pearl	Portland
Hallin, Ruth M.	Tacoma, Wash.	Karvonen, Lila Doris	Portland
Hankins, Hazel Ella	Emmett	Keebler, Velma	Corvallis
Hannah, Alvan J.	Friday Harbor, Wash.	Keeney, Ivan Floyd	Ashland
Hanson, Louis Philip	Paisley	Kelby, Ernest F.	Dunsmuir, Calif.
Hardebeck, Clarence Wm.	Reedley, Calif.	Kellogg, Bernice Stetzel	Albany
Hardy, Dea Jean	Corvallis	Kitchen, William Kay	Emmetsburg, Iowa
Harn, Wayne	Portland	Khanmai, Mohamad A.	
Harper, Jessie Audrey	Junction City		Peshawar, N.W.F.P., India
Harvie, Harry	Glide	Kilpatrick, Joseph Jay	Palo Alto, Calif.
Hauswirth, Armin O.	Albany	King, Elvia Tagg	Gearhart
Hawkes, Frederick Pratt	Preston, Idaho	King, Mildred Geneva	
Haycox, Marion Grace	Olympia, Wash.		Coeur d'Alene, Idaho
Hayes, Zilda Marie	Portland	Klein, Lucy Mildred	Denver, Colo.
Hays, Robert P.	Pasadena, Calif.	Kling, Herbert W.	Los Angeles, Calif.
Hazeltine, Irving Billy	Canyon City	Knotts, Richard B.	Albany
Heathman, Clyde Franklin		Koelsche, Charles Lewis	Redlands, Calif.
	Sacramento, Calif.	Kohlhagen, Bertha	Salem
Hedlund, Gladys Emma	Brownsville	Kolshorn, Agnes	Corvallis
Heidenreich, Heinrich	Phoenix, Arizona	Korf, Juanita	Corvallis
Heinrich, Margaret Celia	Corvallis	Kranick, Ethel May	Bandon
Hennessey, Frances M.	Bisbee, Arizona	Kraus, Elizabeth Louise	Aurora
Henry, Donna Belle	Great Falls, Mont.	Kubin, Arvella Rose	Salem
Hepp, Louis O.	Porterville, Calif.	Kumler, Martha Louise	Brownsville
Hess, William H.	Los Angeles, Calif.		
Heyden, John F.	La Grande	Lager, Nels	San Diego, Calif.
Higbee, Vere Byron	Tillamook	Lauder, Lorne R.	Gooding, Idaho
Higgins, Mrs. Lucile Hayes	Portland	Lawrence, Robert W.	Corvallis
High, Orpheo Pearl	New Plymouth, Idaho	Layton, Neva M.	Tempe, Arizona
Hill, Dorothy Cavanaugh	Portland	Leach, M. Irene	Oregon City
Hill, Martha Helen	Independence	Leaf, Elmer M.	Lewiston, Idaho
Hindman, Marjorie Dean	Elgin	Ledbetter, William Glen	Portland
Hinton, Warren	Everson, Wash.	Leisz, Barbara Rita	Portland
Hogue, Lyle V.	Oakland	Leitner, Walter	Chicago, Ill.
Holiday, Mary E.	Corvallis	Lemon, Burton Carlyle	Eatonville, Wash.
Holiday, Oro Rozella	Corvallis	Leonard, Margaret Eunice	Corvallis
Hollenberg, Leo D.	Nyssa	LeRoy, Tom E.	Cincinnati, Ohio
Holzmeyer, Louise	Dundee	Lewis, David James	San Diego, Calif.
Horner, Phil A.	Covina, Calif.	Lewis, Nylic	Baker
Horner, Vera Delle	Corvallis	Lilly, James Lloyd	Caldwell, Idaho
Horner, Mrs. Wilma A.	Chino, Calif.	Limmeroth, Bertha Sarah	Boyd
Horning, Pearl	Corvallis	Line, Charles Edson	Carlsbad, Calif.
Horrell, Elvera Cronquist	Corvallis	Lingelbach, George Henry	Estacada
Howard, Mabel Frances	Albany	Lloyd, Laurance Henry	Corvallis
Howells, Sara-Louise	Portland	Locker, Viola	Canton, S. D.
Huddleston, Laura E.	Corvallis	Loe, Edna Mae	Corvallis
Hung, Emanuel Bernard	Salem	Lond, Marjorie	Corvallis
Huffman, Marshall Eldridge	La Grande	Lovegren, Lawrence Alfred	Corvallis
Huger, Gladys Caroline	St. Louis, Mo.	Lowry, Edith Mae	Bellingham, Wash.
Hughes, Marguerite Rowena	Reno, Nevada	Lowry, Esther M.	Chico, Calif.
Hull, Andrew W.	Grand Forks, N.D.	Luce, Marion J.	Minneapolis, Minn.
Humble, Mabel Matilda	Baker	Lui, Chung Kwai	Canton, China
Hunt, Helen Irene	Corvallis	Lundberg, Horace W.	Ft. Duchesne, Utah
Huntington, Lucile	Yoncalla	Lundy, Audrew Lucile	Myrtle Point
Huntington, Lucille Harriet	Sisters	Lupton, Alice Louise	Burns
Huntington, Ruth Webster	Sisters	Lusby, George W.	Corbett
Huseth, Clara Ethel	Great Falls, Mont.	Lyle, Nellie C.	Glendale, Arizona
Hutton, Elliott Charles	Marion, Iowa	Lynch, Lavina May	Hermiston
Ingle, Helen M.	Corvallis	McAuliffe, Grace V.	
Ingle, Robert Carlton	Corvallis		East Grand Forks, Minn.
Isbister, J. Annabelle	Gresham	McCallister, Esther Marie	Nampa, Idaho
		McCarthy, Phyllis J.	Marshfield
Jack, Lorena N.	Corvallis	McClew, Ann Elizabeth	Eugene
Jacobs, Evelyn C.	Corvallis	McClun, Rosa Blanche	Prineville
Janz, Catherine Cleghorn	Corvallis	McCourt, Edith	Albany
Janz, Ray Wesley	Corvallis	McCrae, Margaret C.	Monmouth
Jarmon, Lura P.	Newman, Calif.	McCullough, Edward Laurence	
Jeness, Marie	Priest River, Idaho		Bellingham, Wash.
Jensen, Frances	Corvallis	McEachran, Ernest A.	LaGrande
Jewell, Henry E.	San Diego, Calif.	McElroy, Oma May	McMinnville
Jewell, Maxine Evelyn	Corvallis	McGee, Avis O.	Ashland
John, Roy M.	Portland	McGee, Genevieve	Ashland
Johnson, Alfareta Clara	Antigo, Wis.	McGinnis, Dorothy	Kansas City, Mo.
Johnson, Bernice	Dayton, Nevada	McGinniss, Grace Isabeyl	
Johnson, Ellen M.	Corvallis		Douglas, Arizona
Jones, William R.	Oakland	McGowan, Vern B.	Pendleton
Jordan, Barbara V.	Roseburg	McGregory, Myrtle	Rogue River
Jordan, Oren C.	Baker	McHenry, Doris J.	Corvallis
Judy, Howardine C.	Pomona, Calif.	McIntyre, Ethel M.	Albany

McQueen, William L.....	McMinnville	Palmer, Gladys.....	Bountiful, Utah
McQuesten, Isabella Franklin.....	Phoenix, Arizona	Pangborn, Helen Marie.....	Tacoma, Wash.
McWhorter, Lois Anne.....	Corvallis	Pape, Verna Noble.....	Fresno, Calif.
Maassen, Herta Martha.....	Oakland, Calif.	Parker, Ruby Elizabeth.....	Lompoc, Calif.
MacDonald, William Fred.....	Medford	Parlasca, Beth.....	Los Angeles, Calif.
Mackenzie, Thomas T.....	Salem	Parrish, Fairfax H.....	Dallas
Magnesi, Anthony Joseph.....	Berkeley, Calif.	Patch, Dennis Wilmer.....	Halfway
Mahoney, Cornelius Patrick.....	Bend	Patchett, Anita.....	Newman, Calif.
Malcom, Marion Payne.....	Cherokee, Iowa	Pavelek, Frank Joseph.....	Woodburn
Mallery, Albert Lea.....	Oakland	Peck, Frances H.....	Marshfield
Manley, Dorothy Mary.....	Philomath	Pemberton, W. Ellen.....	Salem
March, June May.....	Corvallis	Petersen, Mary Dorothy.....	Sacramento, Calif.
Maris, Buena Margason.....	Tacoma, Wash.	Peterson, Clarence L.....	Sioux Center, Iowa
Marsh, Ida B.....	Boise, Idaho	Peterson, Ivy Cecil.....	Vancouver, Wash.
Martin, Susan Amy.....	Salem	Peterson, Katherine M.....	Ontario
Mason, Edith Sherwood.....	Mill City	Peterson, Lot C.....	Renton, Wash.
Mathiesen, Walter Jesse.....	Banks	Philpott, Georgia Carol.....	Coquille
Mathies, Esther Ruth.....	Nampa, Idaho	Pienett, Sister Gemma.....	Mt. Angel
Mayer, Joella Anna.....	Lebanon	Pierson, Lenn.....	La Grande
Meadowcroft, Clifford Owen.....	Modesto, Calif.	Plummer, Hazel R.....	Dallas
Meckelson, Gerald Anthony.....	Walla Walla, Wash.	Poling, Dan Williams.....	Corvallis
Mehlhaf, Jean.....	Lincoln, Nebr.	Pope, George Albert.....	Wallowa
Meius, Hilda Mildred.....	Dundee	Porter, Ruth Ellen.....	Albany
Mercer, Howard Glenn.....	Sacramento, Calif.	Porterfield, Lois E.....	Corvallis
Messinger, John Ray.....	Delano, Calif.	Preston, Patricia Ann.....	Corvallis
Mickelson, William C.....	Albany	Price, Dorothy Marie.....	Klamath Falls
Miller, Dale Lawrence.....	Portland	Fritchett, Wilson Stanley.....	Vale
Miller, Herman Newton.....	St. Helens	Pronzato, Mary Josephine.....	Fort Bragg, Calif.
Miller, Joseph Verne.....	Strathmore, Calif.	Purvine, Winston Dane.....	Grants Pass
Miller, Susan Jane R.....	Corvallis	Quick, Ruth N.....	Redfield, Kan.
Miller, Mrs. Toinette O.....	Strathmore, Calif.	Race, Charles Edgar.....	Mosier
Moe, Bickie G.....	Corvallis	Raymond, Thayer.....	Raymond, Wash.
Moore, Gail E.....	Chico, Calif.	Read, Irene Janette.....	The Dalles
Moore, Helen Mary.....	Myrtle Creek	Reamy, Daniel H.....	Whittier, Calif.
Moore, Muriel E.....	Klamath Falls	Redetzke, Emmalene Clara.....	Forest Grove
Morgan, Agnes Stewart.....	Salem	Redway, Elizabeth Alice.....	Tacoma, Wash.
Morse, Annie Mabel.....	Hoquiam, Wash.	Reed, Robert Little.....	Amity
Morse, Walter W.....	Corvallis	Reedy, Lois M.....	Klamath Falls
Mortimer, William E.....	Payson, Utah	Reilly, M. Patricia.....	Parkdale
Moser, Ruth A.....	Harvey, N. D.	Reinhart, Clementine English.....	Corvallis
Mote, Dick.....	Corvallis	Reinhart, Jennie Mildred.....	Foster
Muir, Dorothy Thelma.....	Berkeley, Calif.	Rewa, Helen.....	Portland
Mumford, Edgar Royal.....	McMinnville	Reyburn, William A.....	Eugene
Mumdorff, Maurice.....	Cornelius	Reynolds, Hester Adrian.....	Moscow, Idaho
Munson, Edith Jean.....	Corvallis	Rhodes, Omar E.....	Aberdeen, Wash.
Myers, Helen.....	Scio	Richards, Cecil LaDell.....	Cove
Myers, Nora.....	Condon	Richter, Carlton Ernest.....	Portland
Nelson, Herbert Don.....	Corvallis	Risse, Delmar Willard.....	Grinnell, Iowa
Nelson, Neal McMaster.....	Prichard, Idaho	Robb, Olive Jane.....	Portland
Newell, Mary.....	San Rafael, Calif.	Roberts, Audred Willetha.....	Corvallis
Newport, Earl Milton.....	Tangent	Robertson, Charles Andrew.....	Bonneville
Newton, Chester Willard.....	Tillamook	Robley, Asa Austin.....	Corvallis
Nichol, Robert R.....	Grants Pass	Romine, Erma D.....	Lebanon
Nicholas, Addeen.....	Lebanon	Rondeau, Wilma Miller.....	Corvallis
Nichols, Ivan Kaye.....	Corvallis	Roner, Joseph G.....	Harrisburg
Nicolaides, Mabel Elizabeth.....	Philomath	Rose, Robert Leon.....	Parkdale
Nielson, Kathryn LaVerne.....	Ontario	Ross, Donald S.....	Moclips, Wash.
Nihil, Frank.....	San Francisco, Calif.	Ross, Melvina.....	Corvallis
Nisbet, Irma Mary.....	Portland	Rounds, Alpha.....	Marysville, Wash.
Norton, Constance B.....	Corvallis	Rounds, Wallace Thornton.....	Marysville, Wash.
Norton, Eben Lawrence.....	Salt Lake City, Utah	Rowe, Kathryn Eldoris.....	Salem
O'Reilly, Justine Beyers.....	Salem	Rowland, Priscilla.....	Salt Lake City, Utah
Oglesby, Gladys Mae.....	Corvallis	Ruch, Anna C.....	Vallejo, Calif.
Oldroyd, Dorothy Mae.....	Arkansas City, Kan.	Ruffner, Benjamin F.....	Corvallis
Olmsted, Glenn N.....	Winslow, Arizona	Rushing, Lola Ethel.....	LeGrande, Calif.
Olsen, Margaret.....	Pleasant Grove, Utah	Russell, Alta M.....	Tulare, Calif.
Oppenlander, Herman F.....	West Lynn	Rutherford, Roy James.....	Oakland, Calif.
Orner, Louise Jackman.....	Corvallis	Rutschman, Carl Ferdinand.....	Monmouth
Osborn, Fred P.....	Marshfield	Saling, Neil E.....	The Dalles
Ott, Edna Ellen.....	Hermiston	Sands, Mary Jane.....	Corvallis
Owen, Emerys H.....	Dawson, Iowa	Santoro, Lena.....	Beaverton
Owings, Mergen.....	Salem	Sargent, Lilla M.....	Oakland, Calif.
Palmer, Arthur Edwin.....	Albany	Sawyer, Wallace.....	Oswego
		Saylor, Nelma Laura.....	Echo
		Schepman, Fred Foster.....	North Bend
		Schermer, N. Theresa.....	Buffalo, Minn.
		Scheurman, Birney O.....	Vernonia

Scheurman, Lee N.....	Vernonia	Thompson, Barbara Frances.....	Twain Falls, Idaho
Schild, Lily M.....	Tillamook	Thompson, Cyril Hugh.....	Spokane, Wash.
Schiltz, Dorothy Williams.....	Lebanon	Thompson, Grace Ethel.....	Salem
Schlapkohl, Martha.....	Ontario	Thorsen, Alice G.....	Portland
Schlegel, Joseph Theodore.....	Sacramento, Calif.	Thorsen, Erling Henry.....	Corvallis
Schluntz, Daisy Bertha.....	College Place, Wash.	Thorsen, Roy H.....	Corvallis
Schneider, Phil William.....	Corvallis	Thornstenberg, Greta I.....	Eugene
Schrepel, Marie Fredereka.....	Corvallis	Todd, Vernon S.....	Sherwood
Schuster, Sister Mary Celine.....	Mt. Angel	Tompkins, Mary A.....	Portland
Schutt, Wendell David.....	Portland	Toops, Nelle.....	Denver, Colo.
Schwein, Theodore.....	Portola, Calif.	Towner, Edith Mildred.....	Portland
Scoville, Patsy Moe.....	Corvallis	Townsend, Verna E.....	Corvallis
Scullen, Ruby Mae.....	Corvallis	Turnbull, James Lockhart.....	Ontario
Seely, Claire Randolph.....	San Diego, Calif.	Turnidge, Pearl V.....	Albany
Seely, Frank K.....	Corvallis	Tuttle, Hubbard Alonzo.....	Hoquiam, Wash.
Seely, Lloyd.....	Beatty	Valerio, Antoinette J.....	Sacramento, Calif.
Senders, Ralph S.....	Albany	Vance, Ruth.....	Corvallis
Shaffer, Viola Brainerd.....	Corvallis	Vander Griend, Maurine A.....	Lynden, Wash.
Shaner, Bernard Reed.....	Prescott, Arizona	Van Woudenberg, Stephen H.....	Corvallis
Shattuck, Ethel L.....	Sacramento, Calif.	Venske, Harold.....	Solvang, Calif.
Sheehy, Margaret Barron.....	Portland	Vermillion, Bill.....	Baker
Sheesley, Clayton Wallace.....	Tulare, Calif.	Voelker, Clifford H.....	Hillsboro
Sheldon, Russell.....	McMinnville	Vogel, Elmer Charles.....	Tacoma, Wash.
Shelman, Marguerite.....	Albee	Wake, Selmer Olene.....	Corvallis
Shelman, Marian.....	Asotin, Wash.	Walfron, Dale V.....	Hayward, Calif.
Sherman, Eleanor.....	Klamath Falls	Walker, Jesse L.....	Keller, Wash.
Sheythe, Martin B.....	Junction City	Walker, Robert T.....	Portland
Shoemaker, Vernal P.....	Elgin	Walters, Elizabeth Christina.....	Parkdale
Shogren, Harold Wayne.....	Toledo	Wampler, Veroka.....	Dallas
Sinclair, Albert H.....	Klamath Falls	Warren, Roy Cecil.....	Salem
Skene, E. Matthew.....	Hillsboro	Waters, Fred Herbert.....	Tacoma, Wash.
Slinger, Floyd H.....	Albany	Wattenburg, Alma Ruth.....	Stevenson, Wash.
Smiley, Mary Evelyn.....	Elnora, Ind.	Watts, John.....	Burlingame, Calif.
Smith, Dexter M.....	Fresno, Calif.	Weatherford, Marion T.....	Arlington
Smith, Genevieve H.....	Fresno, Calif.	Weatherspoon, Zeloris.....	La Grande
Smith, Harry L.....	Durham, Calif.	Weber, Jim.....	Junction City
Smith, Howard Herman.....	Portland	Welch, Frances L.....	Salem
Smith, J. Rennell.....	Tulare, Calif.	Weldon, L. D.....	Sacramento, Calif.
Smith, Marian Helen.....	Portland	Welsh, James Thomas.....	Portland
Smith, Mildred A.....	Westville, Ind.	Welty, Robert.....	The Dalles
Smith, William Oliver.....	Fresno, Calif.	Westerfield, Bill Rogers.....	Montclair, N. J.
Somers, Nellie E.....	Newport	Wetzel, Martha Marie.....	Portland
Southwick, Ralph.....	Medford	Whitaker, Louis.....	Freewater
Spangle, William E.....	Fair Oaks, Calif.	Whitehead, Edwin Francis.....	Gardnerville, Nevada
Speer, John Millard.....	Seattle, Wash.	Whitehouse, Eugene W.....	Lakeview
Spence, Luanne.....	Corvallis	Whitelaw, Mary Neill.....	Corvallis
Spence, Wilma Margaret.....	Albany	Whitman, George Edward.....	Klamath Falls
Spring, Helen Margaret.....	Corvallis	Whitmore, Joseph Bond.....	Portland
Stallard, Agnes.....	Burns	Whitworth, Sidney Edwin.....	Dallas
Starck, Vivian H.....	Scottsdale, Arizona	Wichmann, George H.....	Coleraine, Minn.
Starnes, Margaret Venita.....	Ashland	Wiegel, Clifford H.....	Auburn, Calif.
Starr, L. Clark.....	Pasadena, Calif.	Wilber, Meredith Gene.....	Portland
Stayton, Elizabeth.....	Stayton	Wildman, Sam G.....	Corvallis
Steinberg, William B.....	Scottsdale, Arizona	Wilkerson, Burford.....	Tillamook
Steinhoff, George Lester.....	Platteville, Wis.	Wilmot, Helen Gertrude.....	Saskatoon, Saskatchewan
Stephens, Janet.....	Moro	Wilson, Ardythe.....	Hood River
Stewart, Alice E.....	Powers	Wilson, Henrietta Mae.....	Lincoln, Nebr.
Stewart, Emma J.....	Portland	Wilson, Homer Vern.....	Elk Creek, Calif.
Stewart, Jean Margaret.....	Berkeley, Calif.	Winniford, John.....	Corvallis
Stiles, Elizabeth Taylor.....	Nogales, Arizona	Wirth, Muriel Jeannette.....	Oroville, Calif.
Stiles, Harold L.....	Nogales, Arizona	Witzig, Frances.....	Corvallis
Stout, Roy Edgar.....	Corvallis	Woerner, John Daniel.....	Elk Grove, Calif.
Stout, Virginia Mae.....	McMinnville	Wonderly, Francis L.....	Corvallis
Street, Mildred Holmes.....	Corvallis	Wood, LeVelle.....	Manhattan, Kan.
Strick, Andrew Ervin.....	Mahin	Yeater, Helen Margaret.....	Monmouth
Striechert, Gretchen.....	Astoria	Yocum, Carol Lee.....	Corvallis
Strong, Arthur Albert.....	Sacramento, Calif.	Young, Dorothy Roberta.....	Medford
Struve, Jeanne Louise.....	Watsonville, Calif.	Young, Hardy S.....	Sherwood
Summers, Mary Lois.....	Reserve, Mont.	Young, Kenneth G.....	Burns
Swanson, Gladys H.....	Glendive, Mont.	Youngberg, Mabel Ellen.....	McMinnville
Sweeney, Glenn Forrest.....	Portland	Zimmerdohle, Frank W.....	Adams
Symonds, May L.....	Long Beach, Calif.	Zorich, Amelia.....	Truckee, Calif.
Tessmer, Arthur.....	Waucoma, Iowa	Zumwalt, Edwin Bruce.....	Beaverton
Tharp, Harold.....	Elkton		
Thomas, Charlot.....	Corvallis		
Thomas, Wanda Margaret.....	Corvallis		
Thomet, Fred Rudolf.....	Ellensburg, Wash.		

Enrollment and Degrees

Summary 1937-38

ENROLLMENT BY CURRICULUM AND CLASS, REGULAR SESSION 1937-38

Curriculum	Freshman year	Sophomore year	Junior year	Senior year	Graduate	Special	Sub-total	Total
Liberal Arts and Sciences								
Lower Division								
Arts and Letters.....	58	26	-----	-----	-----	2		
Science	148	134	-----	-----	-----	2		
Social Science	54	31	-----	-----	-----	2		
Total, Lower Division	260	191	-----	-----	-----	6	457	
School of Science								
General Science	-----	-----	7	25	-----	-----		
Bacteriology	-----	-----	3	3	1	-----		
Botany	-----	-----	2	3	9	-----		
Chemistry	-----	-----	13	10	33	-----		
Entomology	-----	-----	3	-----	9	-----		
Geology	-----	-----	4	7	1	-----		
Mathematics	-----	-----	4	4	2	-----		
Physics	-----	-----	1	2	5	-----		
Zoology	-----	-----	5	7	2	-----		
Total, School of Science	-----	-----	42	61	62	-----	165	
Total, Liberal Arts and Sciences, excluding duplicates	260	191	42	61	62	6	-----	622
Professional Curricula								
School of Agriculture	214	279	118	92	49	5	-----	757
School of Education	47	87	40	50	25	-----	-----	249
School of Engineering	271	338	145	121	11	3	-----	889
School of Forestry	172	209	79	77	16	2	-----	555
School of Home Economics.....	191	232	83	103	25	4	-----	638
School of Pharmacy.....	31	50	11	20	1	1	-----	114
Secretarial Science.....	181	206	60	51	-----	5	-----	503
Architecture and Allied Arts	6	11	8	-----	-----	1	-----	26
Lower-Division Business								
Administration	59	44	-----	-----	-----	2	-----	105
Lower-Division Journalism	10	4	-----	-----	-----	-----	-----	14
Lower-Division Music	3	-----	-----	-----	-----	-----	-----	3
Lower-Division Physical Education	1	-----	-----	-----	-----	-----	-----	1
Totals (excluding duplicates)	1,446	1,651	586	575	189	29	-----	4,476
Auditors	-----	-----	-----	-----	-----	-----	-----	23
Total Students, Regular Session	-----	-----	-----	-----	-----	-----	-----	4,499

DISTRIBUTION OF ENROLLMENT AS TO SEX AND RANK 1937-38

	Men	Women	Total
Total Graduate Students.....	139	50	189
Total Undergraduate Students	2,965	1,322	4,287
Total Auditors	6	17	23
Totals	3,110	1,389	4,499

ENROLLMENT IN SUMMER SESSION, 1937

	Men	Women	Total
Regular Students	279	385	664
Post Session	8	3	11
Auditors	3	27	30
4-H Club Short Course.....	572	986	1,558
Totals	862	1,401	2,263

ENROLLMENT IN GENERAL EXTENSION DIVISION*
1937-38

Oregon State System of Higher Education
(July 1, 1937—June 30, 1938)

	Undergraduates			Graduates			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
<i>Extension Classes</i>									
Portland Center	913	1,506	2,419	65	60	125	978	1,566	2,544
Albany	8	36	44	-----	-----	-----	8	36	44
Astoria	2	27	29	-----	-----	-----	2	27	29
Baker	3	22	25	-----	-----	-----	3	22	25
Corvallis	9	32	41	5	2	7	14	34	48
Eugene	20	89	109	9	9	18	29	98	127
Hood River	1	6	7	-----	-----	-----	1	6	7
Klamath Falls	8	61	69	-----	-----	-----	8	61	69
La Grande	4	20	24	-----	-----	-----	4	20	24
Lebanon	5	10	15	-----	-----	-----	5	10	15
Medford	8	17	25	-----	-----	-----	8	17	25
Pendleton	1	13	14	-----	-----	-----	1	13	14
Salem	4	62	66	5	19	24	9	81	90
St. Helens	6	17	23	-----	-----	-----	6	17	23
The Dalles	14	43	57	-----	-----	-----	14	43	57
Total	1,006	1,961	2,967	84	90	174	1,090	2,051	3,141
<i>Correspondence Study</i>									
New Registrants	442	431	873	-----	-----	-----	442	431	873
Students registered before July 1, 1937, still enrolled	333	292	625	-----	-----	-----	333	292	625
Total	775	723	1,498	-----	-----	-----	775	723	1,498
Total, General Extension Division	1,781	2,684	4,465	84	90	174	1,865	2,774	4,639

* The enrollments given in the table do not include enrollments in radio classes and for other noncredit work of the General Extension Division.

SUMMARY OF DEGREES GRANTED 1937-38

Advanced Degrees		
Doctors of Philosophy		5
Professional Degrees		4
Masters of Arts		8
Masters of Science		56
Total Advanced Degrees	-----	73
Bachelors' Degrees		
Bachelors of Arts		
Science		14
Education		6
Home Economics		12
Bachelors of Science		
Science		44
Agriculture		79
Education		31
Chemical Engineering		15
Civil Engineering		34
Electrical Engineering		23
Mechanical Engineering		28
Industrial Arts		8
Forestry		63
Home Economics		87
Pharmacy		19
Secretarial Science		46
Total Bachelors' Degrees	-----	509
Total Degrees Granted	-----	582*

* This total does not include the following degrees granted by the University of Oregon Medical School through the State College: Bachelor of Arts (in nursing education), 3; Bachelor of Science (in nursing education), 1.

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