

The University and its various colleges and schools reserve the right to change the rules regulating admission to, instruction in and graduation from the University and its various divisions and any other regulations affecting the student body. Such regulations shall go into force whenever the proper authorities may determine, and shall apply not only to prospective students, but also to those who may at such time be matriculated in the University. The University also reserves the right to withdraw courses or change fees. at any time.

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NOTICE

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THE UNIVERSITY CALENDAR FOR 1942-1943

AUTUMN QUARTER, 1942

Preferred registration period for students advised in the spring.....Sept. 8 to Sept. 11, 4:30 p.m.
Fees must be paid in advance of registration

Registration dates for all students.....Sept. 14 to Sept. 26, 12 m.
Fees must be paid in advance of registration

Last registration day before beginning of instruction.....Saturday, Sept. 26, 12 m.

Special instruction for new freshmen.....Begins 9 a.m., Sept. 25, ends Sept. 26

College Aptitude Test (Room 120 Social Sciences Hall).....Saturday, Sept. 26, 8 a.m.

Instruction begins.....Monday, Sept. 28, 8 a.m.

President's annual address.....Friday, Oct. 2, 11 a.m.

Last day to register with a late fee and to add a course.....Saturday, Oct. 3, 12 m.

President's reception to new members of the faculty.....Friday, Oct. 16, 8:30 p.m.

Last day to withdraw and receive a "W" without grade.....Saturday, Nov. 7, 12 m.

Armistice and Admission Day (Holiday).....Wednesday, Nov. 11.

President's reception to parents of new freshmen.....Tuesday, Nov. 17, 7:30 p.m.

Thanksgiving recess begins.....Wednesday, Nov. 25, 6 p.m.

Thanksgiving recess ends.....Monday, Nov. 30, 8 a.m.

Instruction ends.....Wednesday, Dec. 16, 6 p.m.

WINTER QUARTER, 1943

Preferred registration period for students advised in the spring....Nov. 23 to Nov. 25, 4:30 p.m.

Registration dates for all students.....Nov. 30 to Dec. 12, 12 m.

Section reservations cancelled if tuition is not paid by.....Wednesday, Dec. 16, 4:30 p.m.

Registration dates for students not previously registered.....Dec. 28 to Jan. 2, 12 m.

During this period, fees must be paid in advance of registration.
Students may not register December 14 to 26.

Last registration day before the beginning of instruction.....Saturday, Jan. 2, 12 m.

Instruction begins.....Monday, Jan. 4, 8 a.m.

Last day to register with late fee, and to add a course.....Saturday, Jan. 9, 12 m.

College Aptitude Test (233 Phil. Hall).....Monday, Jan. 11, 12 m., or Tuesday, Jan. 12, 8 a.m.

Last day to withdraw and receive a "W" without grade.....Saturday, Feb. 13, 12 m.

Washington's Birthday (Founder's Day and Legal Holiday).....Monday, Feb. 22

Instruction ends.....Friday, March 19, 6 p.m.

SPRING QUARTER, 1943

Preferred registration period for students advised in the spring....Feb. 23 to Feb. 26, 4:30 p.m.

Registration dates for all students.....March 1 to March 12, 4:30 p.m.

Section reservations cancelled if tuition is not paid by.....Friday, March 19, 4:30 p.m.

Registration dates for students not previously registered.....March 24 to March 27, 12 m.

During this period, fees must be paid in advance of registration.
Students may not register March 13 to 23.

Last registration day before beginning of instruction.....Saturday, March 27, 12 m.

Instruction begins.....Monday, March 29, 8 a.m.

Last day to register with late fee, and to add a course.....Saturday, April 3, 12 m.

College Aptitude Test (233 Phil. Hall).....Monday, April 5, 12 m., or Tuesday, April 6, 8 a.m.

Last day to withdraw and receive a "W" without grade.....Saturday, May 8, 12 m.

Honors Convocation.....Wednesday, May 12, 10 a.m.

Governor's Day.....Thursday, May 20

Memorial Day (Holiday).....Monday, May 31

Baccalaureate Sunday.....Sunday, June 6

Instruction ends.....Friday, June 11

Class Day and Alumni Day.....Saturday, June 12

Commencement.....Saturday, June 12

SUMMER QUARTER, 1942

| | |
|--|-------------------------------|
| Registration..... | May 18 to June 22, 4:30 p.m. |
| Instruction begins | |
| Engineering courses..... | Monday, June 15, 7:30 a.m. |
| Nursing Education Hospital and Field Work..... | Monday, June 15, 8 a.m. |
| Law School..... | Wednesday, June 17, 8 a.m. |
| University courses..... | Tuesday, June 23, 7:30 a.m. |
| College Aptitude Tests | |
| 233 Philosophy Hall..... | Monday, June 29, 12 m. |
| 233 Philosophy Hall..... | Monday, July 27, 12 m. |
| Independence Day (Holiday)..... | Saturday, July 4 |
| First term ends..... | Wednesday, July 22, 6 p.m. |
| Second term begins..... | Thursday, July 23, 7:30 a.m. |
| Last day to withdraw and receive a "W" without grade | |
| First term..... | Friday, July 3, 4:30 p.m. |
| Second term..... | Monday, August 3, 4:30 p.m. |
| Full quarter..... | Wednesday, July 22, 4:30 p.m. |
| Law School..... | Wednesday, July 22, 4:30 p.m. |
| Instruction ends | |
| University courses..... | Friday, August 21, 6 p.m. |
| Law School..... | Thursday, August 27, 6 p.m. |
| Nursing Education Hospital and Field Work..... | Friday, August 28, 6 p.m. |

University Calendar Rule

The *autumn quarter* shall begin on the last Monday of September, and end on the Wednesday of the twelfth week of the quarter.

The *winter quarter* shall begin on the first Monday after January 1 (*except* that when January 1 falls on Sunday it shall begin on January 3, and when January 1 falls on Monday it shall begin on January 2), and end on the eleventh Friday thereafter.

The *spring quarter* shall begin on the second Monday after the close of the winter quarter, and end on the eleventh Friday thereafter.

SCHEDULE OF FACULTY, UNIVERSITY SENATE, AND EXECUTIVE COMMITTEE MEETINGS FOR THE YEAR 1942-1943

Autumn Quarter, 1942

| | |
|--|------------------------------|
| Senate (Election of Executive Committee)..... | Thursday, October 1, 3 p.m. |
| Executive Committee (Appointment of all Faculty Committees)..... | Tuesday, October 6, 3 p.m. |
| Senate..... | Thursday, October 15, 3 p.m. |
| Executive Committee..... | Thursday, October 29, 3 p.m. |
| Senate..... | Thursday, November 5, 3 p.m. |

Winter Quarter, 1943

| | |
|--------------------------|-------------------------------|
| Executive Committee..... | Tuesday, January 12, 3 p.m. |
| Senate..... | Thursday, January 21, 3 p.m. |
| Executive Committee..... | Thursday, February 4, 3 p.m. |
| Senate..... | Thursday, February 11, 3 p.m. |

Spring Quarter, 1943

| | |
|--------------------------|----------------------------|
| Executive Committee..... | Tuesday, April 6, 3 p.m. |
| Senate..... | Thursday, April 15, 3 p.m. |
| Executive Committee..... | Thursday, April 29, 3 p.m. |
| Senate..... | Thursday, May 6, 3 p.m. |

BOARD OF REGENTS

1941-1942

| | |
|---|----------|
| WINLOCK W. MILLER, President..... | Seattle |
| Term ends March, 1941 | |
| PHILIP D. MACBRIDE, Vice President..... | Seattle |
| Terms ends March, 1944 | |
| THOMAS BALMER..... | Seattle |
| Term ends March, 1941 | |
| WERNER A. RUPP..... | Aberdeen |
| Term ends March, 1945 | |
| EDWARD P. RYAN..... | Spokane |
| Term ends March, 1940 | |
| ALFRED SHEMANSKI..... | Seattle |
| Term ends March, 1944 | |
| (VACANCY NOT FILLED)..... | _____ |

HERBERT T. CONDON, Secretary

Committees of the Board of Regents

| | |
|----------------------------|-------------------------------------|
| Buildings and Grounds..... | Miller, Rupp, Shemanski |
| Executive..... | Balmer, Macbride, Miller, Shemanski |
| Finance..... | Macbride, Shemanski, Ryan |
| University Lands..... | Rupp, Miller, Ryan |
| University Welfare..... | Ryan, Macbride, Rupp |

University of Washington Alumni Association

| | |
|---------------------|---|
| President..... | Arthur E. Simon, B.A., 1917 |
| Vice President..... | Smith Troy, LL.B., 1930 |
| Vice President..... | Alice Frein Johnson, B.A., 1922, B.A. in Journ., 1923 |
| Treasurer..... | Martin Nelson, B.A., 1933 |
| Secretary..... | R. Bronsdon Harris, B.S. in For., 1931 |

OFFICERS OF ADMINISTRATION

LEE PAUL SIEG, Ph.D., LL.D.....President of the University

The College of Arts and Sciences

EDWARD HENRY LAUER, Ph.D.....Dean of the College of Arts and Sciences
 DAVID THOMSON, B.A., LL.D.
 Vice-President Emeritus; Vice Dean of the College of Arts and Sciences
 HARVEY BRUCE DENSMORE, B.A.....Chairman, General Studies
 RAY L. ECKMANN, B.B.A.
 Administrative Director of the School of Physical and Health Education
 WALTER F. ISAACS, B.S.(F.A.).....Director of the School of Art
 VERNON MCKENZIE, M.A.....Director of the School of Journalism
 EFFIE I. RAITT, M.A.....Director of the School of Home Economics
 ELIZABETH S. SOULE, M.A.....Director of the School of Nursing Education
 HARLAN THOMAS, B.S.....Director Emeritus of the School of Architecture
 WILLIAM F. THOMPSON, Ph.D.....Director of the School of Fisheries
 CARL PAIGE WOOD, M.A.....Director of the School of Music

The Professional and Graduate Schools and Colleges

JUDSON F. FALKNOR, B.S., LL.B.....Dean of the School of Law
 FOREST JACKSON GOODRICH, Ph.C., Ph.D.....Dean of the College of Pharmacy
 EDGAR ALLAN LOEW, E.E.....Dean of the College of Engineering
 FREDERICK MORGAN PADELFORD, Ph.D., LL.D.....Dean of the Graduate School
 ERNEST F. WITTE, Ph.D.....Director of the Graduate School of Social Work
 FRANCIS FOUNTAIN POWERS, Ph.D.....Dean of the College of Education
 FREDERICK ELMER BOLTON, Ph.D.....Dean Emeritus of the College of Education
 HOWARD HALL PRESTON, Ph.D.....Dean of the College of Economics and Business
 MILNOR ROBERTS, B.A.....Dean of the College of Mines
 HUGO WINKENWERDER, M.F.....Dean of the College of Forestry
 RUTH WORDEN, B.A.....Director of the School of Librarianship

Other Administrative Officers

HAROLD A. ADAMS, M.S.....Assistant to the Dean of Men
 MARY IOLA BASH, B.A.....Associate Dean of Women
 HENRY ALFRED BURD, Ph.D.....Director of the Summer Quarter
 HERBERT THOMAS CONDON, LL.B.....Dean of Students
 RAYMOND C. DAVIS.....Comptroller
 RAY L. ECKMANN, B.B.A.....Director of Student Activities
 MAX HIPKOE.....Purchasing Agent
 IRVIN HOFF, M.A.....Registrar
 H. C. HUNTER.....Director, University News Service
 MARGARET S. MANN, B.F.A.....Assistant to the Dean of Women
 CHARLES CULBERTSON MAY, B.S.(C.E.).....Superintendent of Buildings and Grounds
 DEAN S. NEWHOUSE, B.A.....Dean of Men
 GLEN T. NYGREEN, B.S. in Chem.....Assistant to the Dean of Men
 ROBERT W. O'BRIEN, A.B., M.A.....Assistant to the Dean of the College of Arts and Sciences
 EVERETT I. ROLFF, B.A.....Director of Publications
 CHARLES WESLEY SMITH, B.A., B.L.S.....Librarian
 HARRY EDWIN SMITH, Ph.D.....Director of the Extension Service
 NELSON A. WAHLSTROM, B.B.A.....Assistant Comptroller
 MAY DUNN WARD, M.A.....Acting Dean of Women
 *C. KEN WEIDNER.....Assistant Superintendent of Buildings and Grounds
 LOIS J. WENTWORTH, B.A.....Assistant to the Dean of the Graduate School

* On leave, 1942-1943.

LIBRARY STAFF

Smith, Charles Wesley, B.A., B.L.S. *Librarian*
Christoffers, Ethel Margaret, Ph.B., B.S.(L.S.) *Reference Librarian*
Johns, Helen, B.A., Cert.(L.S.) *Circulation Librarian*
Moseley, Maud L., B.A., B.S.(L.S.) *Catalogue Librarian*
Putnam, Marguerite Eleanor, B.A., B.S.(L.S.) *Acquisitions Librarian*
Appleton, Marion Brynner, B.A., B.S.(L.S.) ... *Senior Librarian, Circulation Division*
Arkley, Cecilia, B.A., B.S.(L.S.) *Senior Assistant, Circulation Division*
Campbell, Freda, B.A., B.S.(L.S.) *Senior Librarian, Catalogue Division*
Cavitt, Mary, B.A., B.S.(L.S.) *Senior Librarian, Circulation Division*
Cooper, Dorothy Margaret, B.A., B.S.(L.S.) . *Junior Librarian, Circulation Division*
Duffy, Lucille, B.A., B.A. in Librarianship *Junior Librarian, Catalogue Division*
Ferguson, Elizabeth Margaret, B.S., B.A. in Librarianship
Senior Assistant, Reference Division
Gilchrist, Madeline, B.A., B.S.(L.S.) *Parrington Branch Librarian*
Grier, Mary Catharine, B.S., B.S.(L.S.) *Senior Librarian, Reference Division*
Hale, Ruth Elinor, B.A., B.S.(L.S.) *Senior Librarian, Acquisitions Division*
Heathcote, Lesley Muriel, B.A., B.S.(L.S.), M.A.
Senior Librarian, Acquisitions Division
Jones, Elinor Smiley, B.S., B.A. in Librarianship
Senior Assistant, Reference Division
Jones, Lois, B.A., B.A. in Librarianship *Junior Librarian, Reference Division*
Jones, Winnifred, B.S., B.S.(L.S.) *Senior Librarian, Reference Division*
Keefer, Mary, B.A., B.A. in Librarianship *Junior Librarian, Catalogue Division*
Kelly, Clara J., B.S., B.S.(L.S.), M.S. *Senior Librarian, Reference Division*
Lensrud, Mabel, B.S.(L.S.) *Junior Librarian, Catalogue Division*
Lyons, Hermiena Marion, B.A., B.S.(L.S.) *Senior Assistant, Circulation Division*
McCutchen, Lydia May, B.A., Cert.(L.S.) *Senior Librarian, Acquisitions Division*
Mooney, Jeannette Pearl, B.A., B.S.(L.S.) ... *Senior Assistant, Acquisitions Division*
Oppen, Chester, B.A., B.A. in Librarianship ... *Junior Librarian, Reference Division*
Peterson, Marion E., B.A., B.A. in Librarianship
Junior Librarian, Reference Division
Shorrock, Bernice F., B.A., B.A. in Librarianship
Junior Librarian, Reference Division
Slyter, Shellie L., B.A., B.S. in Librarianship .. *Senior Librarian, Circulation Division*
Smith, Marjorie D., B.A., B.S.(L.S.) *Junior Librarian, Catalogue Division*
Swain, Olive, B.S., B.S.(L.S.), M.A. *Senior Librarian, Catalogue Division*
Todd, Ronald, B.A., B.S.(L.S.) *Senior Librarian, Reference Division*
Tucker, Lena Lucile, B.S.(L.S.), M.A. *Senior Librarian, Catalogue Division*
Wright, Joyce Mary, B.A., B.A. in Librarianship
Assistant Librarian, Parrington Branch

Law Library

Beardsley, Arthur Sydney, LL.B., B.S.(L.S.), M.A., Ph.D.....*Law Librarian*
 Wilkins, Betty Roe, B.A., B.A.L.L., LL.B.....*Assistant Law Librarian*
 Hoard, Mary, B.A., LL.B., LL.M., B.S.(L.S.).....*Catalogue Librarian*

UNITED STATES ARMY RESERVE OFFICERS' TRAINING CORPS

| | |
|---|-------------------------------------|
| Eden, John R., A.B..... | <i>Colonel, Infantry</i> |
| **Davis, Lee D., B.A..... | <i>Colonel, Infantry</i> |
| Richards, Willard K., B.S..... | <i>Lieutenant Colonel, C.A.C.</i> |
| Ames, George W., B.A..... | <i>Lieutenant Colonel, C.A.C.</i> |
| Spoerry, Gottfried W., B.Pd., M.Pd..... | <i>Lieutenant Colonel, Infantry</i> |
| Tilton, Kenneth E., B.S. in Chem. Engr..... | <i>Major, C.A.C.</i> |
| Ramsey, John W..... | <i>Major, Infantry</i> |
| Joseph, Henry B., B.S. in For..... | <i>Major, C.A.C.</i> |
| Cocheu, Stephen D., B.S..... | <i>Captain, Q.M.C.</i> |
| Myers, Oscar L., B.S. in B.A., M.A..... | <i>Captain, Infantry</i> |
| Wienker, Curtis H., B. of Arch..... | <i>First Lieutenant, Infantry</i> |
| Brinsmead, Arthur, B.S..... | <i>First Lieutenant, Infantry</i> |
| Cone, Sidney L., B.A..... | <i>First Lieutenant, C.A.C.</i> |
| Hooper, Alan V., Jr., B.S. in For..... | <i>First Lieutenant, C.A.C.</i> |
| Vivrette, Lyndon, B.A. | <i>First Lieutenant, Infantry</i> |
| Collins, Floyd | <i>First Lieutenant, Infantry</i> |
| Dawson, James R., B.S..... | <i>Second Lieutenant, C.A.C.</i> |
| Chandler, Charles H..... | <i>Sergeant, D.E.M.L. (C.A.C.)</i> |
| Whitchurch, Roy B..... | <i>Sergeant D.E.M.L. (C.A.C.)</i> |
| Holt, Sam N..... | <i>Sergeant, D.E.M.L. (Inf.)</i> |
| Gage, Hazen T..... | <i>Sergeant, D.E.M.L. (C.A.C.)</i> |
| Harrison, Thomas L..... | <i>Sergeant, D.E.M.L. (C.A.C.)</i> |
| Mehaffie, Harold B. | <i>Sergeant, D.E.M.L. (C.A.C.)</i> |
| Bolster, Cecil D. | <i>Sergeant, D.E.M.L. (C.A.C.)</i> |
| Nelson, Carl W. | <i>Sergeant, D.E.M.L. (Inf.)</i> |
| Burke, Rolland J. | <i>Sergeant, D.E.M.L. (Inf.)</i> |

UNITED STATES NAVAL RESERVE OFFICERS' TRAINING CORPS

| | |
|--|--|
| Barr, Eric L., B.S., Ph.D..... | <i>Captain, U.S. Navy</i> |
| Wood, Ralph F., B.S..... | <i>Captain, U.S. Navy</i> |
| Bruckshaw, H. A. N., M.D..... | <i>Commander (M.C.), U.S. Navy</i> |
| Warren, John T., B.S..... | <i>Lieutenant-Commander, U.S. Navy</i> |
| Farwell, Raymond F., A.B., M.A..... | <i>Lieutenant-Commander, U.S.N.R.</i> |
| Willis, Park Weed, Jr., A.B., M.D..... | <i>Lieutenant-Commander (M.C.), U.S.N.R.</i> |
| Ramsey, Walter P., B.S..... | <i>Lieutenant-Commander, U.S. Navy</i> |
| Thompson, Carlisle H., B.S..... | <i>Lieutenant-Commander, U.S. Navy</i> |
| Wendelburg, George, B.S. | <i>Lieutenant, U.S. Navy</i> |
| Littell, Roland B..... | <i>Chief Yeoman, U.S. Navy</i> |
| Hamilton, Malcolm | <i>Chief Gunner's Mate, U.S. Navy</i> |
| Harmony, Rufus A..... | <i>Chief Quartermaster, U.S. Navy</i> |
| Berns, John E..... | <i>Chief Yeoman, U.S. Navy</i> |
| Sincere, W. F. A..... | <i>Chief Turret Captain, U.S.F.R.</i> |
| Hoffman, Jesse L..... | <i>Chief Turret Captain, U.S.F.R.</i> |
| Corbett, George B., B.S..... | <i>Chief Specialist, U.S.N.R.</i> |

** On February to May, 1942.

THE GRADUATE SCHOOL OF SOCIAL WORK

(For Faculty and Courses, see page 326.)

| | |
|------------------------------|--|
| Witte, Ernest F., Ph.D. | <i>Director</i> |
| Bowers, James M., M.D. | <i>Lecturer in Medical Information</i> |
| Cantril, Simon T., M.D. | <i>Lecturer in Medical Information</i> |
| Dorman, Purman, M.D. | <i>Lecturer in Medical Information</i> |
| Francis, Byron F., M.D. | <i>Lecturer in Medical Information</i> |
| Friend, Austin, M.D. | <i>Lecturer in Medical Information</i> |
| Jay, Frederick B., M.D. | <i>Lecturer in Medical Information</i> |
| Leavitt, Harry, M.D. | <i>Lecturer in Medical Information</i> |
| Lincoln, Miriam, M.D. | <i>Lecturer in Medical Information</i> |
| Mercer, Samuel T., M.D. | <i>Lecturer in Medical Information</i> |
| Stewart, Roger E., M.D. | <i>Lecturer in Medical Information</i> |
| Allen, Margaret | <i>Lecturer</i> |
| Block, Virginia | <i>Lecturer</i> |
| Hardin, Gwen | <i>Lecturer</i> |
| Hegland, Leonard L. | <i>Lecturer</i> |
| Johnson, Lillian J. | <i>Lecturer</i> |
| Kelly, John C. | <i>Lecturer</i> |
| Kelly, Samuel P. | <i>Lecturer</i> |
| Kratsch, Ida Rose | <i>Lecturer</i> |
| Lang, Harold A. | <i>Lecturer</i> |
| Mercer, Eleanor | <i>Lecturer</i> |
| Pease, Ruth | <i>Lecturer</i> |
| Perry, Mary | <i>Lecturer</i> |
| Robertson, Orville | <i>Lecturer</i> |
| Scroggie, Bernice E. | <i>Lecturer</i> |
| Adams, Ray | <i>Supervisor of Field Work</i> |
| Allper, Sylvia Nagel | <i>Supervisor of Field Work</i> |
| Barton, Louise Howard | <i>Supervisor of Field Work</i> |
| Braun, Katherine | <i>Supervisor of Field Work</i> |
| Brown, Emily | <i>Supervisor of Field Work</i> |
| Brooks, Harriet | <i>Supervisor of Field Work</i> |
| Chadwick, Nellie | <i>Supervisor of Field Work</i> |
| Denton, Anne | <i>Supervisor of Field Work</i> |
| Fahey, George E. | <i>Supervisor of Field Work</i> |
| Hall, John F. | <i>Supervisor of Field Work</i> |
| Hanlon, Julian | <i>Supervisor of Field Work</i> |
| Hartson, Margaret | <i>Supervisor of Field Work</i> |
| Hogan, Virginia MacKay | <i>Supervisor of Field Work</i> |
| Jamieson, Ann Norrell | <i>Supervisor of Field Work</i> |
| Kirry, Agnes | <i>Supervisor of Field Work</i> |

OFFICE OF THE REGISTRAR

| | |
|------------------------------------|-----------------------------------|
| Hoff, Irvin, M.A. | <i>Registrar</i> |
| Toner, Ethelyn, B.A. | <i>Assistant to the Registrar</i> |
| Burnett, Helen Carlisle, B.S. | <i>Secretary</i> |
| Willard, Frances, B.A. | <i>Credentials</i> |
| Brugger, Minnie Kraus, B.A. | <i>Graduation</i> |
| Saunders, Virginia, B.A. | <i>Recording</i> |
| Pape, Eva Gene | <i>Registration</i> |
| Tate, Frances E. | <i>Transcripts</i> |

THE MUSEUM

| | |
|---|----------------------------------|
| Gunther, Erna, Ph.D. | <i>Director</i> |
| Rathbun, Samuel F. | <i>Honorary Curator of Birds</i> |
| Flahaut, Martha Reekie, B.A., B.S.(L.S.) | <i>Museum Assistant</i> |
| Hardies, Roderick, B.A. | <i>Docent</i> |

THE HENRY ART GALLERY

| | |
|------------------------------------|-----------------|
| Isaacs, Walter F., B.S.(F.A.) | <i>Director</i> |
| Savery, Halley | <i>Curator</i> |

ENGINEERING EXPERIMENT STATION

| | |
|--|------------------------------------|
| Loew, Edgar Allan, B.S., E.E. | <i>Director</i> |
| Kirsten, Frederick Kurt, B.S., E.E. | <i>Aeronautical Engineering</i> |
| Benson, Henry Kreitzer, Ph.D. | <i>Chemical Engineering</i> |
| Harris, Charles William, B.S., C.E. | <i>Civil Engineering</i> |
| Eastman, Austin Vitruvius, B.S. in E.E., M.S. | <i>Electrical Engineering</i> |
| Grondal, Bror Leonard, B.A., M.S.F. | <i>Forest Products</i> |
| Goodspeed, George Edward, B.S. (Min.E.) | <i>Geology</i> |
| Wilson, George Samuel, B.S. | <i>Mechanical Engineering</i> |
| Roberts, Milnor, B.A. | <i>Mining and Metallurgy</i> |
| Osborn, Frederick Arthur, Ph.D. | <i>Physics Standards and Tests</i> |

OCEANOGRAPHIC LABORATORIES

| | |
|--------------------------------------|------------------------|
| *Thompson, Thomas Gordon, Ph.D. | <i>Director</i> |
| Utterback, Clinton Louis, Ph.D. | <i>Acting Director</i> |

OFFICE OF STATE CHEMIST

| | |
|--|--------------------------------|
| Johnson, Charles Willis, Ph.C., Ph.D. | <i>Director</i> |
| Arrigoni, Louis, M.S. | <i>Assistant State Chemist</i> |

NORTHWEST EXPERIMENT STATION, UNITED STATES

BUREAU OF MINES

| | |
|--|------------------------------------|
| Yancey, Harry Fagan, Ph.D. | <i>Supervising Engineer</i> |
| Johnson, Kenneth Alexander, B.S. | <i>Assistant Chemist</i> |
| Bird, J. Howard | <i>Assistant Mining Engineer</i> |
| Skinner, Kenneth G., M.S. in Cer.E. | <i>Assistant Chemical Engineer</i> |
| Geer, M. R., M.S. in Min.E. | <i>Junior Mining Engineer</i> |
| Zane, R. E., M.S. in Met.E. | <i>Junior Chemical Engineer</i> |
| Keating, Henry T. | <i>Principal Clerk</i> |
| Towle, Harriett E. | <i>Clerk</i> |
| Lance, William E. | <i>Mill Mechanic</i> |

UNIVERSITY HEALTH SERVICE

| | |
|---------------------------------|----------------------------------|
| Hall, David Connolly, M.D. | <i>University Health Officer</i> |
| Rice, Myrtle Alley, M.D. | <i>Assistant Health Officer</i> |
| Lester, Charles N., M.D. | <i>Assistant Health Officer</i> |
| Bender, Charles E., M.D. | <i>Assistant Health Officer</i> |
| Dirstine, Morris J., M.D. | <i>Assistant Health Officer</i> |
| Vukov, S. J., M.D. | <i>Assistant Health Officer</i> |
| Soderstrom, K. M., M.D. | <i>Assistant Health Officer</i> |

* On leave, 1942-1943.

BOARDS AND COMMITTEES*

1941-1942

Administrative

Admissions—Dean of the College or School concerned, and Registrar.

Board of Deans—Lauer, Condon, Falknor, Goodrich, Loew, Newhouse, Padelford, Powers, Preston, Roberts, Thomson, Ward, Winkenwerder, and Registrar.

Director of Graduate Publications—Padelford.

Traffic Judge—Richards.

Executive Committee of University Senate

Merritt Benson, J. Corbally, B. Grondal, G. McKay, L. Mander, Frederick Osborn; Registrar, secretary.

Committees of the Faculty

Athletics—Chairman, Nottelmann; Barksdale, Griffith, Lauer, D. H. Mackenzie, May, Pellegrini, Quainton, Schaller.

Budget—Chairman, Tartar; W. E. Cox, Steiner, Tymstra, Winger, Wood; Comptroller, ex officio.

Building Needs—Chairman, Eastwood; Fuller, Isaacs, Alfred Jensen, McKay, H. H. Martin, Olschewsky; Superintendent of Buildings and Grounds, ex officio.

Curriculum—Chairman, Dakan; and the chairmen of the college curriculum committees, together with a representative from each college or school having no curriculum committee.

Grades—Chairman, William R. Wilson; Henrietta Adams, Dille, Harrison, Holt, Loew, F. A. Osborn, Powers; Registrar, ex officio.

Graduation—Chairman, Grondal; Coombs, Cornu, A. V. Eastman, Lutey, Ray, Skinner; Registrar, ex officio.

Honors—Chairman, Densmore; Dvorak, F. S. Eastman, Gundlach, Lorig, H. C. Meyer, Rising; Registrar, ex officio.

Library—Chairman, C. W. Smith; Beardsley, Benham, Carpenter, Cook, Padelford, Skinner, Thomson, Wangaard, Weaver, Williams, Winslow.

Public Exercises—Chairman, Daniels; Conway, Corbally, Hanley, Jerbert, Lawrence, Lindblom, A. L. Miller, Powell, Welke.

Public Relations—Chairman, Burd; Christian, Farquharson, Harsch, Webster; Comptroller, ex officio; Director, University News Service, ex officio.

Radio—Chairman, Loew; Denny, Hoff, Hughes, Kenworthy, Lauer, Normann, H. E. Smith, Stevenson Smith; Director, University News Service, ex officio.

Relations with Secondary Schools and Colleges—Chairman, T. R. Cole; Stephen Brown, E. M. Draper, Foster, Gates, Hitchcock, Ida Ingalls, Powers, Sperlin, Mabel Turner, Utterback, Vail, Warner; Registrar, ex officio.

Rhodes Scholarships—Chairman, Harrison; K. C. Cole, Costigan, Densmore, Taylor.

Rules—Chairman, O'Bryan; Hayner, Huber, Lawson, E. B. Stevens, Thomson; Registrar, ex officio.

Schedule and Registration—Chairman, Griffith; Mikesell, Munro, Peek, Powell, Van Horn; ex officio: Registrar, Assistant to Dean of College of Arts and Sciences.

Student Campus Organizations—Chairman, A. L. Miller; Bartels, Bash, Blankenship, W. M. Read, Seeman, F. C. Smith, Starr, Zillman.

Student Discipline—Chairman, Schmid; M. E. Benson, Sholley, Soule, E. R. Wilcox, Wm. R. Wilson.

Student Welfare—Chairman, Butterbaugh; Edna Benson, Engel, Leahy, McMinn, Newhouse, Nostrand, Ward, Ruth Wilson, Witte; Registrar, ex officio.

Tenure and Academic Freedom—Chairman, Steiner; H. K. Benson, Falknor, Goodspeed, Grondal, Mund, Rex Robinson, Rowntree, C. T. Williams, G. S. Wilson, Winther.

Graduate School Committees

Graduate Publications—Padelford, Carpenter, Church, K. C. Cole, Goodspeed, Griffith, Gundlach, Gunther, Rigg, C. W. Smith; Director of Publications, ex officio.

University Research—Carpenter, Lauer, Padelford, Preston, Weaver.

* The President is ex officio member of all University boards and committees.

UNIVERSITY SENATE FOR 1941-1942

A. Humanities

I. LETTERS

Terms expire Spring, 1944:

Benham (English)
Chessex (Rom. Langs.)
Cornu (English)
Winther (English)

Terms expire Spring, 1943:

Christian (Journ.)
Lawson (English)
D. Thomson (Classics)
W. C. E. Wilson (Rom. Langs.)

Terms expire Spring, 1942:

* M. E. Benson (Journ.)
Garcia-Prada (Rom. Langs.)
Read (Classics)
Zillman (English)

II. ART

Terms expire Spring, 1944:

H. Hall (Music)
C. Lawrence (Music)

Terms expire Spring, 1943:

* McKay (Music)
Penington (Art)

Terms expire Spring, 1942:

E. G. Benson (Art)
Munro (Music)

B. Science

III. GENERAL

Terms expire Spring, 1944:

Coombs (Geol.)
Ordal (Bact.)

Terms expire Spring, 1943:

Carpenter (Math.)
Robinson (Chem.)

Terms expire Spring, 1942:

Henry (Bact.)
* Osborn (Physics)

IV. TECHNOLOGY

Terms expire Spring, 1944:

* Grondal (Forestry)
Lindblom (Elec. Engr.)
Tymstra (Mech. Engr.)
Warner (Gen. Engr.)

Terms expire Spring, 1943:

H. K. Benson (Chem. Engr.)
Jensen (Gen. Engr.)
McMinn (Mech. Engr.)
Pearce (Forestry)

Terms expire Spring, 1942:

Barr (Nav. Sci.)
Eastman (Elec. Engr.)
Kirsten (Aero. Engr.)
Smith (Civ. Engr.)

* Member of the Executive Committee.

C. Social Studies

V. GENERAL

Terms expire Spring, 1944:
K. Cole (Pol. Sci.)
Steiner (Soc.)

Terms expire Spring, 1943:
Nelson (Phil.)
W. R. Wilson (Psych.)

Terms expire Spring, 1942:
* Mander (Pol. Sci.)
Rader (Phil.)

VI. APPLIED

Terms expire Spring, 1944:
W. E. Cox (E.&B.)
Hutchinson (P.E. for Women)
J. W. Richards (Law)
C. Williams (Educ.)

Terms expire Spring, 1943:
Foster (P.E. for Men)
Lorig (E.&B.)
Mackenzie (E.&B.)
Nottelmann (Law)

Terms expire Spring, 1942:
* Corbally (Educ.)
Denny (Home Econ.)
Hall (E.&B.)
Rowntree (Home Econ.)

JOURNALS

College of Education Record

John E. Corbally, Ph.D.....*Managing Editor*

Modern Language Quarterly

Frederick M. Padelford, Ph.D., LL.D.....*Managing Editor*

Pacific Northwest Quarterly

Charles M. Gates, Ph.D.*Managing Editor*
Harry N. M. Winton, A.M.....*Editorial Associate*

* Member of the Executive Committee.

ALPHABETICAL LIST OF THE UNIVERSITY FACULTY 1942-1943†

- †Lee Paul Sieg, 1934.....President of the University
B.S., 1900, M.S., 1901, Ph.D., 1910, Iowa; LL.D., 1934, Pittsburgh, 1941, Iowa
- Adams, Edwin Hubbard, 1939.....Associate in English
B.A., 1927, M.A., 1931, Washington State
- *†Adams, Henrietta M., 1929 (1937)
Assoc. Prof. Nursing Education; Dir. Nursing Education, Hospital Division
R.N., 1920, Seattle General Hospital; B.S., 1926, M.S., 1934, Washington
- Adkinson, Burton W., 1942.....Acting Instructor in Geography
B.A. in Ed., 1936, M.A., 1940, Washington
- Alfonso, Marie, 1922 (1936).....Associate Professor of Librarianship
B.A., 1913, Nebraska; B.S.(L.S.), 1921, Washington
- Amero, Emilio, 1941
Acting Associate Professor of Design and Walker-Ames Associate
School of Fine Arts, Mexico
- Ames, George W., Lieutenant Colonel, C.A.C., 1937 (1941)
Associate Professor of Military Science and Tactics
B.A., 1902, Washington; Coast Artillery School, 1929
- Anderson, Elam D., M.D., 1940.....Lecturer in Nursing Education
A.B., Utah; M.D., Northwestern
- Anderson, Julia M., 1940.....Instructor in Nursing Education
B.S., 1931, Minnesota; Graduate, Pasadena Hospital School of Nursing
- Anderson, Sylvia Finlay, 1920.....Associate in English
B.A., 1919, M.A., 1923, Washington
- Anderson, Victoria, 1937.....Associate in English
B.A., 1914, M.A., 1917, Washington
- Andrews, Siri, 1930 (1937).....Assistant Professor of Librarianship
B.S.(L.S.), 1930, Washington
- Ankele, Felice Charlotte, 1929 (1936).....Instructor in German
B.A., 1925, M.A., 1926, Ph.D., 1936, Washington
- Arestad, Sverre, 1937 (1940)..Instructor in Scandinavian Languages and Literature
B.A., 1929, Ph.D., 1938, Washington
- Arnason, Thorbjorg Dyrleif, 1941.....Instructor in Nursing Education
Nursing Diploma, 1923, Bispebjerg Hospital; B.S. in Nursing, 1941, Washington
- Auernheimer, August A., 1928 (1937)....Assistant Professor of Physical Education
B.P.E., Normal College; M.A., 1932, Columbia
- Ayer, Leslie James, 1916.....Professor of Law
B.S., 1899, Upper Iowa; J.D., 1906, Chicago

A single date following a name indicates the beginning of service in the University. When two dates are given, the first indicates the beginning of service in the University; the second, in parentheses, is the date of appointment to present rank. Dates of appointment of deans are not shown.

† Revised as of May 1, 1942.

† Member of Graduate School faculty.

* On leave, 1942-1943.

- †Bailey, Alan James, 1939 (1942)
Associate Professor and Director of Lignin and Cellulose Research
B.S.F., 1933, M.S.F., 1934, Ph.D., 1936, Washington
- Baisler, Perry, 1937 (1941).....Instructor in Speech
B.A., 1932, M.A., 1938, Washington
- Baker, William Y., M.D., 1940.....Lecturer in Nursing Education
B.S., 1931, M.D., 1933, Nebraska
- †Ballantine, John Perry, 1926 (1937).....Professor of Mathematics
A.B., 1918, Harvard; Ph.D., 1923, Chicago
- Ballard, Arthur C., 1929.....Research Associate in Anthropology
B.A., 1899, Washington
- †Barksdale, Julian D., 1936.....Assistant Professor of Geology
B.A., 1930, Stanford; Ph.D., 1936, Yale
- Barnaby, Joseph Thomas, 1934.....Lecturer in Fisheries
B.S., 1929, Washington; M.S., 1932, Stanford
- Barr, Eric L., Captain, U.S.N., 1936 (1938)
Prof. Naval Science and Tactics; Exec. Officer, Dept. Naval Science and Tactics
Graduate, 1911, U.S. Naval Academy; Ph.D., 1938, Washington
- *Bartels, Robert D. W., 1938 (1941).....Assistant Professor of Marketing
B.S., 1935, Ohio State; M.B.A., 1936, Northwestern; Ph.D., 1941, Ohio State
- Bash, Mary Iola, 1925.....Associate Dean of Women
B.A., 1914, Washington
- Basham, Nina Mae, 1941.....Instructor in Nursing Education
Graduate, 1933, Parkland Hospital, Dallas, Texas; B.S. in Nursing, 1939, Washington
- Batie, Harriett Virginia, 1941.....Associate in Education
B.S., 1935, Hastings College
- Battin, Patricia Bush, 1942.....Instructor in Nursing Education
B.S. in Nursing, 1936, Washington.
- Beal, Maud L., 1933 (1941).....Instructor in English
B.A., 1926, M.A., 1929, Washington
- Beardsley, Arthur Sydney, 1926 (1937).....Law Librarian; Professor of Law
LL.B., 1918, B.S.(L.S.), 1924, M.A., 1925, Ph.D., 1928, Washington
- †Beaumont, Ross A., 1940.....Instructor in Mathematics
A.B., 1936, M.S., 1937, Michigan; Ph.D., 1940, Illinois
- Beck, Eleanor N., 1932.....Associate in Music
Pupil of Marcel Grancjany, Harpist, American School at Fontainebleau, Paris
- Bell, F. Heward, 1931.....Lecturer in Fisheries
B.A., 1924, British Columbia
- Bell, Milo C., 1940.....Lecturer in Fisheries
B.S. in M.E., 1930, Washington
- Belshaw, Roland E., 1930 (1937).....Associate Professor of Physical Education
B.A., 1927, Oregon; M.A., 1930, Columbia

† Member of Graduate School faculty.

* On leave, 1942-1943.

- †Bement, Douglas, 1941.....Professor of English and Director of the
Division of Composition and Creative Writing
A.B., 1919, Yale; LL.B., 1922, Michigan; M.A., 1930, George Washington
- †Benham, Allen Rogers, 1905 (1916).....Professor of English
A.B., 1900, A.M., 1901, Minnesota; Ph.D., 1905, Yale
- Benson, Edna G., 1927 (1936).....Associate Professor of Design
A.B., 1909, Iowa; M.A., 1923, Columbia
- †Benson, Henry Kreitzer, 1904 (1912).....Professor of Chemical Engineering;
Executive Officer, Departments of Chemistry and Chemical Engineering
A.B., 1899, A.M., 1902, Franklin and Marshall; Ph.D., 1907, Columbia;
D.Sc., 1926, Franklin and Marshall
- Benson, Merritt E., 1931 (1937).....Associate Professor of Journalism
LL.B., 1930, Minnesota
- Berry, James Alexander, 1938.....Lecturer in Bacteriology
M.S., 1917, Michigan State
- †Beuschlein, Warren Lord, 1922 (1937).....Professor of Chemical Engineering
B.S., 1920, California Institute of Technology; M.S., 1925, Ch.E., 1930, Washington
- Bird, Winfred W., 1928 (1940).....Assistant Professor of Speech
A.B., 1926, Lawrence College; M.A., 1928, Washington; Ph.D., 1938, Iowa
- Birnbaum, William Zygmunt, 1939.....Assistant Professor of Mathematics
LL.M., 1925, Ph.D., 1929, University of Lwow
- Black, Charlotte Scott, 1941.....Instructor in Home Economics
B.S., 1925, Manitoba; M.S., 1939, Teachers College, Columbia
- Blankenship, Russell, 1932 (1937).....Associate Professor of English
A.B., 1914, Missouri; M.A., 1929, Ph.D., 1935, Washington
- Bliss, A. Jeannette, 1922 (1937).....Associate Professor of Home Economics
B.A., 1906, Washington; M.A., 1917, Columbia
- Bliven, Paul, 1941.....Lecturer in General Engineering
B.S. in M.E., 1927, Minnesota; LL.B., 1933, Georgetown
- Boehmer, Herbert, 1937.....Instructor in General Engineering
Dipl. Ing. Braunschweig, 1928, Germany; M.S. in A.E., 1934, Washington
- †Bolton, Frederick Elmer, 1912
Prof. of History of Education; Dean Emeritus of the College of Education
B.S., 1893, M.S., 1896, Wisconsin; Ph.D., 1898, Clark
- Bonham, Kelshaw, 1942.....Research Associate in Oceanography
B.S., 1931, M.S., 1935, Ph.D., 1937, Washington
- †Bostetter, Edward E., 1940.....Assistant Professor of English
A.B., 1935, Franklin and Marshall; Ph.D., 1938, Princeton
- Bostwick, Irene Neilson, 1930 (1942).....Assistant Professor of Music
B.M., 1922, Washington
- Botzer, William Holst, 1942.....Acting Associate in Business Law
B.A., 1935, LL.B., 1938, Washington
- Bovier, Esther, 1942.....Instructor in Nursing Education
B.S. in Nursing, 1939, Washington

† Member of Graduate School faculty.

- †Brakel, Henry Louis, 1905 (1936)
 Prof. of Engineering Physics; Executive Officer of the Dept. of Physics
 B.S., 1902, Olivet College; M.A., 1905, Washington; Ph.D., 1912, Cornell
- Braker, Thelma, 1940.....Instructor in Nursing Education
 B.S. in Nursing, 1931, Washington; 1934, Graduate, Providence Hospital
- Brinsmead, Arthur, First Lieut., Infantry, 1940
 Instructor in Military Science and Tactics
 B.S., 1938, Washington
- Brookbank, Earl Bruce, M.D., 1938.....Lecturer in Nursing Education
 A.B., 1907, Indiana; M.D., 1912, Oregon
- Brown, Margaret Ogden, 1941.....Acting Instructor in Home Economics
 B.S., 1926, Illinois
- Brown, Robert Quixote, 1919 (1941)...Associate Professor of General Engineering
 B.S. in E.E., 1916, Washington
- Brown, Robert Whitcomb, M.D., 1940.....Lecturer in Nursing Education
 B.A., 1923, Wisconsin; M.D., 1928, Harvard
- Brown, Stephen Darden, 1930 (1937).....Associate Professor of Business Law
 LL.B., 1925, B.A., 1932, Washington; LL.M., 1938, Stanford
- Bruckshaw, Henry A. N., Commander (MC), U.S. Navy, 1942
 Lecturer in Naval Science and Tactics
 M.D., 1909, Boston
- Bruenner, Bertram F., M.D., 1938.....Lecturer in Nursing Education
 B.S., 1925, M.D., 1929, Minnesota
- Buckley, Robert William, 1942.....Associate in Physical Education
- Buechel, Henry Theodore, 1941.....Lecturer in Economics and Business
 B.A., 1929, M.A., 1937, Washington State
- †Burd, Henry Alfred, 1924 (1927)
 Professor of Marketing; Director of the Summer Quarter
 B.S., 1910, Illinois Wesleyan; M.A., 1911, Ph.D., 1915, Illinois
- Burgess, Janna P., 1937.....Associate in English
 B.A., 1918, Iowa; M.A., 1928, Washington
- Burns, Harry H., 1934 (1936).....Instructor in English
 B.A., 1928, Ph.D., 1935, Washington
- Butterbaugh, Grant I., 1922 (1937).....Associate Professor of Statistics
 A.B., 1916, Wisconsin; M.B.A., 1923, Washington
- †Butterworth, Joseph M., Jr., 1929.....Associate in English
 B.A., 1919, M.A., 1921, Brown
- Byers, Jean, 1939.....Instructor in Nursing Education
 R.N., 1930, Evanston Hospital; B.S., 1930, Northwestern; M.A., 1939, Columbia
- *†Cady, George H., 1938.....Assistant Professor of Chemistry
 A.B., 1927, A.M., 1928, Kansas; Ph.D., 1931, California
- *†Cady, Willoughby Miller, 1941.....Assistant Professor of Physics
 A.B., 1927, Brown; Ph.D., 1932, Harvard

† Member of Graduate School faculty.

* On leave, 1942-1943.

- Campbell, Alex D., M.D., 1940.....Lecturer in Nursing Education
B.A., 1930, Whitman; M.D., 1938, Johns Hopkins
- †Carpenter, Allen Fuller, 1909 (1926)
Prof. of Mathematics; Executive Officer of the Department of Mathematics
A.B., 1901, Hastings College; A.M., 1909, Nebraska; Ph.D., 1915, Chicago;
D.Sc., 1937, Hastings College
- Carpenter, David Bailey, 1941.....Associate in Sociology
A.B., 1937, M.A., 1938, Washington University (St. Louis)
- †Carrell, James Aubrey, 1939 (1941).....Associate Professor of Speech
A.B., 1927, Nebraska Wesleyan; M.A., 1929, Ph.D., 1936, Northwestern
- Carstensen, Vernon, 1941.....Acting Associate Professor of History
B.A. in Ed., 1928, Iowa State Teachers College; M.A., 1932, Ph.D., 1936, Iowa
- Chapman, Wilbert M., 1938.....Lecturer in Fisheries
B.S., 1932, M.S., 1933, Ph.D., 1937, Washington
- Cheng, Ch'eng-k'un, 1942.....Associate in Sociology
B.A., 1931, Yenching University (Peiping); M.A., 1937, Washington
- *Chertkov, Morris, 1934 (1937).....Assistant Professor of Business Law
Ph.B., 1931, J.D., 1933, Chicago
- †Chessex, Jean Charles William, 1928 (1934)
Associate Professor of Romanic Languages
B.A., 1920, B.D., 1922, M.A., 1925, Lausanne (Switzerland)
- Chittenden, Hiram Martin, 1923 (1936)...Assistant Professor of Civil Engineering
B.S. in C.E., 1920, C.E., 1935, Washington
- Christian, Byron Hunter, 1926 (1936).....Associate Professor of Journalism
B.A., 1921, M.A., 1929, Washington
- Christian, John LeRoy, 1941....Acting Assistant Professor of Far Eastern History
B.A., 1935, Walla Walla; M.A., 1936, Stanford
- †Church, Phil E., 1935 (1937)...Assistant Professor of Geography and Meteorology
B.S., 1923, Chicago; Ph.D., 1937, Clark
- Clark, Earl F., 1935.....Associate in Physical Education
- Clark, Lois, 1940.....Research Associate in Botany
B.A., 1907, M.A., 1910, Washington; Ph.D., 1919, Minnesota
- Cocheu, Stephen D., Captain, Q.M.C., 1942
Assistant Professor of Military Science and Tactics
B.S., 1935, U.S. Military Academy
- Cochran, Lyall Baker, 1923 (1937)....Assistant Professor of Electrical Engineering
B.S. in E.E., 1923, E.E., 1936, Washington
- Coffman, Grace, 1939.....Instructor in Nursing Education
B.A., 1920, Washington; R.N., 1925, Presbyterian Hospital (Chicago)
- †Cohen, Joseph, 1932 (1941).....Assistant Professor of Sociology
B.A., 1925, M.A., 1927, Washington; Ph.D., 1935, Michigan
- †Cole, Kenneth C., 1924 (1936).....Professor of Political Science
B.Lit., 1924, Oxford; Ph.D., 1930, Harvard

† Member of Graduate School faculty.

* On leave, 1942-1943.

- †Cole, Thomas Raymond, 1930
Professor of Educational Administration and Supervision
M.A., 1902, Upper Iowa; Ph.B., 1904, DePauw; LL.D., 1931, Upper Iowa
- *Collier, Ira Leonard, 1919.....Assistant Professor of Civil Engineering
B.S. in C.E., 1913, C.E., 1917, Washington
- Collins, Floyd, First Lieut., Infantry, 1941
Instructor in Military Science and Tactics
- Colton, Agnes Louise, 1941.....Acting Associate in English
B.A., 1925, Whitman; M.A., 1928, Oregon; Ph.D., 1939, Washington
- Condon, Herbert T., 1903.....Dean of Students
B.A., 1892, Oregon; LL.B., 1894, Michigan
- Cone, Sidney Loyd, First Lieut., C.A.C., 1940
Instructor in Military Science and Tactics
B.A. in E.&B., 1938, Washington
- Conway, John Ashby, 1927 (1930).....Assistant Professor of Drama
B.A., 1927, Carnegie Institute of Technology
- †Cook, Thomas I., 1939.....Associate Professor of Political Science
B.S., 1928, London University; Ph.D., 1938, Columbia
- †Coombs, Howard A., 1935 (1937).....Assistant Professor of Geology
B.S., 1929, M.S., 1931, Ph.D., 1935, Washington
- Cooper, Lemuel Browning, 1939.....Instructor in Mechanical Engineering
B.S. in M.E., 1931, Washington
- Copenhagen, Helen, 1941.....Associate in Mathematics
B.S., 1930, M.S., 1935, Washington
- †Corbally, John E., 1927 (1942)
Professor of Secondary Education and Director of Cadet Teaching
B.A., 1918, Whitworth; M.A., 1925, Ph.D., 1929, Washington
- †Corey, Clarence Raymond, 1907 (1929)
Associate Professor of Mining Engineering and Metallurgy
E.M., Montana State School of Mines; M.A., 1915, Columbia
- *Cornu, Donald, 1928 (1932).....Assistant Professor of English
LL.B., 1922, M.A., 1926, Ph.D., 1928, Washington
- Cory, Herbert Ellsworth, 1923
Professor of Liberal Arts; Executive Officer of the Department of Liberal Arts
A.B., 1906, Brown; Ph.D., 1910, Harvard
- †Costigan, Giovanni, 1934 (1942).....Associate Professor of History
A.B., 1926, Oxford; M.A., 1928, Wisconsin; M.A., 1930, Oxford; Ph.D., 1930, Wisconsin
- †Cox, Edward Godfrey, 1911 (1926).....Professor of English
B.A., 1899, Wabash College; M.A., 1901, Ph.D., 1906, Cornell
- Cox, William Edward, 1919 (1923).....Professor of Economics and Accounting
B.A., 1909, M.A., 1910, Texas
- Craig, Joseph A., 1931.....Lecturer in Fisheries
B.A., 1923, M.A., 1931, Stanford

† Member of Graduate School faculty.

* On leave, 1942-1943.

- §Crain, Richard W., 1936.....Instructor in Mechanical Engineering
B.S. in E.E., 1930, B.S. in M.E., 1931, Colorado State College
- †Cramlet, Clyde Myron, 1920 (1934).....Associate Professor of Mathematics
A.B., 1916, Walla Walla; M.S., 1920, Ph.D., 1926, Washington
- Creel, Wilhelmine Schaeffer, 1940.....Instructor in Music
B.M., 1927, M.M., 1929, American Conservatory of Music; work with Bela Bartok and Zoltan Kodaly
- Creore, Alvin Emerson, 1940.....Instructor in Romanic Languages
A.B., 1934, M.A., 1936, Rochester; Ph.D., 1939, Johns Hopkins
- §Crescitelli, Frederick, 1940.....Instructor in Physiology
Ph.B., 1930, M.S., 1932, Ph.D., 1934, Brown
- Cross, Harriet, 1932 (1941).....Assistant Professor of Nursing Education
R.N., 1921, Columbia Hospital, Wisconsin; B.S., 1925, Minnesota
- †Crounse, Dorothy, 1937.....Assistant Professor of Social Work;
Supervisor of Field Work, Graduate School of Social Work
B.S., 1921, Teachers College, Columbia; M.S.S., 1933, Smith College of Social Work
- Curtis, Elizabeth, 1930.....Associate in Art
B.F.A., 1929, M.F.A., 1933, Washington
- Dahlgren, Edwin Harold, 1934.....Lecturer in Fisheries
B.S., 1931, Washington
- Dakan, Carl Spencer, 1919 (1923)
Professor of Corporation Finance and Investments
B.S., 1909, Missouri
- †Daniels, Joseph, 1911 (1923).....Professor of Mining Engineering and Metallurgy
S.B., 1905, Massachusetts Institute of Technology; M.S., 1908, E.M., 1933, Lehigh
- Da Silveira, Edmund Albin, 1941.....Associate in Portuguese
A.B., 1941, California
- †David, Jean Ferdinand, 1936.....Assistant Professor of Romanic Languages
A.B., 1924, Sorbonne, Paris; B.A., 1927, M.A., 1931, Saskatchewan; Ph.D., 1936, Johns Hopkins
- Davidson, Frederick A., 1931.....Lecturer in Fisheries
Ph.D., 1927, Chicago
- Davis, Erma Nelson, 1926.....Associate in History
B.A., 1918, Denver; M.A., 1924, Utah
- †Davis, Lee D., Colonel, Infantry.....Professor of Military Science and Tactics
B.A., 1909, U.S. Military Academy
- Dawson, James R., Second Lieut., C.A.C., 1941
Instructor in Military Science and Tactics
B.S., 1940, Washington
- †Dehn, William Maurice, 1907 (1919).....Professor of Organic Chemistry
A.B., 1893, A.M., 1896, Hope; Ph.D., 1903, Illinois
- †Demmery, Joseph, 1928 (1934)
Professor of Business Fluctuations and Real Estate
Ph.B., 1920, M.A., 1924, Chicago

§ On war leave, 1942-1943.

† Member of Graduate School faculty.

‡ On February to May, 1942.

- †Denny, Grace Goldena, 1913 (1934).....Professor of Home Economics
A.B., 1907, Nebraska; M.A., 1919, Columbia
- †Densmore, Harvey Bruce, 1907 (1933)....Professor of Greek; Chairman, General
Studies; Executive Officer of the Dept. of Classical Languages and Literature
A.B., 1903, Oregon; A.B., 1907, Oxford
- deVries, Mary Aid, 1921 (1939).....Associate Professor of Physical Education
B.A., 1920, Wisconsin
- †Dille, James M., 1936 (1941).....Professor of Pharmacology
B.S., 1930, M.S., 1933, Nebraska; Ph.D., 1935, Georgetown
- †Dobie, Edith, 1926 (1937).....Associate Professor of History
B.A., 1914, Syracuse; A.M., 1922, Chicago; Ph.D., 1925, Stanford
- †Donaldson, Lauren R., 1935 (1939).....Assistant Professor of Fisheries
B.S., 1926, Intermountain Union College; M.S., 1931, Ph.D., 1939, Washington
- †Dorman, Helen Thompson, 1933 (1942)...Assistant Professor of Social Work and
Supervisor of Field Work, Graduate School of Social Work
B.A., 1928, Washington; A.M., 1939, Chicago
- Douglas, Howard Clark, 1941.....Instructor in Bacteriology
A.B., 1936, Ph.D., 1942, California
- Douglass, Clarence Eader, 1939.....Instructor in General Engineering
B.S. in C.E., 1927, Washington State
- Douglass, Frank H., M.D., 1940.....Lecturer in Nursing Education
P.H.G., 1919, Washington State; M.D., 1925, Oregon
- Dowd, Laurence Phillips, 1941.....Associate in Economics and Business
B.A. in E.&B., 1938, Washington; M.A., 1941, Hawaii
- †Draper, Edgar Marion, 1925 (1936)
Professor of Secondary Education and Curriculum
B.A., 1916, M.A., 1925, Ph.D., 1927, Washington
- Draper, Oscar Eldridge, 1920 (1923).....Lecturer in Accounting
M.Acct., 1902, Vories Business College
- †Dresslar, Martha Estella, 1918 (1937)....Associate Professor of Home Economics
A.B., 1913, Southern California; B.S., 1917, Washington; M.S., 1918, Columbia
- Duchow, Esther, 1940.....Associate in Bacteriology
B.S., 1934, Washington
- Duggins, George Herbert, 1942.....Associate in Physical Education
B.P.A., 1935, M.P.A., 1942, Purdue
- Dunlop, Henry A., 1931.....Lecturer in Fisheries
B.A., 1919, M.A., 1922, British Columbia
- Dutton, Harry H., M.D., 1938.....Lecturer in Nursing Education
M.D., 1914, Vermont
- †Dvorak, August, 1923 (1937)....Professor of Educational Research and Statistics
A.B., 1920, Ph.D., 1923, Minnesota
- Dwinnell, James Herbert, 1941.....Instructor in Aeronautical Engineering
B.S. in A.E., 1939, Washington
- †Earle, Frances M., 1931 (1941).....Associate Professor of Geography
B.A., 1918, Winthrop; M.S., 1926, Columbia; Ph.D., 1929, George Washington

† Member of Graduate School faculty.

- Eastman, Austin Vitruvius, 1924 (1942).....Professor of Electrical Engineering;
Executive Officer of the Department of Electrical Engineering
B.S. in E.E., 1922, M.S., 1929, Washington
- †Eastman, Fred S., 1927 (1939)...Associate Professor of Aeronautical Engineering
B.S. in E.E., 1925, Washington; M.S., 1929, Massachusetts Institute of Technology
- †Eastwood, Everett Owen, 1905
Professor of Mechanical Engineering; Executive Officer of the Departments of
Aeronautical and Mechanical Engineering; Director Guggenheim Laboratories
C.E., 1896, A.B., 1897, A.M., 1899, Virginia; B.S., 1902, Massachusetts Institute of
Technology
- †Eby, Edwin Harold, 1927 (1942).....Associate Professor of English
Ph.B., 1923, Chicago; Ph.D., 1927, Washington
- †Eckelman, Ernest Otto, 1911 (1934).....Professor of Germanic Literature
B.A., 1897, Northwestern College; B.L., 1898, Wisconsin; Ph.D., 1906, Heidelberg
(Germany)
- Eckmann, Ray L., 1936.....Director of Student Activities; Administrative
Director of the School of Physical and Health Education
B.B.A., 1922, Washington
- Eden, John R., Colonel, Infantry, 1942....Professor of Military Science and Tactics
A.B., 1910, De Pauw; Graduate of Infantry School, Company Officers' Course, 1922
- Edmonds, Robert Harold Gray, 1920 (1933)
Associate Professor of Mechanical Engineering
B.S., 1915, Whitman; B.S. in M.E., 1922, M.S. in M.E., 1926, M.E., 1931, Washington
- Edmundson, Clarence S., 1920.....Associate in Physical Education
B.S., 1910, Idaho
- Egtvet, Percy, 1939.....Associate in Physical Education
B.A., 1926, Washington
- Eichinger, Walter A., 1936 (1939).....Instructor in Music
M.M., 1933, Northwestern
- Emery, Donald William, 1934.....Associate in English
B.A., 1927, M.A., 1928, Iowa
- Engel, Ernest Dirck, 1934 (1941).....Assistant Professor of General Engineering
B.S. in E.E., 1930, Washington
- Engle, Nathanael Howard, 1941
Professor and Director of the Bureau of Business Research
B.A., 1925, M.A., 1926, Washington; Ph.D., 1929, Michigan
- Enquist, Lucille C., 1941.....Acting Associate in Speech
B.A., 1937, M.A., 1941, Washington
- †Esper, Erwin Allen, 1927 (1934).....Professor of Psychology
B.A., 1917, M.A., 1920, Ph.D., 1923, Ohio State
- Ethel, Garland, 1927.....Instructor in English
B.A., 1923, M.A., 1927, Ph.D., 1928, Washington

† Member of Graduate School faculty.

- Evans, Catherine, 1941.....Acting Associate in Art
B.F.A., 1927, Washington
- Everest, Harold P., 1940.....Assistant Professor of Journalism
B.A., 1939, Washington
- †Falknor, Judson F., 1936.....Professor of Law; Dean of the School of Law
B.S., 1917, LL.B., 1919, Washington
- Farquharson, Frederick Burt, 1925 (1940).....Professor of Civil Engineering
B.S. in M.E., 1923, M.E., 1927, Washington
- Farwell, Raymond Forrest, Lieutenant Commander, U.S.N.R., 1921 (1940)
Assistant Professor of Naval Science and Tactics; Professor of Transportation
A.B., 1920, California; M.A., 1926, Washington
- Faurot, Leonard Lee, 1941.....Associate in Physical Education
B.S. in Ed., 1936, Ohio
- †Ferguson, Grace Beals, 1941.....Assistant Professor of Medical Social Work
A.B., 1917, Minnesota; M.A., 1930, Indiana
- Ferrall, Michael, 1938 (1941).....Instructor in Drama
B.D.A., 1935, Goodman Theatre Art Institute, Chicago
- †Fischer, Louis, 1935 (1941).....Associate Professor of Pharmaceutical Chemistry
B.S., Ph.C., 1926, M.S., 1928, Ph.D., 1933, Washington
- Fish, Frederic F., 1934.....Lecturer in Fisheries
B.S., 1928, Cornell; Sc.D., 1931, Johns Hopkins
- Fitzgerald, Petronella, 1941.....Acting Associate in Art
B.A., 1929, Washington
- Flothow, Paul G., M.D., 1940.....Lecturer in Nursing Education
M.D., 1923, Pennsylvania; M.S. in Surgery, 1927, Minnesota
- Foote, Hope Lucille, 1923 (1937).....Associate Professor of Interior Design
A.B., 1920, Iowa State; M.A., 1923, Columbia
- Forman, Marie L., 1935.....Instructor in Nursing Education
R.N., Methodist State Hospital, South Dakota; B.S., 1935, Washington
- Forrest, Jack, 1937.....Acting Associate in English
LL.B., 1928, Washington
- Foster, Frederic John, 1935.....Lecturer in Fisheries
- †Foster, Henry Melville, 1927 (1936)...Professor of Physical Education; Executive
Officer, Department of Physical Education for Men
B.S., 1924, Oregon; M.A., 1926, Columbia
- Francis, Byron F., M.D., 1940.....Lecturer in Nursing Education
B.A., 1922, Washington; M.D., 1926, Washington University (St. Louis)
- Franzke, Albert L., 1936 (1939).....Associate Professor of Speech
B.A., 1916, M.A., 1933, Lawrence
- †Frein, Pierre Joseph, 1903.....Professor of Romanic Languages
A.B., 1892, Williams College; Ph.D., 1899, Johns Hopkins
- Froistad, Wilmer, 1942.....Lecturer in Social Work
B.A., 1930, Washington

† Member of Graduate School faculty.

- †Frye, Theodore Christian, 1903.....Professor of Botany
B.S., 1894, Illinois; Ph.D., 1902, Chicago
- †Fuller, Richard E., 1930 (1940).....Research Professor of Geology
B.S., 1924, M.S., 1925, Ph.D., 1930, Washington
- †Garcia-Prada, Carlos, 1925 (1939).....Professor of Spanish
A.B., 1918, Colombia (South America); A.M., 1924, Michigan; Ph.D., 1929, Bogota (South America)
- Garfield, Viola, 1937.....Associate in Anthropology
B.A., 1928, M.A., 1931, Washington; Ph.D., 1939, Columbia
- †Gates, Charles M., 1936 (1939).....Assistant Professor of History
B.A., 1926, Yale; M.A., 1928, Harvard; Ph.D., 1934, Minnesota
- Gillette, Alletta Maria, 1929 (1931).....Instructor in English
B.S., 1907, Smith; M.A., 1911, Washington
- Godwin, Martha Ann, 1941.....Lecturer in Social Work
B.S. in Ed., 1931, State Teachers College, Alabama;
M.S. in Social Work, 1934, William and Mary
- †Goggio, Charles, 1920 (1936).....Professor of Romanic Languages
A.B., 1910, Harvard; A.M., 1914, Ph.D., 1919, Wisconsin
- Gombosi, Otto, 1940.....Lecturer in Music
Ph.D., 1925, University of Berlin, Germany
- †Goodrich, Forest Jackson, 1914 (1934)
Professor of Pharmacognosy; Dean of the College of Pharmacy
Ph.C., 1913, B.S., 1914, M.S., 1917, Ph.D., 1926, Washington
- Goodsell, Julia, 1928 (1937).....Instructor in Physiology
B.S., 1926, M.S., 1928, Washington; Ph.D., 1940, Chicago
- †Goodspeed, George Edward, 1919 (1934)
Professor of Geology; Executive Officer of the Department of Geology
B.S.(Min.E.), 1910, Massachusetts Institute of Technology
- †Gowen, Herbert Henry, 1909 (1914).....Professor of Oriental Studies
St. Augustine's College (Canterbury); D.D., 1912, Whitman College
- Gowen, Lancelot E., 1924 (1937).....Professor of Architecture
B.A. in Arch., 1916, M.A.(Arch.), 1921, Gr. Arch., 1922, California
- Graf, Hubert Arthur, 1936.....Associate in Music
Theoretical work with H. J. Williams, London, England; Enrico Tramonti, Chicago; Graduate, Holy Names Academy
- Graves, Dorsett V., 1922.....Associate in Physical Education
- Gray, Robert Simpson, 1939.....Associate in Drama
B.A., 1936, M.A., 1938, Washington
- †Gregory, Homer Ewart, 1920 (1933)....Professor of Management and Accounting
A.B., 1914, Washington State; M.A., 1917, Chicago
- †Griffith, Dudley David, 1924 (1927)
Professor of English; Executive Officer of the Department of English
B.A., 1903, Simpson College; Ph.D., 1916, Chicago
- †Grondal, Bror Leonard, 1913 (1929).....Professor of Forestry
B.A., 1910, Bethany; M.S.F., 1913, Washington

† Member of Graduate School faculty.

- Groth, Miriam Terry, 1930 (1937).....Assistant Professor of Music
B.M., 1926, Washington
- Grytbak, Margit H., M.D., 1940.....Lecturer in Nursing Education
B.S., 1931, M.D., 1933, Minnesota
- †Gundlach, Ralph H., 1927 (1937).....Associate Professor of Psychology
B.A., 1924, M.A., 1925, Washington; Ph.D., 1927, Illinois
- †Gunther, Erna, 1923 (1941).....Professor of Anthropology; Director of the
Museum; Executive Officer, Department of Anthropology
A.B., 1919, Barnard; A.M., 1920, Ph.D., 1928, Columbia
- *†Guthrie, Edwin Ray, 1914 (1928).....Professor of Psychology
A.B., 1907, A.M., 1910, Nebraska; Ph.D., 1912, Pennsylvania
- Guthrie, Elton F., 1929 (1941).....Assistant Professor of Sociology
B.A., 1926, Ph.D., 1933, Washington
- Haendler, Helmut Max, 1939 (1940).....Instructor in Chemistry
B.S., 1935, Northeastern; Ph.D., 1940, Washington
- Hage, Robert Evans, 1940.....Instructor in Aeronautical Engineering
B.S. in A.E., 1939, Washington; M.S., 1940, Massachusetts Institute of Technology
- Hall, Amy Violet, 1924 (1940).....Assistant Professor of English
B.A., 1920, M.A., 1923, Ph.D., 1940, Washington
- Hall, David Connolly, M.D., 1908..Professor of Hygiene; University Health Officer
Ph.B., 1901, Brown; Sc.M., 1903, Chicago; M.D., 1907, Rush Medical College; Fellow,
American College of Physicians
- Hall, Helen, 1931 (1934).....Assistant Professor of Music
B.M., 1925, Washington
- *†Hall, James Kendall, 1930 (1934) ..Professor of Public Utilities and Public Finance
B.A., 1925, M.A., 1926, Oregon; Ph.D., 1929, Stanford
- Hall, John F., 1931.....Lecturer in Social Work
M.A., 1915, Yale
- Haller, Mary E., 1931 (1941).....Assistant Professor of Mathematics
B.A., 1924, M.S., 1931, Ph.D., 1934, Washington
- Hamack, Frank Hartmond, 1921.....Associate in Accounting
LL.B., 1916, Georgetown
- Hamilton, Rachel Elizabeth, 1921 (1937).....Instructor in French
B.L., 1910, Whitman; M.A., 1924, Washington
- †Hanley, John H., 1939
Assistant Professor of Botany and Forestry; Director of the Arboretum
B.S.F., 1927, Michigan; M.S., 1933, Ph.D., 1937, Illinois
- Hannum, Clair Arthaud, 1941.....Lecturer in Zoology
B.S., 1923, M.S., 1924, Washington
- Hansen, John Robert, 1941.....Associate in Anatomy
B.S., 1939, Washington
- Hansen, Thomas Louis, 1941.....Instructor in Architecture
B. Arch., 1930, Oregon; M.S. in Arch., 1934, Columbia;
M. Arch., 1939, Massachusetts Institute of Technology

† Member of Graduate School faculty.

* On leave, 1942-1943.

- Hardman, Stuart Floyd, 1941.....Associate in English
B.S., 1938, Utah Agricultural College
- Harrington, Donal Francis, 1938.....Instructor in Drama
B.A., 1928, Montana; M.A., 1933, Columbia
- †Harris, Charles William, 1906 (1924).....Professor of Hydraulic Engineering
B.S. in C.E., 1903, Washington; C.E., 1905, Cornell
- Harris, Emily C., 1942.....Lecturer in Social Work
B.A., 1922, Mt. Holyoke; Graduate Pennsylvania School of Social Work
- †Harrison, Joseph Barlow, 1913 (1933).....Professor of English
B.A., 1910, Washington; A.B., 1913, Oxford
- Harrison, Roger W., 1933.....Lecturer in Fisheries
B.S.(C.E.), 1925, Washington State; M.S., 1928, George Washington
- *Harsch, Alfred E., 1930 (1940).....Professor of Law
B.A., 1926, LL.B., 1928, Washington
- †Hatch, Melville H., 1927 (1941).....Professor of Zoology
B.A., 1919, M.A., 1921, Ph.D., 1925, Michigan
- Hauan, Merlin James, 1928.....Lecturer in Civil Engineering
B.S. in E.E., 1925, Washington
- Hawthorn, George Edward, 1924 (1937) ..Associate Professor of Civil Engineering
B.S. in C.E., 1915, C.E., 1926, Washington
- †Hayner, Norman Sylvester, 1925 (1937).....Professor of Sociology
B.A., 1920, Washington; A.M., 1921, Ph.D., 1923, Chicago.
- Hejtmanek, Viola, 1940.....Instructor in Nursing Education
R.N., 1931, Seattle General Hospital; B.S. in Nursing, 1939, Washington
- Helmlingé, Charles Louis, 1911 (1940).....Professor of Romanic Languages
B.Ph., 1911, Berea; M.A., 1915, Washington
- *†Henderson, Joseph E., 1929 (1942).....Professor of Physics
B.S., 1922, Wooster; Ph.D., 1928, Yale
- Hennes, Robert G., 1934 (1941).....Associate Professor of Civil Engineering
B.S., 1927, Notre Dame; M.S.(C.E.), 1928, Massachusetts Institute of Technology
- *†Henry, Bernard S., 1931 (1941)
Professor of Bacteriology; Executive Officer of the Department of Bacteriology
B.S., 1925, M.A., 1926, Ph.D., 1931, California
- Henry, Dora Priaulx, 1932.....Research Associate in Oceanography and Zoology
Ph.D., 1931, California
- Hensley, Mercedes H., 1939.....Associate in Art
B.F.A., 1930, M.F.A., 1938, Washington
- Hermans, Thomas G., 1929 (1940).....Assistant Professor of Psychology
B.S., 1923, M.A., 1927, Washington
- Herrman, Arthur Philip, 1923 (1937)
Professor of Architecture; Executive Officer of the School of Architecture
B.A.(Arch.), 1920, Carnegie Institute of Technology

† Member of Graduate School faculty.

* On leave, 1942-1943.

- Hicken, James, 1936.....Associate in Drama
B.S., 1933, Washington
- Higgs, Paul McClellan, 1926 (1939).....Assistant Professor of Physics
B.S., 1919, Washington
- Hill, Naomi H., 1937.....Associate in Speech
B.A., 1928, M.A., 1934, Washington
- Hill, Raymond L., 1927 (1934).....Associate Professor of Painting
Rhode Island School of Design, 1913
- Hill, William Ryland, Jr., 1941.....Assistant Professor of Electrical Engineering
B.S. in E.E., 1934, Washington; M.S. in E.E., 1938, E.E., 1941, California
- Hillis, Norman Douglas, 1941.....Associate in General Engineering
B.S., 1934, Washington
- Hiltner, Walter Frederick, 1939 (1940).....Instructor in General Engineering
B.S. in C.E., 1934, Washington; M.S. in C.E., 1935, Massachusetts Institute of Technology
- †Hitchcock, C. Leo, 1937 (1941)
Associate Professor of Botany; Executive Officer of the Department of Botany
A.B., 1927, A.M., 1929, Pomona; Ph.D., 1931, Washington University (St. Louis)
- Hoard, George Lisle, 1920 (1941).....Professor of Electrical Engineering
B.S. in E.E., 1917, M.S. in E.E., 1926, Washington
- Hoedemaker, Edward D., M.D., 1935
Lecturer in Psychiatry; Lecturer in Nursing Education
B.S., 1927, M.D., 1929, Michigan
- Hoffman, Katherine Janet, 1942.....Instructor in Nursing Education
B.A., 1929, College of Puget Sound; R.N., 1934, Tacoma General School of Nursing
- †Hoffstadt, Rachel Emilie, 1923 (1939).....Professor of Bacteriology
B.S., 1908, Hanover; M.S., 1913, Chicago; Ph.D., 1915, D.Sc., 1921, Johns Hopkins
- Holmes, Harlan B., 1931.....Lecturer in Fisheries
B.A., 1922, M.A., 1931, Stanford
- *†Holt, William Stull, 1940
Professor of American History; Executive Officer of the Department of History
A.B., 1920, Cornell; Ph.D., 1926, Johns Hopkins
- Hooper, Alan V., First Lieut., C.A.C., 1940
Instructor in Military Science and Tactics
B.S.F., 1939, Washington
- Horsfall, Frank, 1935.....Associate in Music
- †Horton, George P., 1934 (1939).....Assistant Professor of Psychology
B.S., 1926, M.A., 1930, Ph.D., 1932, Princeton
- †Hotson, John William, 1911 (1936).....Professor of Botany
A.B., 1901, A.M., 1902, McMaster; Ph.D., 1913, Harvard
- *†Huber, John Richard, 1939.....Assistant Professor of Economics
B.A., 1931, Wooster; M.A., 1933, Ph.D., 1937, Princeton
- Hudson, Alfred Emmons, 1940.....Associate in Anthropology
Ph.B., 1927, Ph.D., 1937, Yale

† Member of Graduate School faculty.

* On leave, 1942-1943.

- †Hughes, Glenn, 1919 (1930)
Professor of English; Director of the School of Drama
B.A., 1916, Stanford; M.A., 1921, Washington
- †Hutchinson, Mary Gross, 1919 (1936) . . . Professor of Physical Education; Executive
Officer, Department of Physical Education for Women
A.B., 1912, Goucher College; M.A., 1915, Columbia
- Ingalls, Ida, 1936 (1941) Associate Professor of Home Economics
B.A., 1920, Iowa; M.A., 1924, Columbia
- Irvine, Demar B., 1937 (1938) Assistant Professor of Music
B.A., 1929, M.A., 1931, California; Ph.D., 1937, Harvard
- †Isaacs, Walter F., 1922 (1929)
Professor of Fine Arts; Director of the School of Art
B.S.(F.A.), 1909, James Millikin
- †Jacobs, Melville, 1928 (1937) Assistant Professor of Anthropology
A.B., 1922, New York; A.M., Ph.D., 1931, Columbia
- Jacobsen, Philip A., 1927 (1939) Assistant Professor of General Engineering
B.S., 1926, Washington
- Jacobsen, Theodor S., 1928 (1941) Associate Professor of Astronomy and
Mathematics; Executive Officer of the Department of Astronomy
B.A., 1922, Stanford; Ph.D., 1926, California
- Jacobson, Berthe P., 1937 (1939) Associate Professor of Music
Graduate Conservatory of Geneva; Diploma Schola Cantorum, Paris; Diploma Dalcroze
Institute of Geneva
- Jensen, Alfred, 1930 (1939) Assistant Professor of General Engineering
B.S. in C.E., 1925, M.S. in C.E., 1937, Washington
- †Jensen, Merrill Monroe, 1935 (1942) Associate Professor of History
B.A., 1929, M.A., 1931, Washington; Ph.D., 1934, Wisconsin
- †Jerbert, Arthur Rudolph, 1921 (1937) Associate Professor of Mathematics
B.S., 1916, M.S., 1923, Ph.D., 1928, Washington
- †Jessup, John H., 1926 (1927) Associate Professor of Educational Sociology
A.B., 1920, Earlham College; M.A., 1924, Iowa
- Johnson, B. Pauline, 1941 Assistant Professor of Art
B.A., 1929, Washington; M.A., 1936, Columbia
- †Johnson, Charles Willis, 1903 (1904) Professor of Pharmaceutical Chemistry;
State Chemist; Dean Emeritus of the College of Pharmacy
Ph.C., 1896, B.S., 1900, Ph.D., 1903, Michigan
- Johnson, Sylvia G., 1939 Instructor in Nursing Education
R.N., 1936, City Hospital, New York; B.S., 1939, Washington
- Jones, Robert William, 1920 (1934) Professor of Journalism
B.A., 1906, LL.B., 1913, Missouri; M.A., 1918, South Dakota
- †Jonquet, Eugene Maurice, 1940
Supervisor of Field Work, Graduate School of Social Work
B.A., 1932, James Millikin; M.A., 1933, M.S., 1938, Washington University (St. Louis)
- Joseph, Henry Burton, Major, C.A.C., 1941 (1942)
Assistant Professor of Military Science and Tactics
B.S.F., 1927, Washington

† Member of Graduate School faculty.

- Kahin, Helen, 1930 (1936).....Instructor in English
B.A., 1909, Wilson College; M.A., 1911, Indiana; Ph.D., 1934, Washington
- Kask, John L., 1935.....Lecturer in Fisheries
B.A., 1928, British Columbia; Ph.D., 1936, Washington
- †Katz, Solomon, 1936 (1939).....Assistant Professor of History
A.B., 1930, Ph.D., 1933, Cornell
- Keith, Wendell Paisley, 1939.....Instructor in Ceramic Engineering
B.S. in Ceramics, 1934, Illinois
- Kelez, George Bothwell, 1934.....Lecturer in Fisheries
B.S., 1930, Washington; M.A., 1932, Stanford
- †Kelly, Edgar Andrew, 1937.....Assistant Professor of Pharmaceutical Chemistry
Ph.C., 1928, B.S., 1929, M.S., 1930, Ph.D., 1933, Washington
- Kennedy, Fred Washington, 1909 (1938)
Associate Professor of Journalism; Director of Journalism Laboratories
- *Kenworthy, Ray W., 1929 (1939).....Assistant Professor of Physics
B.A., 1924, M.S., 1925, Iowa; Ph.D., 1938, Washington
- †Kerr, Clark, 1940.....Assistant Professor of Labor
A.B., 1932, Swarthmore; A.M., 1933, Stanford; Ph.D., 1939, California
- Kidwell, Kathro, 1939.....Instructor in Physical Education
B.S., 1927, Nebraska; M.A., 1928, Wisconsin
- †Kimble, G. Eleanor, 1941
Acting Assistant Professor of Social Work and Supervisor of Field Work
A.B., 1917, A.M., 1921, California; Ph.D., 1931, Chicago
- Kimmel, Edward, Colonel, U.S. Army, retired, 1932 (1939).....Lecturer in History
B.S., 1897, M.A., 1907, Washington State College
- †Kincaid, Trevor, 1899 (1901).....Professor of Zoology; Executive Officer of
the Department of Zoology and Physiology
B.S., 1899, M.A., 1901, Washington; D.Sc., College of Puget Sound
- Kingston, J. Maurice, 1940.....Associate in Mathematics
B.A., 1935, Western Ontario; M.A., 1936, Ph.D., 1939, Toronto
- †Kinscella, Hazel Gertrude, 1942.....Lecturer in Music
B.M., 1916, B.F.A., 1928, B.A., 1931, Nebraska; M.A., 1934, Columbia; Ph.D., 1941,
Washington
- Kirchner, George, 1919 (1939).....Assistant Professor of Music
Leipzig
- †Kirsten, Frederick Kurt, 1915 (1923).....Professor of Aeronautical Engineering
B.S. in E.E., 1909, E.E., 1914, Washington
- Kocher, Paul Harold, 1938 (1942).....Assistant Professor of English
A.B., 1925, Columbia; J.D., 1929, Ph.D., 1936, Stanford
- Kolm, Roger Edward, 1941.....Associate in Civil Engineering
B.S. in C.E., 1940, Washington
- Kuhn, Bertha M., 1940.....Associate in English
B.A., 1916, M.A., 1917, North Dakota; Ph.D., 1940, Washington

† Member of Graduate School faculty.

* On leave, 1942-1943.

- *Kunde, Norman Frederick, 1930 (1937). Assistant Professor of Physical Education
B.S., 1928, M.A., 1932, Washington
- Lamberty, Elizabeth Regina, 1941.....Instructor in Nursing Education
R.N., 1934, B.S., 1938, Minnesota
- Larson, T. Elida, 1941.....Instructor in Pharmacy
B.S., 1931, Iowa; M.S., 1941, Washington
- Lauer, Edward Henry, 1934.....Professor of Germanic Languages and Literature;
Dean of the College of Arts and Sciences
A.B., 1906, A.M., 1909, Ph.D., 1916, Michigan
- Lawrence, Charles Wilson, 1926 (1934).....Associate Professor of Music
B.M., 1918, Oberlin; M.A.(Music), 1930, Washington
- Lawson, Jane Sorrie, 1922 (1939).....Associate Professor of English
M.A., 1906, St. Andrews (Scotland)
- †Leahy, Kathleen M., 1927.....Assistant Professor of Nursing Education;
Director of Public Health Nursing Field Work
R.N., Stanford Hospital; A.B., 1926, Oregon; M.S., 1932, Washington
- †Levy, Ernst, 1937.....Professor of History, Law and Political Science
LL.D., 1906, Berlin
- Lindblom, Roy Eric, 1924 (1937).....Associate Professor of Electrical Engineering
B.S. in E.E., 1922, M.S. in E.E., 1929, Washington
- Lingafelter, Edward Clay, 1939 (1941).....Instructor in Physical Chemistry
B.S., 1935, Ph.D., 1939, California
- *†Lockling, William Bruce, 1939.....Assistant Professor of Economics
A.B., 1927, A.M., 1929, California; Ph.D., 1933, Illinois
- †Loew, Edgar Allan, 1909 (1923)....Professor of Electrical Engineering; Dean of
the College of Engineering; Director of the Engineering Experiment Station
B.S.(E.E.), 1906, E.E., 1922, Wisconsin
- Lorig, Arthur N., 1934 (1941).....Associate Professor of Accounting
B.A., 1922, Wisconsin; C.P.A., 1927; M.A., 1932, Stanford; Ph.D., 1936, Chicago
- *†Loucks, Roger B., 1936 (1939).....Assistant Professor of Psychology
B.S., 1927, Ph.D., 1930, Minnesota
- *†Loughridge, Donald H., 1931 (1942).....Professor of Physics
B.S., 1923, Ph.D., 1927, California Institute of Technology
- †Lucas, Henry Stephen, 1921 (1934).....Professor of History
A.B., 1913, Olivet; A.M., 1915, Indiana; Ph.D., 1921, Michigan
- Luccock, Eugene C., 1937 (1939).....Professor of Law
A.B., 1912, Washington and Jefferson; LL.B., 1915, Pittsburgh; LL.M., 1937, Stanford
- Lutey, William Glen, 1934 (1940).....Instructor in Liberal Arts
B.A., 1930, M.A., 1931, Washington
- †Lynch, James E., 1931.....Associate Professor of Fisheries
B.A., 1917, M.A., 1921, Nebraska; Ph.D., 1929, California
- McAdams, Laura Elizabeth, 1941.....Instructor in Home Economics
B.S., 1923, M.S., 1932, Kansas State College

* On leave, 1942-1943.

† Member of Graduate School faculty.

- McCarthy, Joseph L., 1941.....Research Associate in Lignin Research
B.S. in Chem.E., 1934, Washington; M.S., 1936, Idaho; Ph.D., 1938, McGill
- McConahey, James M., 1921.....Lecturer in Accounting
B.S., 1896, M.S., 1899, Washington and Jefferson; LL.B., 1899, Northwestern; C.P.A., 1916
- McDuffee, Alice Ella, 1941.....Instructor in Nursing Education
R.N., 1931, Good Samaritan Hospital, Portland, Oregon; B.S. in Nursing, 1940, Washington
- †McFarlan, Lee Horace, 1927 (1934).....Associate Professor of Mathematics
B.S., 1917, Kansas State Teachers' College; A.M., 1921, Ph.D., 1924, Missouri
- McGownd, Jane, 1924 (1928).....Assistant Professor of Physical Education
B.S., 1917, M.A., 1923, Columbia
- McIntyre, Harry John, 1919 (1930)
Associate Professor of Mechanical Engineering
B.S. in M.E., 1915, M.B.A., 1923, Washington
- †McKay, George F., 1927 (1934).....Associate Professor of Music
B.Mus., 1923, Rochester
- †McKenzie, Vernon, 1928
Professor of Journalism; Director of the School of Journalism
B.A., 1909, Toronto; M.A., 1914, Harvard
- McKinlay, Florence, 1937.....Associate in English
B.A., 1908, Lombard College; M.A., 1931, Washington
- McLellan, Helen, 1937 (1941).....Assistant Professor of Physical Education
B.S., 1930, Wisconsin; M.A., 1931, Columbia
- †McMahon, Edward, 1908 (1927).....Professor Emeritus of American History
Ph.B., 1898, Washington; M.A., 1907, Wisconsin
- †McMahon, Theresa Schmid, 1911 (1929)
Professor Emeritus of Economics and Labor
B.A., 1899, M.A., 1901, Washington; Ph.D., 1909, Wisconsin
- McMinn, Bryan Towne, 1920 (1939).....Professor of Mechanical Engineering
B.S. in M.E., 1918, Oregon State; M.S. in M.E., 1926, M.E., 1931, Washington
- Mackenzie, Donald H., 1929 (1940)
Associate Professor of Management and Accounting
B.B.A., M.B.A., 1925, Washington; C.P.A.
- †Mackin, J. Hoover, 1934 (1940).....Associate Professor of Geology
B.S., 1930, New York; MA., 1932, Ph.D., 1937, Columbia
- MacLaurin, William Alexander, 1941.....Associate in Architecture
B.Arch., 1937, Washington; M.S., 1938, Columbia
- MacLean, Dorothy, 1936 (1939).....Instructor in Physical Education
B.S., 1933, Oregon; M.S., 1938, Washington
- Magnusson, Harrison Willard, 1942.....Lecturer in Fisheries
M.A., 1939, Wyoming
- Maki, John McGilvrey, 1939.....Associate in Oriental Studies
B.A., 1932, M.A., 1936, Washington
- †Mander, Linden A., 1928 (1937).....Professor of Political Science
M.A., 1921, Adelaide (Australia)

† Member of Graduate School faculty.

- †Mansfield, Robert S., 1932 (1937).....Assistant Professor of Journalism
B.A., 1926, M.A., 1931, Michigan
- †Marckworth, Gordon Dotter, 1939.....Professor of Forest Management
B.S.F., 1916, Ohio; M.F., 1917, Yale
- Mark, Sara N., 1937.....Associate in English
B.A., B.S., 1911, M.A., 1929, Washington
- Marple, Marcia Tracy, 1941.....Acting Associate in Art
B.A., 1935, Washington; M.A., 1937, Mills
- †Martin, Arthur W., 1937 (1938).....Assistant Professor of Physiology
B.S., 1931, College of Puget Sound; Ph.D., 1936, Stanford
- ‡†Martin, Charles Emanuel, 1924.....Professor of Political Science; Executive
Officer of the Department of Political Science
B.L., 1914, A.M., 1915, California; Ph.D., 1917, Columbia
- †Martin, Howard Hanna, 1930 (1940)
Professor of Geography; Executive Officer of the Department of Geography
B.S., 1922, Pennsylvania; M.A., 1923, Ph.D., 1929, George Washington; Sc.D., 1937,
Monmouth
- Mason, William E., 1942.....Associate in Economics and Business
A.B., 1935, Pacific University
- Mauck, Frances, 1942.....Acting Instructor in Home Economics
M.A., 1927, Columbia; Ph.D., 1929, Chicago
- May, Charles Culbertson, 1912 (1929)...Professor of Civil Engineering and Archi-
tecture; Superintendent of Buildings and Grounds
B.S. in C.E., 1910, Washington
- Meisnest, Frederick William, 1906.....Professor of Germanic Literature
B.S., 1893, Ph.D., 1904, Wisconsin
- Metheny, David, M.D., 1940.....Lecturer in Nursing Education
A.B., 1920, Pennsylvania; M.D., 1923, Jefferson Medical College
- †Meyer, Herman Carl H., 1934 (1942)
Associate Professor of Germanic Languages
B.A., 1924, Capital University (Ohio); Ph.D., 1936, Chicago
- *Mikesell, Raymond, 1937 (1941)...Assistant Professor of Economics and Business
B.A., M.A., 1935, Ph.D., 1939, Ohio State
- †Miller, Alfred Lawrence, 1923 (1937).....Professor of Mechanics and Structures
B.S. in C.E., 1920, C.E., 1926, Washington
- Miller, Charles John, 1927 (1936).....Associate Professor of Marketing
B.B.A., 1922, M.B.A., 1927, Washington
- Miller, Mary Annice, 1941.....Instructor in Nursing Education
B.S. in Nursing, 1939, Washington
- Milner, John Gillette, 1941
Supervisor of Field Work, Graduate School of Social Work
B.A., 1939, Stanford
- Miyomoto, Shotaro Frank, 1941.....Associate in Sociology
B.A., 1936, M.A., 1938, Washington

† Member of Graduate School faculty.

‡ Exchange Professor at the American University, 1942-1943.

* On leave, 1942-1943.

- †More, Charles Church, 1900 (1912).....Professor of Structural Engineering
C.E., 1898, Lafayette; M.C.E., 1899, Cornell; M.S., 1901, Lafayette
- Moritz, Harold Kennedy, 1928 (1939).....Associate Professor of Civil Engineering
B.S.(M.E.), 1921, Massachusetts Institute of Technology
- Moser, Louise, 1940.....Instructor in Nursing Education
A.B., 1930, Wittenberg College; R.N., Massachusetts General Hospital
- Moulton, Ralph Wells, 1941.....Assistant Professor of Chemical Engineering
B.S. in Chem.E., 1932, M.S. in Chem.E., 1934, Ph.D., 1938, Washington
- Mullemeister, Hermance, 1918 (1928).....Assistant Professor of Mathematics
Ph.D., 1913, Royal University of Utrecht (Holland)
- †Mund, Vernon A., 1932 (1937).....Professor of Economics
B.B.A., 1928, M.B.A., 1929, Washington; Ph.D., 1932, Princeton
- †Munro, Kathleen, 1929 (1936).....Associate Professor of Music
B.M., 1924, Washington; M.A., 1929, Columbia; Ph.D., 1937, Washington
- Murray, Ray M., Jr., 1939.....Associate in General Engineering
B.S. in M.E., 1938, Washington
- Myers, Oscar Levi, Captain, Infantry, 1941
Instructor in Military Science and Tactics
B.S. in B.A., 1927, Missouri; M.A., 1934, Stanford
- †Neikirk, Lewis Irving, 1911 (1914).....Assistant Professor of Mathematics
B.S., 1898, M.S., 1901, Colorado; Ph.D., 1903, Pennsylvania
- †Nelson, Everett J., 1930 (1941).....Professor of Philosophy
B.A., 1923, M.A., 1925, Washington; M.A., 1928, Ph.D., 1929, Harvard
- Newhouse, Dean Scholfield, 1934.....Dean of Men
B.A., 1930, Washington
- Newsom, Bryan, M.D., 1935.....Lecturer in Nursing Education
M.D., 1930, Northwestern; C.P.H., 1934, Johns Hopkins
- Nicholson, Donald A., M.D., 1935.....Lecturer in Nursing Education
M.D., 1897, Minnesota
- Nix, Martha J., 1928 (1941).....Instructor in English
B.A., 1922, M.A., 1925, Washington
- Norlin, Agnes, 1934.....Associate in English
B.A., 1927, Colorado; M.A., 1931, Washington
- *Norman, Edward Herbert, 1941.....Assistant Professor of Japanese History
B.A., 1933, Toronto; B.A., 1935, Cambridge; Ph.D., 1940, Harvard
- Normann, Theodore F., 1940.....Associate Professor of Music
B.A., 1925, Macalester College; M.A., 1928, Columbia
- §Norris, Albert R., 1940 (1941).....Instructor in Anatomy
B.S., 1939, Washington
- Norris, Anna Church, 1938.....Research Associate in Oceanography
B.S., 1924, M.S., 1927, Ph.D., 1931, Washington
- †Norris, Earl R., 1927 (1940).....Professor of Chemistry
B.A., 1919, Montana State; Ph.D., 1924, Columbia

† Member of Graduate School faculty.

* On leave, 1942-1943.

§ On war leave, 1942-1943.

- Northrup, Mary W., 1931.....Instructor in Nursing Education
A.B., 1920, Vassar; M.S., 1923, Columbia
- †Nostrand, Howard Lee, 1939.....Professor of Romanic Languages; Executive
Officer of the Department of Romanic Languages
B.A., 1932, Amherst; A.M., 1933, Harvard; Dr. of Univ. of Paris, 1934
- †Nottelmann, Rudolph H., 1927.....Professor of Law
A.B., 1912, Monmouth; M.A., 1913, Illinois; LL.B., 1922, Yale
- Oberdorfer, Conrad Walter, 1941.....Assistant Professor of Law
J.U.D., 1933, Munich; LL.B., 1939, Northeastern; LL.M., 1940, Harvard
- O'Brien, Robert William, 1939 (1941).....Instructor in Sociology
A.B., 1929, Pomona; A.M., 1931, Oberlin
- O'Bryan, Joseph Grattan, 1914 (1927).....Professor of Law
B.A., Jesuit College (Denver); LL.D., 1928, Regis College
- Olcott, Virginia, 1931 (1939).....Assistant Professor of Nursing Education
R.N., Peter Bent Brigham Hospital; B.S., 1927, M.S., 1931, Washington
- Oliver, Harold J., 1940 (1941).....Instructor in General Engineering
B.S. in C.E., 1927, Iowa State College
- Olschewsky, Henry, 1931 (1939).....Assistant Professor of Architecture
B.Arch., 1931, Washington
- †Ordal, Erling J., 1937 (1938).....Assistant Professor of Bacteriology
A.B., 1927, Luther; Ph.D., 1936, Minnesota
- †Orr, Douglass Winnett, M.D., 1941.....Lecturer in Social Work
A.B., 1928, Swarthmore; M.S., 1934, M.D., 1935, Northwestern
- †Orr, Frederick Wesley, 1925 (1928)
Professor of Speech; Executive Officer of the Department of Speech
B.L., 1901, Drury; G.C.D., 1905, Boston School of Expression; M.A., 1925, Lawrence
College
- †Osborn, Frederick Arthur, 1902.....Professor of Physics
Ph.B., 1896, Ph.D., 1907, Michigan
- †Osburn, Worth J., 1936.....Professor of Remedial and Experimental Education
A.B., 1903, Central College; A.M., 1904, Vanderbilt; B.S.(Educ.), 1908, Missouri; Ph.D.,
1921, Columbia
- Osterman, Elizabeth, 1941.....Research Associate in Bacteriology
B.A., 1932, M.S., 1937, Washington; Ph.D., 1940, Yale
- †Padelford, Frederick Morgan, 1901
Professor of English; Dean of the Graduate School
B.A., 1896, M.A., 1899, Colby; Ph.D., 1899, Yale; LL.D., 1936, Mills
- Parry, Tom Jones, 1942.....Lecturer in Marketing
- Pask, Joseph Adam, 1941.....Acting Assistant Professor of Ceramic Engineering
B.S. in Ceramic Engr., 1934, M.S. in Ceramic Engr., 1935, Washington
- †Patterson, Ambrose, 1919 (1939).....Professor of Painting
Melbourne National Gallery, Victoria, Australia; Julien, Colorossi and Delocluse Acad-
emies, Europe
- Pauly, Jean, 1935.....Associate in Music
Brussels Conservatory of Music

† Member of Graduate School faculty.

- Pautzke, Clarence, 1937.....Lecturer in Fisheries
B.S., 1932, Washington
- †Payne, Blanche, 1927 (1942).....Professor of Home Economics
B.S., 1916, Kansas State Teachers College; M.A., 1924, Columbia
- Peacock, Alexander H., M.D., 1935.....Lecturer in Nursing Education
M.D., 1903, Pennsylvania
- †Pearce, John Kenneth, 1921 (1934).....Associate Professor of Forestry
B.S.F., 1921, Washington
- Peek, Clifford, 1938.....Assistant Professor of Physical Education
B.S., 1929, Washington; M.A., 1931, Columbia
- Pellegrini, Angelo, 1930 (1940).....Instructor in Speech
B.A., 1927, Ph.D., 1942, Washington
- Pence, Orville Leon, 1941.....Associate in Speech
B.A., 1935, M.A., 1939, Washington
- Penington, Ruth, 1928 (1937).....Assistant Professor of Design
B.F.A., 1927, M.F.A., 1929, Washington
- Pentz, Deborah B., 1942.....Acting Assistant Professor of Social Work
B.A., 1925, Dominican College; M.A., 1938, Chicago
- Person, Henry, 1937 (1941).....Instructor in English
B.A., 1927, Washington
- Peterson, Lorin W., 1941.....Associate in Journalism
B.A., 1938, Washington
- †Phifer, Lyman D., 1928 (1939).....Associate Professor of Oceanography;
Assistant Director of Oceanographic Laboratories
B.S., 1928, M.S., 1929, Ph.D., 1932, Washington
- †Phillips, Herbert Joseph, 1920 (1934).....Assistant Professor of Philosophy
B.A., 1920, Ph.D., 1933, Washington
- Phillips, Ronald, 1935.....Associate in Music
- Pierson, William H., 1937 (1938).....Instructor in Geography
B.A., 1925, Texas; M.S., 1934, Washington
- Plein, Elmer M., 1938.....Instructor in Pharmacy
Ph.C., B.S., 1929, M.S., 1931, Ph.D., 1936, Colorado
- Pollard, Charles Lancaster, 1941.....Research Associate in Economics and Business
B.A., 1923, Missouri
- Posell, Edward A., M.D., 1938.....Lecturer in Nursing Education
B.S., 1923, City of New York; M.D., 1927, Boston
- †Powell, Sargent, 1919 (1934).....Associate Professor of Chemistry
B.S., 1913, M.S., 1916, Washington; Ph.D., 1919, Illinois
- †Powers, Francis Fountain, 1928 (1939)
Professor of Educational Psychology; Dean of the College of Education
B.A., 1924, Washington; M.A., 1927, Oregon; Ph.D., 1928, Washington
- Powers, Leland Earle, M.D., 1941.....Lecturer in Nursing Education
M.D., 1933, Iowa; M.S. in Public Health, 1938, Michigan

† Member of Graduate School faculty.

- Pratt, Dudley, 1925 (1941).....Associate Professor of Sculpture
B.A., 1919, Yale
- †Preston, Howard Hall, 1920 (1922).....Professor of Money and Banking; Dean
of the College of Economics and Business
B.S., 1911, Coe College (Iowa); M.A., 1914, Ph.D., 1920, Iowa; LL.D., 1938, Coe College
- Pries, Lionel Henry, 1928 (1938).....Associate Professor of Architecture
A.B., 1920, California; M.Arch., 1921, Pennsylvania
- †Pritchard, Clyde Summerfield, 1941.....Instructor in Social Work
B.A., 1932, Washington; M.A., 1939, Chicago
- †Quainton, Cecil Eden, 1924 (1936).....Associate Professor of History; Acting
Executive Officer of the Department of History
A.B., 1918, Manitoba; B.A., 1924, Cambridge
- Raby, Kenneth, 1941.....Associate in Physical Education
B.A., 1940, Washington
- †Rader, Melvin Miller, 1930.....Assistant Professor of Philosophy
B.A., 1925, M.A., 1927, Ph.D., 1929, Washington
- Radford, Ethel Sanderson, 1919.....Associate in Chemistry
B.A., 1895, McGill
- †Rahskopf, Horace G., 1928 (1936).....Associate Professor of Speech
B.A., 1920, Willamette; M.A., 1927, Ph.D., 1935, Iowa
- †Raitt, Effie Isabel, 1912 (1914)
Professor of Home Economics; Director of the School of Home Economics
B.S., 1912, M.A., 1919, Columbia
- Ramsey, John W., Major, Infantry, 1940
Assistant Professor of Military Science and Tactics
Infantry School, 1925 and 1930
- Ramsey, Walter P., Lieutenant-Commander, U.S.N., 1940
Assistant Professor of Naval Science and Tactics
B.S., 1921, U. S. Naval Academy
- †Rankin, John Stewart, Jr., 1941.....Assistant Professor of Zoology
B.A., 1933, M.A., 1934, Wesleyan; Ph.D., 1936, Duke
- †Ray, Verne F., 1933 (1940).....Assistant Professor of Anthropology
B.A., 1931, M.A., 1933, Washington; Ph.D., 1937, Yale
- †Read, William Merritt, 1927 (1936)....Associate Professor of Classical Languages
A.B., 1923, A.M., 1924, DePauw; Ph.D., 1926, Michigan
- Reeves, George Spencer, 1935 (1939)....Assistant Professor of Physical Education
B.S., 1933, M.S., 1938, Oregon
- Reuss, Curt Woldemar, 1941.....Associate in German
B.A., 1939, Buffalo; M.A., 1941, Washington
- Rhodes, Fred H., Jr., 1927 (1936).....Assistant Professor of Civil Engineering
B.S.(C.E. and M.E.), 1926, C.E., 1935, Washington
- Richards, John W., 1931 (1937).....Professor of Law
B.A., 1923, Wisconsin; LL.B., 1926, LL.M., 1930, S.J.D., 1931, Harvard

† Member of Graduate School faculty.

- Richards, Willard K., Lieutenant Colonel, C.A.C., 1940
Associate Professor of Military Science and Tactics
B.S., 1910, U.S. Military Academy; Coast Artillery School, 1916, 1928; Command and General Staff School, 1929
- Riehl, Herbert, 1941.....Acting Instructor in Meteorology
New York University
- Riemer, Svend H., 1940.....Assistant Professor of Sociology
Ph.D., 1929, Heidelberg
- †Rigg, George Burton, 1909 (1928).....Professor of Botany
B.S., 1896, Iowa; A.M., 1909, Washington; Ph.D., 1914, Chicago
- †Riley, Herbert P., 1938 (1942).....Associate Professor of Botany
A.B., 1925, A.M., 1929, Ph.D., 1931, Princeton
- †Rising, Louis Wait, 1934 (1936).....Professor of Pharmacy
Ph.G., B.S., 1924, Oregon State; M.S., 1926, Ph.C., Ph.D., 1929, Washington
- †Roberts, Milnor, 1901
Professor of Mining and Metallurgy; Dean of the College of Mines
B.A., 1899, Stanford
- †Robinson, Rex J., 1929 (1937).....Associate Professor of Chemistry
B.A., 1925, DePauw; M.A., 1927, Ph.D., 1929, Wisconsin
- Rollins, Paul R., M.D., 1940.....Lecturer in Nursing Education
B.S., 1924, Washington; M.D., 1928, Washington University (St. Louis)
- Rosen, Moritz, 1909 (1928).....Professor of Music
Graduate, Warsaw Conservatory, Russia
- Rowlands, Thomas McKie, 1928 (1934) .Assistant Professor of General Engineering
B.S.(Nav. Arch. and Marine Engr.), 1926, Massachusetts Institute of Technology
- †Rowntree, Jennie Irene, 1925 (1932).....Professor of Home Economics
B.S., 1918, Wisconsin; M.S., 1924, Chicago; Ph.D., 1929, Iowa
- Royal, Loyd Allen, 1941.....Lecturer in Fisheries
B.S., 1931, Washington
- Ruch, Helen Josephine, 1942.....Instructor in Nursing Education
R.N., 1931, Michael Reese Nursing School; B.S., 1940, Bradley Polytechnic Institute
- Rulifson, Leone Helmich, 1926 (1937) ...Assistant Professor of Physical Education
B.S., 1922, M.A., 1935, Washington
- St. Clair, Laura P., 1937.....Associate in English
A.B., 1915, West Lafayette; M.A., 1917, Adrian College, Michigan
- Samson, Victor J., 1937.....Lecturer in Fisheries
B.S., 1930, Washington
- Sanderman, Llewellyn Arthur, 1928 (1936).....Instructor in Physics
B.S., 1923, Linfield; M.S., 1931, Washington
- †Savage, George Milton, Jr., 1935 (1942).....Assistant Professor of English
B.A., 1928, M.A., 1928, Ph.D., 1935, Washington
- †Savery, William, 1902
Professor of Philosophy; Executive Officer of the Department of Philosophy
A.B., 1896, Brown; A.M., 1897, Ph.D., 1899, Harvard

† Member of Graduate School faculty.

- Sawyer, Ruth Freida, 1940.....Instructor in Home Economics
B.S., 1933, Minnesota; M.S., 1940, Iowa State
- Schaefer, Milner B., 1937.....Lecturer in Fisheries
B.S., 1935, Washington
- Schaller, Gilbert Simon, 1922 (1937).....Professor of Mechanical Engineering
B.S., 1916, Illinois; M.B.A., 1925, Washington
- Scheffer, Victor B., 1938.....Lecturer in Oceanography
B.S., 1930, M.S., 1932, Ph.D., 1936, Washington
- Schertel, Max, 1931 (1938).....Instructor in German
B.A., 1923, M.A., 1928, Ph.D., 1938, Washington
- †Schmid, Calvin F., 1937 (1941).....Professor of Sociology
B.A., 1925, Washington; Ph.D., 1930, Pittsburgh
- Schmoe, Floyd, 1935.....Instructor in Forestry
B.S., 1922, New York State College of Forestry; M.S. in Forestry, 1937, Washington
- Schrader, O. H., Jr., 1936 (1941).....Assistant Professor of Forestry
B.S.F., 1931, Washington; M.S., 1932, Wisconsin
- Schram, Lloyd W., 1940
Research Associate in the Bureau of Governmental Research
B.A., 1934, LL.B., 1937, Washington; LL.M., 1938, Harvard
- †Schultheis, Frederic D., 1938 (1942)
Associate Professor of Chinese Language and History
B.A., 1929, Washington; M.A., 1931, Columbia
- †Seeman, Albert L., 1928 (1939).....Associate Professor of Geography
A.B., 1921, Morningside (Iowa); M.B.A., 1924, Northwestern; Ph.D., 1930, Washington
- Sergev, Sergius, 1923 (1939).....Associate Professor of Civil Engineering
B.S. in M.E., 1923, M.E., 1931, Washington
- Shattuck, Evelyn Rennie, 1941.....Instructor in Nursing Education
R.N., 1936, Good Samaritan Hospital, Oregon; B.S., 1940, Washington
- *Shattuck, Warren L., 1935 (1941).....Professor of Law
B.A., LL.B., 1934, Washington; J.S.D., 1936, Yale
- Sheckels, G. Dale, 1941.....Instructor in Electrical Engineering
B.S. in E.E., 1938, Washington; M.S. in E.E., 1940, Massachusetts Institute of Technology
- Shefelman, S. Harold, 1930.....Lecturer in Law
Ph.B., 1920, Brown; LL.B., 1925, Yale
- Sheldon, Charles S., II, 1940.....Instructor in Transportation
B.A., 1936, M.A., 1938, Washington; A.M., 1939, Harvard
- Sherwood, K. K., M.D., 1935.....Lecturer in Nursing Education
B.S., 1923, B.M., 1925, M.D., 1928, Minnesota
- *Sholley, John Burrill, 1932 (1939).....Professor of Law
LL.B., 1932, Washington; J.S.D., 1937, Chicago
- Shuck, Gordon Russell, 1918 (1937).....Professor of Electrical Engineering
E.E., 1906, Minnesota
- †Sidey, Thomas Kay, 1903 (1927).....Professor of Latin and Greek
A.B., 1891, Toronto; Ph.D., 1900, Chicago

† Member of Graduate School faculty.

* On leave, 1942-1943.

- Simpson, Lurline Violet, 1924 (1934).....Assistant Professor of French
B.A., 1920, M.A., 1923, Ph.D., 1928, Washington
- †Sivertz, Victorian, 1926 (1936).....Assistant Professor of Chemistry
B.S., 1922, Washington; M.S., 1924, West Virginia; Ph.D., 1926, McGill
- †Skinner, Macy Millmore, 1916 (1928).....Professor of Foreign Trade
A.B., A.M., Ph.D., 1897, Harvard
- Slough, Ione O., 1941.....Instructor in Nursing Education
Grad., 1918, University of Michigan School of Nursing; B.S., 1934, Michigan State Normal College
- †Smith, Charles Wesley, 1905 (1926).....Librarian; Professor of Librarianship
B.A., 1903, B.L.S., 1905, Illinois
- Smith, Frederick Charnley, 1926 (1941)...Associate Professor of Civil Engineering
B.S. in C.E., 1926, C.E., 1929, Washington
- †Smith, George McPhail, 1919.....Profesor of Inorganic Chemistry
B.S., 1900, Vanderbilt; Ph.D., 1903, Freiburg (Germany)
- †Smith, George Sherman, 1921 (1941).....Professor of Electrical Engineering
B.S. in E.E., 1916, E.E., 1924, Washington
- Smith, Harriet H., 1931.....Assistant Professor of Nursing Education;
Director of Nursing Service, King County Hospital
R.N., Seattle General Hospital; B.A., 1918, Mount Holyoke
- Smith, Harry Edwin, 1914 (1929)
Professor of Insurance; Director of Extension Service
A.B., 1906, DePauw; Ph.D., 1912, Cornell
- Smith, Richard T., 1940.....Lecturer in Fisheries
B.S., 1932, M.S., 1937, Washington
- †Smith, Stevenson, 1911 (1916).....Professor of Psychology; Executive Officer,
Department of Psychology; Director of the Gatzert Foundation
A.B., 1904, Ph.D., 1909, Pennsylvania
- Snyder, William Arthur, 1940.....Associate in Mechanical Engineering
B.S. in M.E., 1939, Minnesota
- Soderstrom, Kenneth Malcolm, M.D., 1941.....Lecturer in Nursing Education
M.D., 1931, Nebraska
- Somers, Raymond H., M.D., 1935.....Lecturer in Nursing Education
B.S., 1921, M.D., 1921, Northwestern
- Sorenson, Marguerite, 1941.....Acting Associate in Home Economics
B.S., 1935, Washington
- †Soule, Elizabeth, 1920 (1934)
Professor of Nursing Education; Director of the School of Nursing Education
R.N., Malden Hospital, Massachusetts; B.A., 1926, M.A., 1930, Washington
- Spector, Ivar, 1931 (1936)....Assistant Professor of Russian Language and History
B.A., 1915, Yekaterinoslav (Russia); M.A., 1919, Teachers Seminar (Russia); M.A., 1926, Northwestern; Ph.D., 1928, Chicago
- †Spellacy, Edmond F., 1935 (1936).....Associate Professor of Political Science
A.B., 1927, A.M., 1931, Stanford; Ph.D., 1935, Harvard

† Member of Graduate School faculty.

- Sperlin, Ottis Bedney, 1921 (1923).....Lecturer in English
A.B., 1903, Indiana; Ph.M., 1908, Chicago
- Spoerry, Gottfried W., Lieutenant Colonel, Infantry, 1939
Assistant Professor of Military Science and Tactics
B.Pd., 1902, M.Pd., 1903, Idaho State Normal; Infantry School, 1927
- Spragg, Armored McDowell, 1941.....Acting Associate in Art
B.A., 1934, Washington
- Starr, Mary Elizabeth, 1935 (1941).....Assistant Professor of Home Economics
B.S., 1929, M.A., 1935, Washington
- †Steiner, Jesse Frederick, 1931.....Professor of Sociology and Social Work;
Executive Officer of the Department of Sociology
B.A., 1901, Heidelberg College; M.A., 1913, Harvard; Ph.D., 1915, Chicago; Litt.D., 1937,
Heidelberg College
- Stevens, Belle, 1932.....Research Associate in Oceanography and Zoology
Ph.D., 1931, Washington
- †Stevens, Edwin B., 1910 (1936).....Professor of Higher Education and Guidance
A.B., 1896, Tufts College; A.M.(Educ.), 1899, Harvard
- §Stevens, Leonard W., 1937.....Associate in Physical Education
B.S., 1933, Washington
- Stevenson, Margaret Whyte, 1941.....Associate in English
B.A., 1929, Boston; M.A., 1935, Washington
- Stirling, Brents, 1932 (1937).....Assistant Professor of English
LL.B., 1926, Ph.D., 1934, Washington
- †Stone, Edward Noble, 1910 (1940).....Professor of Classical Languages
A.B., 1891, M.A., 1893, Olivet
- Storvick, Clara A., 1941.....Assistant Professor of Home Economics
A.B., 1929, St. Olafs; M.S., 1933, Iowa State College
- †Stowell, Ellery Cory, 1942.....Professor of International Law
A.B., 1898, Harvard; Licencié en droit, 1906, Docteur en droit, 1909, Univ. of Paris;
Graduate, Ecole Libre des Sciences Politiques, Paris
- Stubbs, Lucile, 1940.....Associate in English
B.A., 1922, Colorado
- Stuntz, Daniel Elliot, 1940.....Instructor in Botany
B.S., 1935, Washington; Ph.D., 1940, Yale
- Sullivan, C. L., 1935.....Instructor in Mechanical Engineering
- Suomela, Arnie J., 1935.....Lecturer in Fisheries
B.S., 1924, M.S., 1931, Washington
- Sutermeister, Robert Arnold, 1940.....Associate in Economics and Business
A.B., 1934, Harvard
- Svelander, Katherine Theodora, 1941.....Instructor in Nursing Education
R.N., 1928, Swedish Hospital; B.S., 1928, Washington
- †Svihla, Arthur, 1938.....Associate Professor of Zoology
A.B., 1925, Illinois; Ph.D., 1931, Michigan

† Member of Graduate School faculty.

§ On war leave, 1942-1943.

‡ Exchange Professor from the American University, 1942-1943.

- Svihla, Ruth Dowell, 1940.....Research Associate in Zoology and Botany
A.B., 1920, Smith; M.S., 1923, Illinois; Ph.D., 1930, Michigan
- Swift, Arthur L., Jr., 1941.....Lecturer in Social Work
B.A., 1913, Williams College; B.D., 1916, Union Theological Seminary; M.A., 1925,
Columbia
- Syrdal, Richard Rolfson, 1941.....Instructor in General Engineering
B.A., 1936, St. Olaf; Ph.M., 1938, Wisconsin
- †Tartar, Herman Vance, 1917 (1927).....Professor of Chemistry
B.S., 1902, Oregon State; Ph.D., 1920, Chicago
- *Tatsumi, Henry S., 1935 (1939).....Assistant Professor of Japanese
B.A., 1933, M.A., 1935, Washington
- *†Taub, Abraham H., 1936 (1939).....Assistant Professor of Mathematics
B.S., 1931, Chicago; Ph.D., 1935, Princeton
- †Taylor, Edward Ayres, 1929.....Professor of English
B.A., 1909, Denver; M.A., 1918, Ph.D., 1925, Chicago
- †Taylor, George Edward, 1939 (1941).....Professor of Far Eastern History;
Executive Officer of the Far Eastern Department
A.B., 1927, A.M., 1928, Birmingham, England
- Taylor, Robert Lincoln, 1941.....Associate Professor of Law
B.A., 1927, Yale; J.D., 1930, Northwestern
- †Terrell, Margaret Elma, 1928 (1936)...Assistant Professor of Home Economics;
Director of Commons; Business Director of Dining Halls and Residences
B.A., 1923, Penn College; M.A., 1927, Chicago
- Thomas, Harlan, 1926
Professor of Architecture; Director Emeritus of the School of Architecture
B.S., 1894, Colorado State College
- Thompson, Carlisle, Lieutenant-Commander, U.S.N., 1940
Assistant Professor of Naval Science and Tactics
B.S., 1922, U. S. Naval Academy
- *†Thompson, Thomas Gordon, 1919 (1929)
Professor of Chemistry; Director of Oceanographic Laboratories
A.B., 1914, Clark; M.S., 1915, Ph.D., 1918, Washington
- †Thompson, William F., 1930
Professor of Fisheries; Director of the School of Fisheries
B.A., 1911, Ph.D., 1931, Stanford
- †Thomson, David, 1902.....Professor of Latin; Vice Dean of College of
Arts and Sciences; Vice President Emeritus
B.A., 1892, Toronto; LL.D., 1936, British Columbia
- Thorgrimson, O. B., 1937.....Lecturer in Law
LL.B., 1901, Nebraska
- Thorpe, Berenice DuRae, 1941.....Acting Associate in English
B.A., 1924, M.A., 1925, Washington
- Tilden, Dorothy May, 1936 (1937).....Assistant Professor of Home Economics
A.B., 1922, California; M.A., 1934, Cornell

† Member of Graduate School faculty.

* On leave, 1942-1943.

- Tilton, Kenneth E., Major, C.A.C., 1940 (1941)
Assistant Professor of Military Science and Tactics
B.S. in Chem. E., 1925, Washington
- *Torney, John A., Jr., 1930 (1937).....Assistant Professor of Physical Education
B.S., 1928, Washington; M.A., 1930, Columbia
- Truax, Arthur, 1924.....Lecturer in Finance
- Turner, Mabel Alexandra, 1941.....Instructor in Librarianship
A.B., 1926, Oregon; B.S. in L.S., 1931, Columbia
- Tustin, Whitney, 1935.....Associate in Music
- †Tyler, Richard G., 1929.....Professor of Sanitary Engineering
C.E., 1908, Texas; B.S. in C.E., 1910, Massachusetts Institute of Technology
- Tymstra, Sybren Ruurd, 1929 (1939)
Associate Professor of Mechanical Engineering
M.E., 1905, Zwickau
- *†Uehling, Edwin A., 1936.....Assistant Professor of Physics
A.B., 1925, Wisconsin; M.A., 1930, Ph.D., 1932, Michigan
- Ulbrickson, Alvin M., 1927.....Associate in Physical Education
B.B.A., 1927, Washington
- †Umphrey, George Wallace, 1911 (1922).....Professor of Romanic Languages
A.B., 1899, Toronto; A.M., 1901, Ph.D., 1905, Harvard; Litt.D., 1920, San Marios (Lima)
- †Utterback, Clinton Louis, 1918 (1934)
Professor of Physics; Acting Director of Oceanographic Laboratories
B.S., 1908, Purdue; M.S., 1918, Washington; Ph.D., 1926, Wisconsin
- †Vail, Curtis C. D., 1939..Professor of Germanic Languages and Literature; Executive Officer of the Department of Germanic Languages and Literature
A.B., 1924, Hamilton; M.A., 1929, Ph.D., 1936, Columbia
- †Van Horn, Robert B., 1925 (1938)..Professor of Hydraulic Engineering; Executive Officer of the Department of Civil Engineering
B.S. in C.E., 1916, C.E., 1926, Washington
- Van Norman, Karl H., M.D., 1932
Director of Medical Instruction, King County Hospital
M.D., 1904, Toronto
- Van Ogle, Louise, 1915 (1932).....Associate Professor of Music
Theoretical work with Dr. Bridge, Chester, England; Richter, Leipzig; Piano, Godowsky, Lhevinne, Berlin; Harold Bauer, Paris
- Vickner, Bertha Almen, 1920.....Associate in English
B.A., 1910, Gustavus Adolphus;; M.A., 1917, Washington
- †Vickner, Edwin John, 1912.....Professor of Scandinavian Languages; Executive Officer of the Department of Scandinavian Languages
A.B., 1901, A.M., 1902, Ph.D., 1905, Minnesota
- Vivrette, Lyndon, First Lieut., Infantry, 1941
Instructor in Military Science and Tactics
A.B., 1939, California
- von Brevern, Maxim, 1934 (1942)..Associate Professor of Political Science; Executive Secretary of the Bureau of International Relations
Graduate, Imperial and Royal Maria Theresian Military Academy, Wienerneustadt, Austria, 1907; Ph.D., 1936, Washington

* On leave, 1942-1943.

† Member of Graduate School faculty.

- Wade, Arthur E., M.D., 1928.....Lecturer in Home Economics
B.S., Cornell College; M.D., 1905, Sioux City College of Medicine
- Wagenknecht, Edward Charles, 1925 (1940).....Associate Professor of English
B.T., 1921, Union Theological College; Ph.B., 1923, M.A., 1924, Chicago; Ph.D., 1932, Washington
- Wagner, Charlotte Fitton, 1940.....Associate in Speech
B.A., 1937, Washington
- Walker, Lauren McNeal, 1941.....Associate in Accounting
B.A., 1939, Washington
- Wallace, John Randall, Jr., 1941 (1942).....Instructor in General Engineering
B.S. in C.E., 1941, Washington
- Walters, Margaret C., 1929 (1940).....Instructor in English
B.A., 1917, Mills; M.A., 1919, Yale
- Wangaard, Frederick, 1936 (1939).....Assistant Professor of Forestry
B.S., 1933, Minnesota; Ph.D., 1939, New York State College of Forestry
- Ward, May Dunn, 1918.....Acting Dean of Women
B.S., 1917, Washington; M.A., 1921, Columbia
- Warner, Frank Melville, 1913 (1937).....Professor of Engineering Drawing
B.S.(M.E.), 1907, Wisconsin
- Warren, John Thompson, Lieutenant Commander, U.S.N., 1941
Associate Professor of Naval Science and Tactics
B.S., 1924, U. S. Naval Academy
- Watson, M. Grace, 1941.....Instructor in Nursing Education
R.N., 1919, Vancouver, B. C.; B.S. in Nursing, 1938, Washington
- Watters, Reginald Eyre, 1941.....Instructor in English
B.A., 1935, M.A., 1937, Toronto; Ph.D., 1941, Wisconsin
- Watts, Charles E., M.D., 1933.....Lecturer in Nursing Education
B.S., 1913, Idaho; M.D., 1918, Rush Medical
- †Weaver, Charles Edwin, 1907 (1921).....Professor of Paleontology
B.S., 1904, Ph.D., 1907, California
- Weber, Erwin Leo, 1941.....Lecturer in Mechanical Engineering
B.S. in E.E., 1906, B.S. in M.E., 1908, Minnesota
- Weber, Julius A., M.D., 1938.....Lecturer in Nursing Education
B.A., M.D., 1925, Nebraska
- †Webster, Donald H., 1939.....Associate Professor of Political Science;
Executive Secretary, Bureau of Governmental Research
B.A., 1929, LL.B., 1931, Ph.D., 1933, Washington
- †Weiser, Russell S., 1935 (1938).....Assistant Professor of Bacteriology; Acting
Head of the Department of Bacteriology
B.S., 1930, M.S., 1931, North Dakota State; Ph.D., 1934, Washington
- Welander, Arthur D., 1937.....Associate in Fisheries
B.S., 1934, Washington
- Welch, Ralph, 1942.....Associate in Physical Education
- Welke, Walter, 1929 (1936).....Assistant Professor of Music
B.M., 1927, Michigan

† Member of Graduate School faculty.

- Wendelburg, George, Lieutenant, U.S.N., 1941
Assistant Professor of Naval Science and Tactics
B.S., 1933, U. S. Naval Academy
- Wenhe, Mary Bixby, 1937.....Associate in Speech
B.A., 1931, M.A., 1936, Washington
- Werner, August, 1931.....Professor of Music
B.S., 1913, College of Agriculture, Stend, Norway
- Wesner, Elenora, 1924.....Associate in German
A.B., 1915, Chicago; M.A., 1923, Northwestern
- West, Frank Beach, 1939.....Instructor in Chemical Engineering
B.S., 1936, Ph.D., 1939, Minnesota
- Westfall, Marjorie Elgar, 1940.....Associate in Chemistry
B.S., 1930, Washington
- Wheeler, Bayard O., 1941.....Lecturer in Economics and Business
A.B., 1928, California; M.A., 1930, Washington
- Whittlesey, Walter Bell, 1909 (1929).....Assistant Professor of French
B.A., 1907, M.A., 1909, Washington
- Wick, Oswald Justin, 1937
Associate in Mining, Metallurgical and Ceramic Engineering
B.S., 1936, M.S., 1937, Montana School of Mines
- Wienker, Curtis H., First Lieutenant, Infantry, 1940
Instructor in Military Science and Tactics
B. of Arch., 1939, Washington
- Wilcox, Elgin Roscoe, 1920 (1936)...Professor of General Engineering; Executive
Officer of the Department of General Engineering
B.S., 1915, Met.E., 1919, Washington
- †Williams, Curtis Talmadge, 1920 (1936)
Professor of Methods and Philosophy of Education
A.B., 1913, Kansas State Normal; A.M., 1914, Ph.D., 1917, Clark
- Willis, Park Weed, Jr., Lieutenant Commander MC-V(S), U.S.N.R., 1940
Lecturer in Naval Science and Tactics
B.S., 1916, M.D., 1931, Pennsylvania
- Wilson, Clotilde, 1929 (1937).....Assistant Professor of Romanic Languages
B.A., 1926, M.A., 1927, Ph.D., 1931, Washington
- Wilson, Florence Bergh, 1929 (1930).....Assistant Professor of Music
B.M., 1917, B.A., 1924, Washington; M.A., 1925, Columbia
- †Wilson, George Samuel, 1906 (1924)
Professor of Mechanical Engineering; Consulting Engineer
B.S., 1906, Nebraska
- Wilson, Ruth, 1936 (1940).....Assistant Professor of Physical Education
B.S., 1931, Utah; M.S., 1936, Wisconsin
- †Wilson, William Charles Eade, 1926 (1940).....Associate Professor of Spanish
A.B., 1922, Montana; M.A., 1925, Ph.D., 1928, Washington
- †Wilson, William R., 1919 (1929).....Professor of Psychology
B.A., 1917, M.S., 1921, Ph.D., 1925, Washington

† Member of Graduate School faculty.

- †Winger, Roy Martin, 1918 (1925).....Professor of Mathematics
A.B., 1906, Baker; Ph.D., 1912, Johns Hopkins
- †Winkenwerder, Hugo, 1909 (1912)
Professor of Forestry; Dean of the College of Forestry
B.S., 1902, Wisconsin; M.F., 1907, Yale
- †Winslow, Arthur Melvin, 1918 (1927).....Professor of Mechanical Engineering
Ph.B., 1903, Brown; B.S., 1906, Massachusetts Institute of Technology
- †Winther, Sophus Keith, 1925 (1940).....Professor of English
B.A., 1918, M.A., 1919, Oregon; Ph.D., 1926, Washington
- †Witte, Ernest F., 1939
Professor of Social Work; Director of the Graduate School of Social Work
B.Sc. in B.A., 1925, A.M., 1926, Nebraska; Ph.D., 1932, Chicago
- †Wood, Carl Paige, 1918 (1928)
Professor of Music; Director of the School of Music
B.A., 1906, M.A., 1907, Harvard
- Wood, Ralph F., Captain, U.S.N., 1940.....Lecturer in Naval Science
B.S., 1911, United States Naval Academy
- Woodcock, Edith, 1930 (1933).....Assistant Professor of Music
B.M., 1925, Rochester; M.M., 1936, Washington
- †Woolston, Howard B., 1919.....Professor of Sociology
A.B., 1898, Yale; S.T.B., 1901, Chicago; M.A., 1902; Harvard; Ph.D., 1909, Columbia
- †Worcester, John Locke, 1917 (1922)
Professor of Anatomy; Executive Officer of the Department of Anatomy
M.D., 1900, Birmingham School of Medicine
- Worden, Ruth, 1926 (1937)
Professor of Librarianship; Director of the School of Librarianship
B.A., 1911, Wellesley
- Worman, Eugenie H., 1919.....Associate in Design
B.A.(Educ.), 1928, Washington
- Wyckoff, Hewlett J., M.D., 1938.....Lecturer in Nursing Education
M.D., 1916, Northwestern
- Zeusler, Frederick A., Commander, U.S.C.G., 1937.....Lecturer in Oceanography
Graduate, Coast Guard School
- Zillman, Lawrence J., 1930 (1937).....Assistant Professor of English
B.A., 1928, Ph.D., 1936, Washington
- Zuckerman, Herbert Samuel, 1939.....Instructor in Mathematics
B.S., 1932, California Institute of Technology; M.S., 1934, Chicago; Ph.D., 1936, California
- Zumwalt, Eugene V., 1936 (1940).....Assistant Professor of Forestry
B.S.F., 1934, California; M.S.F., 1938, Washington
- *†Zwermann, Carl Henry, 1939.....Assistant Professor of Ceramics
B.S., 1929, M.S., 1937, Ph.D., 1939, Illinois

† Member of Graduate School faculty.

* On leave, 1942-1943.

Walker-Ames Professors, Lecturers, and Associates

- Amero, Emilio, 1941-1942**.....Associate in Art
School of Fine Arts, Mexico
- Loewi, Otto, 1942 (spring)**.....Professor of Pharmacology and Therapeutics
New York University College of Medicine
- Moulton, Harold G., 1942 (winter)**.....Professor of Economics and Business
President, The Brookings Institution
- Odum, Howard W., 1942 (spring)**.....Professor of Sociology
Director, Institute for Research in Social Science, University of North Carolina
- Rohde, Gilbert, 1942 (winter)**.....Lecturer in Industrial Design
New York University
- Schnitzler, Heinrich, 1942 (winter)**.....Lecturer in Drama and German
Austrian actor and stage director
- Wright, Louis B., 1942 (spring)**.Lecturer in Early American History and Literature
Henry E. Huntington Library and Art Gallery

THE UNIVERSITY OF WASHINGTON

The University was established at Seattle by the territorial legislature in January, 1861, and classes were opened on November 4 of that year in a building erected on a ten-acre tract which now lies in the heart of Seattle's metropolitan district. The University was moved to its present location on the shores of Lakes Washington and Union in 1895. Under the constitution and laws of the State, the government of the University is vested in a Board of Regents, consisting of seven members appointed by the Governor by and with the advice and consent of the Senate. Each regent is appointed for a term of six years. The University derives its support from legislative appropriation, student fees, endowments, and the income from real estate owned by the University. The campus contains 605 acres within the city limits of Seattle between Lakes Washington and Union, with a shore line of more than one mile on Lake Washington and about a quarter mile on Lake Union.

The University Library contains 409,000 (March, 1942) bound volumes and receives currently about 7,800 serial publications. The Henry Suzzallo Library building houses the basic collection of books and provides facilities for students and faculty. Specialization is provided in the fields of science, the social studies and Pacific Northwest Americana. A branch in Parrington Hall gives reference service in the field of English language and literature. There are several departmental collections on the campus.

Two libraries are separately administered: the Law School Library, with 92,426 volumes, and the Drama Library, with 14,955 volumes. The libraries of the University, together with the Seattle Public Library and other Seattle library agencies, provide more than a million volumes for the use of students and research workers.

The service offered by the University Library staff includes instruction in the use of the Library and of its more specialized materials. Orientation tours are conducted for freshmen each fall and a printed guide to the Library is supplied to new students.

The museum of the University of Washington was created the State Museum by law in 1899. Its collections are representative of the history, ethnology, geology and natural history of the state and adjacent regions, and of those countries with which the state has special relations.

The Horace C. Henry Gallery, with its collection representing the work of some 200 representative nineteenth century painters, was the gift of the late Horace C. Henry of Seattle. To supplement the permanent collections, traveling exhibitions are shown during the college year.

The Department of Commerce maintains at the College of Mines its Northwest Experiment Station, which serves the Pacific Northwest and the coast regions of Alaska. The Mine Safety Station of the United States Bureau of Mines is also located on the campus.

The Engineering Experiment Station was organized in 1917 to coordinate the engineering investigations in progress and to facilitate development of industrial research in the University.

The Gatzert foundation for Child Development was established in 1910 by means of a gift from Sigmund Schwabacher and the executor of the will of Abraham Schwabacher and is under the administrative control of the Department of Child Welfare.

The Alice McDermott Memorial foundation was established in 1924 through the will of the late Mrs. Josephine McDermott, for research and study in the fields of tuberculosis and cancer.

THE UNIVERSITY ORGANIZATION

The University of Washington is one of five institutions of higher education which compose the state's system of public education, the others being the state college and the three state colleges of education. To the University is given exclusive authority to instruct in the following major lines: aeronautical engineering, architecture, commerce, fisheries, forestry, journalism, law, librarianship, marine engineering, and medicine.

The University has concurrent authority with the state college to instruct in the following major lines: chemical engineering, civil engineering, electrical engineering, home economics, liberal arts, mechanical engineering, mining, pharmacy, professional training of high school teachers, school supervisors and school superintendents, and pure science.

The Colleges and Schools. The University includes the following colleges and schools:

A. *The College of Arts and Sciences*, composed of the departments in liberal arts and pure science and the following semi-professional schools:

The School of Architecture

The School of Journalism

The School of Art

The School of Music

The School of Drama

The School of Nursing Education

The School of Fisheries

The School of Physical Education

The School of Home Economics

General Studies—for students with no major

B. *The College of Economics and Business.*

C. *The College of Education.*

G. *The School of Law.*

D. *The College of Engineering.*

H. *The College of Mines.*

E. *The College of Forestry.*

I. *The College of Pharmacy.*

F. *The Graduate School*, including the Graduate School of Social Work and the School of Librarianship.

Definitions and Explanations. The word *course* refers to a single study pursued for a definite period, for which credit may be given toward University requirements for graduation in accordance with the number of hours taken. A *curriculum* is a group of courses arranged to be followed consecutively or concurrently. A *department* is the unit of instructional organization in a particular science or art, as the department of geology. A *college* gives full curricula, beginning with the freshman year, or, in the College of Education, with the sophomore year, and covering 12 quarters. The work of a *school* is preceded by two or more years of college work.

The four-year program of the college is divided into the *lower division* (freshman and sophomore) and *upper division* (junior and senior).

The term *unit* is applied to work taken in high school; a *credit* to work taken in college. A university credit is given for one hour of recitation a week throughout one quarter. Thus a quarter course in which there are five recitations a week is a five-credit course.

The term *major* is applied to the department or subject in which a student elects to specialize.

Special Curricula within the Schools. Certain semi-professional curricula are given for which no special school or college is provided. Such is the curriculum in chemistry in the College of Arts and Sciences.

The University does not give a medical course, but offers a pre-medical curriculum especially planned as a foundation for study in a medical school. This may be two years in length for schools not requiring college graduation, or four years for schools requiring that amount of preparation.

Under provisions of the National Defense Act, students in the University may attain commissions as reserve officers in the United States Army by meeting the requirements for advanced work in military science. This can be done without interference with the student's regular academic work. Likewise, students completing the course in naval science may receive commissions in the Naval Reserve.

The Four-Quarter System. The University is operated on the four-quarter system, each quarter having approximately 12 working weeks. (For dates, see University Calendar, page 8.)

GENERAL INFORMATION

ADMISSION TO THE UNIVERSITY

Students May Enter the University in Any Quarter, Autumn, Winter, Spring, or Summer

In order to make a maximum contribution in this war emergency, the University of Washington has placed instruction on a twelve-month basis. The summer quarter has been made an integral part of the regular school year. Students in most *majors* may begin their work in any quarter, autumn, winter, spring, or summer. By placing their attendance on a twelve-month basis, carrying a normal fifteen-credit schedule, students may graduate in three calendar years. Students who demonstrate unusual scholastic ability may carry up to twenty credits a quarter and graduate in as little as two and one-half years.

How to Obtain Information

Correspondence regarding admission to any college or school of the University, and requirements for graduation, should be addressed to the Registrar.

Admission Procedure

Before a student may register for University classes, he must place on file with the Registrar complete credentials of all his previous secondary and college education. Credentials accepted toward admission to the University are kept on permanent file. For admission to the autumn quarter, the required credentials should be forwarded after high school graduation and before July 15. Prompt answer cannot be guaranteed to correspondence and credentials received less than thirty days before the opening of the session for which admission is sought.

Admission Requirements

Any prospective student will find that one of the ten following classifications fits his case. He should examine them carefully to determine which one refers to him, and then study the requirements listed thereunder to ascertain how he may be admitted to the University.

1. *Beginning freshmen who have been graduated from an accredited* high school or secondary school in the State of Washington or in Alaska must:*

- a. Submit an official application for admission blank. (May be obtained from any high school principal or from the Registrar.)
- b. Have completed at least 16 acceptable units** (or 15 units exclusive of activity credit in physical education, debate, etc.) with grades certifiable for college entrance. The University will not accept a student who has included in the 16 units, grades which are defined by his high school as being of lower value than the minimum passing grade of that high school. Such grades will be considered failures for purposes of admission to the University.
- c. Have included in the 16 units, 3 units of English, and 6 additional units in academic fields (English, mathematics, foreign language, social science, natural science). The other seven units may consist of further academic study or may be selected from the subjects ordinarily known as non-academic or vocational (agriculture, art, music, shop, domestic science, commercial courses, etc.). Less than a unit will not be counted in a foreign language.
- d. Have completed the subject requirements of the college to which he seeks admission. (See chart, page 56.)

*Accredited high schools in Washington are those accredited by the State Department of Education; in Alaska, by the Northwest Accrediting Association; in other states, by the state university or the state accrediting association.

**To count as a unit, a subject must be taught five times a week, in periods of not less than forty-five minutes, for a high school year of thirty-six weeks. The maximum allowance toward University entrance, for junior high school study, is four units. In satisfying entrance requirements, with college courses, a minimum of ten quarter credits is counted as the equivalent of the entrance unit.

MINIMUM UNIT ADMISSION REQUIREMENTS

(Entrance requirements are stated in terms of units. A unit equals two high school semester credits.)

For other recommendations see statement of college concerned.

| College | English | Mathematics | For. Lang. | Lab. Sci. ¹ | Soc. Sci. | Other Acad. Subj. ² | Free Elective |
|--|---------|--|------------|-------------------------------------|-------------------------|--------------------------------|---------------|
| 1. Arts and Sciences ³ | 3 | 2 (Elem. Alg. & Pl. Geom. or 2nd yr. Alg.) | 2 of one* | 1* | 1 | 0 | 7 |
| 2. Economics & Business..... | 3 | 2 (Elem. Alg. & Pl. Geom. or 2nd yr. Alg.) | 0 | 0 | 1 (U.S. Hist. & Civics) | Minimum of 3 | 7 |
| 3. Education*** | 3 | 2 (Elem. Alg. & Pl. Geom. or 2nd yr. Alg.) | *** | 1* | 1 | Minimum of 2 | 7 |
| 4. Engineering.. | 3 | 3 (Elem. & Adv. Alg., Pl. & Sol. Geom.) | 0 | 1 (Chem.) ⁴ 1 (Phys.) | 0 | 1 | 7 |
| 5. Forestry..... | 3 | 2½ (Elem. & Adv. Alg. & Pl. Geom.) | 0 | ** | 0 | Minimum of 3½ | 7 |
| 6. Mines..... | 3 | 3 (Elem. & Adv. Alg., Pl. & Sol. Geom.) | 0 | 1 (Chem.) ⁴ 1 (Phys.) | 0 | 1 | 7 |
| 7. Pharmacy.... | 3 | 2 (Elem. Alg. & Pl. Geom. or 2nd yr. Alg.) | 0 | ** | 0 | Minimum of 4 | 7 |
| 8. Comprehensive (Admit to any college)... | 3 | 3 (Elem. & Adv. Alg., Pl. & Sol. Geometry) | 2 of one* | 1 (Chem.) ⁴ 1 (Phys.) | 1 | 0 | 5 |

¹ Approved Laboratory sciences; Biology, Botany, Chemistry, Geology, Physics, Zoology.

² Typical academic subjects are: English, foreign language, mathematics, science, history, economics. Some non-academic subjects are: commercial courses, manual training, home economics, band.

³ Includes also Schools of Art, Architecture, Fisheries, Home Economics, Journalism, Music, Nursing Education, and Physical Education.

⁴ In Engineering and Mines, a student who is deficient in chemistry will be expected to earn 15 hours of chemistry credit in his freshman year instead of the usual twelve.

* Two units of one foreign language and one unit of one laboratory science should be taken in high school. Students who do not take these subjects in high school will be asked to take them in the University during the freshman and sophomore years, with credit toward graduation.

** Pharmacy recommends one unit of a laboratory science. Forestry recommends one unit of physics.

*** Students interested in teaching enter College of Arts and Sciences. They may request transfer to the College of Education when they have earned 45 credits in academic subjects with a grade average of 2.5. A deficiency in foreign language may be removed by substituting 20 credits in language and literature.

- e. *Probation Rule.* Students entering with a grade point average of 2.0 or above enter as regular students. All other graduates of high schools of Washington and Alaska, satisfying the subject requirements of the University and its respective colleges will be admitted on probation. If, at the end of the first quarter, the work of any entering student is not satisfactory, he shall be subject to the action of the Admissions and Scholarship Board.

2. Beginning freshmen who have been graduated from an unaccredited high school in the State of Washington or in Alaska must:

- a. Submit an official application for admission blank. (May be obtained from any high school principal or from the Registrar.)
- b. Have completed at least 16 acceptable units** (or 15 units exclusive of activity credit in physical education, debate, etc.) with grades certifiable for college entrance. The University will not accept a student who has included in the 16 units, grades which are defined by his high school as being of lower value than the minimum passing grade of that high school. Such grades will be considered failures for purposes of admission to the University.
- c. Have included in the 16 units, 3 units of English and 6 additional units in academic fields (English, mathematics, foreign language, social science, natural science). The other seven units may consist of further academic study or may be selected from the subjects ordinarily known as non-academic or vocational (agriculture, art, music, shop, domestic science, commercial courses, etc.). Less than a unit will not be counted in a foreign language.
- d. Have completed the subject requirements of the college to which he seeks admission. (See chart, page 56.)
- e. Have a scholastic standing which ranks them in the highest 25 per cent of their graduating class. (Students of lower rank see section 4, below.)

3. Beginning freshmen who have been graduated from an accredited high school or secondary school not located in the State of Washington or Alaska must:

- a. Submit an official application for admission blank. (May be obtained from any high school principal or from the Registrar.)
- b. Have completed at least 16 acceptable units** (or 15 units exclusive of activity credit in physical education, debate, etc.) with grades certifiable for college entrance. The University will not accept a student who has included in the 16 units, grades which are defined by his high school as being of lower value than the minimum passing grade of that high school. Such grades will be considered failures for purposes of admission to the University.
- c. Have included in the 16 units, 3 units of English, and 6 additional units in academic fields (English, mathematics, foreign language, social science, natural science). The other seven units may consist of further academic study or may be selected from the subjects ordinarily known as non-academic or vocational (agriculture, art, music, shop, domestic science, commercial courses, etc.). Less than a unit will not be counted in a foreign language.
- d. Have completed the subject requirements of the college to which he seeks admission. (See chart, page 56.)
- e. Have earned a "C" average (a grade point of 2.0).
- f. Be eligible for admission to the university of their own state.

** To count as a unit, a subject must be taught five times a week, in periods of not less than forty-five minutes, for a high school year of thirty-six weeks. The maximum allowance toward University entrance, for junior high school study, is four units. In satisfying entrance requirements with college courses, a minimum of ten quarter credits is counted as the equivalent of the entrance unit.

4. Beginning freshmen who have not been graduated from any secondary school in the United States must meet requirements without deficiency by passing College Entrance Board Examinations. (Foreign students see Section 8.)

- a. Complete information concerning the examinations may be obtained by writing to the College Entrance Examination Board, 431 West 117th Street, New York City, N. Y.

5. Advanced undergraduate students who have attended some other college or university must:

- a. Submit complete official credentials covering both preparatory and college credits, together with a statement of honorable dismissal from the institution last attended. If the applicant has attended college for less than one year he shall be required to submit a credential from his high school in addition to his college transcript. If his high school record is unsatisfactory, he shall not be admitted until at least one year of college work has been completed with satisfactory grades.
- b. Have earned over his total college record, and also in the last term, a "C" average (a grade point of 2.0).
- c. Be in no scholastic difficulty at the institution last attended.

Allowance of Advanced Credit:

- (1) Students (under classifications 5, 6, and 7) who have completed advanced study in colleges and universities of recognized rank, will be allowed whatever credit is acceptable to the University. In no case, will more than three years' credit (135 quarter credits) be accepted toward a bachelor's degree requiring four years of college study. The entire last year's work (45 quarter credits) must be done at the University of Washington.
 - (2) Transfer of credit from normal schools, junior colleges, and other institutions accredited for less than four years will not be accepted in excess of the accreditation of the individual school concerned. For example, no student will be permitted credit earned in a junior college accredited for two years after he has earned a total of 90 quarter hours (60 semester hours) of college credit.
 - (3) Credits earned in unaccredited schools offering specialized instruction are accepted only after certification by the departmental examiner, the executive officer of the department, the dean of the college concerned, and the Registrar. The fee for such certification is \$5. Students seeking such certification must secure the proper forms in the Registrar's office.
 - (4) For work done at institutions whose standing is unknown, or with private teachers, advanced credit will be granted only upon examination. (See page 60 for regulations.)
 - (5) For information concerning admission to the School of Law or the School of Librarianship, see the bulletins of those schools. For information concerning admission to the Graduate School of Social Work, see Graduate School section, page 203.
6. College of Education. Requirements for admission to the College of Education are: (1) completion of the first year of work of any college of the University, or 45 quarter credits of college work in courses approved by the faculty of the College of Education and the faculty of the college concerned plus the required credits in military or naval science and physical education; (2) a 2.50 grade point average or better.

7. Graduate Students. A certificate of graduation with a bachelor's or higher degree from a college or university of recognized rank is required for admission to the Graduate School. Prospective candidates for graduate degrees should see that complete official transcripts of their graduate and undergraduate records are permanently filed in the Registrar's office. As these may not be withdrawn, the student should request of his alma mater a duplicate record for his own use when interviewing his major and minor departments and the Dean of the Graduate School. (See Graduate School Section, page 174.)

8. Foreign Students:

- a. Must satisfy the same general requirements as those from American schools.
- b. Must demonstrate sufficient working knowledge of English and acquaintance with American methods of instruction to enable them to carry regular college work successfully. Students from foreign schools whose standing is not known to be the equivalent of accredited American schools may be required to pass College Entrance Board examinations in representative subjects. A student graduating from a school system which provides for less than twelve years of instruction may be held for additional high school work.

9. Special Students—mature individuals (21 years of age or over) who are not eligible for admission as regular students. To be accepted as special students they must:

- a. Submit all available credentials and records of previous work in secondary schools and colleges, together with the Application for Special Admission secured from the Registrar.
- b. Secure the consent of the Board of Admissions of the University.
- c. Be classified as residents of the State of Washington.

A Special Student may:

- (1) Take such regular courses as the dean of his college may approve.
- (2) Become a regular student by fulfilling the admission requirements of the college and department in which he is enrolled.

A Special Student may not:

- (1) Earn a degree.
- (2) Participate in student activities.

10. Auditors. A student eligible for regular or for special standing may enroll as an auditor, after securing the consent of his college dean and the instructor of the course, and paying the auditor's fee of \$12.* He may audit as many courses as his college dean deems wise. An auditor may listen to lectures without doing the required work of the course. He may not participate in class discussion, or in laboratory work, and under no circumstances will he be allowed credit in the course. He may, in a subsequent quarter, take the course as a regular student and receive credit by fulfilling all the requirements of the course. No person may attend any course in which he has not been registered as a student or enrolled as an auditor.

*During the summer quarter, tuition is the same as for regular students.

Freshman Days

Freshman Days is an introductory period for new students. Attendance is expected of all freshmen. The purpose is to give pleasant first impressions of the University from the faculty and from student representatives, to give new students vocational, scholastic, and personal advice, to promote friendships, and to introduce campus activities.

The period opens September 25, 1942, at 9:00 a.m., with the "Welcome Assembly" in Meany Auditorium, at which time the President of the University will deliver his Address of Welcome to the class of 1946.

Advanced Credit by Examination

Advanced Credit by Examination is governed by the following regulations:

1. The work of preparation for the examination must have been done by private study or in class work for which no credit has been granted toward graduation by any institution.

2. A student may not take an advanced credit examination in a course which he has audited, or for which he has been registered in an accredited institution.

3. Only a student enrolled for the current quarter in the University of Washington may apply for advanced credit examination.

4. A student may not apply for advanced credit examination in more hours of credit than he would be permitted to take in regular courses.

5. A student may not earn by advanced credit examination more than one-half the number of credits required for graduation. At least one-half the number of credits required for graduation must be residence credit (not home study, extension classes, or by examination).

6. A student must follow exactly this procedure in applying for and taking an Advanced Credit Examination:

- a. Obtain an application form at the Information Window, fill in Part I completely, and secure the certification of the Registrar in Part II.
- b. Secure the approving signatures of the examiner, the executive officer of the department, and the dean of the college indicated in Part III.
- c. Pay to the Comptroller a fee of \$2 per credit. (See Part IV.)
- d. Present Application Blank and receipt for fee at the Information Window and obtain a card authorizing the department to give the examination.
- e. Present the authorization card to the examiner at the time of the examination.

7. The examiner will fill in the back of the authorization card and mail it to the Registrar's Office, where the grade will be recorded.

8. If the examination for advanced credit is not a comprehensive written one, the dean of the college shall require that a statement of the procedure by which the student was tested be submitted for filing.

The Extension Service

The Extension Service provides means for persons to earn college credit by attending Saturday or evening classes in Seattle and other cities in the State, or by home study. Such credit may be applied toward a degree only when all other requirements for the degree have been met and after the student has satisfactorily completed one year in residence at the University of Washington. (For additional information, see Extension bulletins.)

Credits earned in Extension, like credits earned by Advanced Credit Examination, are not resident credits. A maximum of ninety non-resident credits may be counted toward the requirements for a bachelor's degree. Of the forty-five credits required in the senior year, not more than ten may be non-resident credits.

The Extension Service offers Saturday classes which meet on the campus and carry resident credit, but may not be used for an advanced degree.

No resident student may take an extension course without the consent of his dean, the Registrar, and the Director of the Extension Service, properly indicated on the forms provided by the Extension Service for the purpose.

Extension Credit from Other Institutions

The University reserves the right to accept or reject for degree credit, extension or correspondence courses offered by other institutions.

In general, it is the policy of the University of Washington to accept correspondence or extension credit only from accredited colleges and universities whose extension departments appear on the membership lists of the National Extension Association.

Rules relating to application of extension credit toward a bachelor's degree:

1. Accepted extension credit will be added to a student's standing after he has been in residence for three quarters and has earned 35 residence credits.
2. Extension credit from other schools will not apply in the senior year.

Registration

At the beginning of each quarter, the student arranges his schedule of studies with the advice and assistance of his college adviser. A regular course consists of 15 or 16 credits.

Autumn Quarter. Students who followed the Spring Advisory Program may take advantage of a preferred registration period designed to assure them of the courses they have selected. This period extends from September 8 to 4:30 p.m. September 11. Students who do not take advantage of the preferred registration period may register from September 14 to 12 m. September 26, along with students who did not secure advice in the spring and with new students. In all cases, fees must be paid in advance. During the preferred period, registration must be in person, total fees must be paid in advance, and any change on the Yearly Program of Studies must be approved by the adviser.

Winter and Spring Quarters. See calendar, page 8, for dates.

Registration is complete when fees are paid, when the election blank has been signed by all required officers, and when approved by the Registration Office, 106 Education Hall.

Mail Registration. Students who were enrolled in the University Spring Quarter, 1942, and who planned their programs for 1942-1943 during the Spring Advisory Period, may reserve sections by mail in the following manner: mail Yearly Program of Studies and tuition to the Comptroller, University of Washington, before September first. Students must fill out registration books in Education Hall 104 before mail registration is complete.

Information regarding mail registration for the Summer Quarter may be obtained from the Summer Quarter Bulletin.

Aptitude Test

All undergraduate students who have not previously taken the University of Washington Aptitude Test must do so at a time to be announced each quarter. See calendar, page 8.

Medical Examinations

All students, regardless of classification, entering the University for the first time are required to pass a medical examination as a part of their registration requirements. Men will report to the Pavilion and women to the Gymnasium on the date and hour designated. This appointment takes precedence over all others scheduled for that hour. Students failing to appear for the medical examination at the appointed time will be excluded from classes on notice to the Registrar. For a second appointment, to compensate the University for the additional expense thereby necessitated, a special fee of \$5 must be paid.

EXPENSES

Notice: The right is reserved to change any or all fees without notice to present or future students. Consult University Calendar for fee payment dates. See page 64 regarding late registration fines.

RESIDENT STUDENTS¹

Examples of Autumn, Winter, and Spring Quarter Fees for Various Types of Registration

| Types of Registration | Tuition Fee | Incidental Fee | Misc. Fees | A.S.U.W. FEE | | | TOTAL FEES | | |
|---|-------------|----------------|------------|--------------|-----------|-----------|------------|-----------|-----------|
| | | | | Aut. Qtr. | Win. Qtr. | Spr. Qtr. | Aut. Qtr. | Win. Qtr. | Spr. Qtr. |
| Undergraduate..... | \$15 | \$12.50 | | \$5 | \$2.50 | \$2.50 | \$32.50 | \$30.00 | \$30.00 |
| Fresh. & new soph. | 15 | 12.50 | ** \$27.50 | 5 | 2.50 | 2.50 | 60.00 | 30.00 | 30.00 |
| Graduate..... | 15 | 12.50 | | * | * | * | 27.50 | 27.50 | 27.50 |
| Law School..... | 15 | 12.50 | †\$10 | 5 | 2.50 | 2.50 | 42.50 | 40.00 | 40.00 |
| Auditors..... | 12 | | | * | * | * | 12.00 | 12.00 | 12.00 |
| Ex-service men or women..... | | 12.50 | | 5 | 2.50 | 2.50 | 17.50 | 15.00 | 15.00 |
| †Undergrad. nurses in apprvd. hosp... | 5 | | | * | * | * | 5.00 | 5.00 | 5.00 |
| †Grad. nurses in approved hosp.... | 10 | | | * | * | * | 10.00 | 10.00 | 10.00 |
| Part time. (Max. 6 cr. hrs. excl. of R.O.T.C.)..... | 15 | 2.50 | | * | * | * | 17.50 | 17.50 | 17.50 |
| †Persons registered for thesis only.... | | 12.50 | | * | * | * | 12.50 | 12.50 | 12.50 |

¹ A resident student is one who has been domiciled in this state or the territory of Alaska for a period of one year immediately prior to registration. Children of persons engaged in military, naval, lighthouse, or national park service of the United States within the State of Washington are considered as domiciled in this state. The domicile of a minor is that of his parents.

A prospective student is classified as a non-resident when credentials are presented from institutions not located in the State of Washington. If the student believes himself domiciled within the state, he should file a petition with the non-resident office (203 Condon Hall) for change of classification to resident status.

*Optional. If a membership in A.S.U.W. is desired, the A.S.U.W. fee should be added to the total fee as shown for this type of registration.

** This charge represents an advance on an Army R.O.T.C. uniform which must be paid by freshmen and sophomores at the time of initial enrollment (see page 161).

† Individuals in these classifications must be certified by the School of Nursing Education or the Graduate School.

‡ Law library fee.

NOTE: The following courses require the payment of a fee in addition to tuition: *Nursing field work*, \$5 per course; *cadet teaching*, \$1 per credit hour; *botany field trip*, \$5.

Music, riding, golf, and locker fees (see Descriptions of Courses) should be added to the above when applicable.

NON-RESIDENT STUDENTS¹

Examples of Autumn, Winter, and Spring Quarter Fees for Various Types of Registration

| Types of Registration | Tuition Fee | Incidental Fee | Misc. Fees | A.S.U.W. FEE | | | TOTAL FEES | | |
|---|-------------|----------------|------------|--------------|-----------|-----------|------------|-----------|-----------|
| | | | | Aut. Qtr. | Win. Qtr. | Spr. Qtr. | Aut. Qtr. | Win. Qtr. | Spr. Qtr. |
| Undergraduate..... | \$50 | \$12.50 | | \$5 | \$2.50 | \$2.50 | \$67.50 | \$65.00 | \$65.00 |
| Fresh. & new soph. | 50 | 12.50 | ** \$27.50 | 5 | 2.50 | 2.50 | 95.00 | 65.00 | 65.00 |
| Graduate..... | 50 | 12.50 | | * | * | * | 62.50 | 62.50 | 62.50 |
| Law School..... | 50 | 12.50 | † 10 | 5 | 2.50 | 2.50 | 77.50 | 75.00 | 75.00 |
| Auditors..... | 12 | | | * | * | * | 12.00 | 12.00 | 12.00 |
| Ex-service men or women..... | 25 | 12.50 | | 5 | 2.50 | 2.50 | 42.50 | 40.00 | 40.00 |
| †Undergrad. nurses in apprvd. hosp... | 5 | | | * | * | * | 5.00 | 5.00 | 5.00 |
| †Grad. nurses in approved hosp.... | 10 | | | * | * | * | 10.00 | 10.00 | 10.00 |
| Part time. (Max. 6 cr. hrs. excl. of R.O.T.C.)..... | 50 | 2.50 | | * | * | * | 52.50 | 52.50 | 52.50 |
| †Persons registered for thesis only.... | | 12.50 | | * | * | * | 12.50 | 12.50 | 12.50 |

¹ A non-resident student is one who has *NOT* been domiciled in this state or the territory of Alaska for a period of one year immediately prior to registration.

The following rules govern the determination of the legal domicile of a student:

- The legal words *domicile* and *residence* are not equivalent terms; domicile requires more than mere residence.
- No one can acquire domicile by residence in the State of Washington when such residence is merely for the purpose of attending the University.
- The domicile of a minor is normally that of his parents and in case of their death, that of his legally appointed guardian. The domicile of a minor ordinarily will change with that of his parents.

*Optional. If membership in A.S.U.W. is desired, the A.S.U.W. fee should be added to the total fee as shown for this type of registration.

** This charge represents an advance on an *Army* R.O.T.C. uniform which must be paid by freshmen and sophomores at the time of initial enrollment (see page 161).

† Individuals in these classifications must be certified by the School of Nursing Education or the Graduate School.

†Law library fee.

NOTE: The following courses require the payment of a fee in addition to tuition: *Nursing field work*, \$5 per course; *cadet teaching*, \$1 per credit hour; *botany field trip*, \$5.

Music, riding, golf, and locker fees (see Descriptions of Courses) should be added to the above when applicable.

Exemptions

Members of the teaching staff of the University are exempt from the tuition and incidental fees.

Persons to whom "cadet teaching" exemption certificates have been issued are exempt from the tuition fee only.

All honorably discharged service men or women who served in the military or naval service of the United States during the first World War; and all honorably discharged service men who served in the military or naval services of any of the governments associated with the United States during the said war, provided they were citizens of the United States at the time of their enlistment and who are again citizens at the time of their registration in the University, and who are classified as residents, are exempt from the payment of the tuition fee. Ex-service men and women who are classified as non-residents are exempt from the payment of one-half of the non-resident tuition fee. (This exemption is not granted during the summer quarter.)

Payment of Fees

All fees are payable in advance of registration, except in the case of pre-registered students who may pay fees any time prior to the date set for cancellation of classes. If classes are cancelled, students must re-register and pay fees when registering.

Fees of pre-registered students may be paid by mail. The remittance should be mailed to the Comptroller of the University for the *exact* amount due, and show the fee statement number.

Refund of Fees

Autumn, Winter, and Spring Quarters

All fees (except those indicated as not subject to refund) will be refunded in full if complete withdrawal is made during the first three days; one-half of said fees will be refunded if withdrawal is made during the first thirty days, except for R.O.T.C. uniform fee which will be refunded if student is excused for cause or withdraws within 15 days, notifies R.O.T.C. of his intentions, and obtains uniform cancellation notice. Otherwise the uniform must be completed and will be turned over to him. At least ten days must elapse between payment and refund of fees. Unless specific instructions are received by the comptroller's office regarding the refund of fees, all properly authorized refunds will be made to the student involved in the registration.

Students withdrawing under discipline forfeit all rights to the return of any portion of the fees.

Applications for refund may be refused unless requested during the quarter in which the fees apply.

Refund of Fees to Students Withdrawing to Enter Military Service

Students volunteering or called to military service will be refunded registration fees in proportion to the time spent in attendance, subject to the limitations of the statute in regard to refund of the State tuition. After the fourth week, a student withdrawing to enter military service may receive from one-third to full credit for all courses in which his grades are "passing." See page 69.

Summer Quarter Fees

(Important. Consult Summer Quarter Bulletin for fees and fee payment dates.)

Miscellaneous Charges Applicable Only in Special Cases

The unused portion of breakage tickets will be refunded in full. The other charges noted are not subject to refund, except when payment is made in error.

Late Registration Fine. Unless delay in registering is occasioned by officials of the University, *undergraduate* students and *graduate students in the Law School* registering late will be charged a fine of two dollars (\$2) on the first day of instruction and a further cumulative fee of one dollar (\$1) for each day thereafter

up to a total of four dollars (\$4). After the first week of instruction, no student shall be permitted to register except with the consent of his dean and payment of a late registration fee of five dollars (\$5). *Graduate students not in the Law School* may register without penalty during the first week of the quarter.

Change of Registration Fee. A fee of one dollar (\$1) is charged for each change of registration or number of changes which are made simultaneously, except that no charge is made when the change is made on the initiative of the University or for dropping a course.

Breakage Ticket Deposit. In certain laboratory courses a breakage ticket is required to pay for laboratory supplies and breakage of equipment. Tickets may be purchased at the comptroller's office for three dollars (\$3).

Special Examination Fee. A fee of one dollar (\$1) will be charged for each examination outside the regular schedule, including the examination for foreign language reading. In the case of examination for *advanced credit*, a fee of two dollars (\$2) per credit hour is charged. (See page 60.)

A fee of two dollars and fifty cents (\$2.50), payable to the Extension Service, is charged for removal of incompletes in absentia.

Practice Rooms. Piano practice room,* one hour a day: \$3 each quarter; organ practice room,* one hour a day, \$12.50 each quarter; violin practice room,** one hour a day, no charge.

Locker Fee (Men). A fee of one dollar (\$1) per quarter during the regular academic year, and fifty cents (\$.50) per term during the summer quarter, is charged faculty members and students who are registered for physical education. Locker tickets may be secured at the office of the Associated Students. Faculty members and students who are not registered for physical education may also secure lockers upon payment of the same fee.

Grade Sheet Fee. One grade sheet is furnished each quarter without charge; a fee of twenty-five cents (\$.25) is charged for each additional sheet.

Graduation Fee. Each graduate receiving a baccalaureate or higher degree is required to pay a graduation fee of five dollars (\$5). The fee for a three-year normal or six-year standard diploma is two dollars and fifty cents (\$2.50). The fee for other professional certificates is one dollar (\$1). The three-year normal or six-year standard diploma fee does not include the legal registration fee of one dollar (\$1) which must be paid to the county school superintendent who first registers a teacher's diploma.

Printing and Thesis Binding Fees. Each recipient of a higher degree pays a fee of two dollars (\$2) for the binding of one copy of his thesis. In addition, each recipient of a master's degree contributes five dollars (\$5) and each recipient of a doctorate twenty-five dollars (\$25) to the publishing fund, which contribution is applied to the cost of printing an annual volume of digests of theses.

Transcript Fee. One transcript of a student's record is furnished without charge. Fifty cents (\$.50) is charged for each additional transcript.

Medical Examination and X-Ray Fees. Students who *fail to keep* their medical or X-ray appointments must pay a fee of five dollars (\$5) for a make-up medical examination and one dollar (\$1) for an X-ray.

X-Ray Plates. Applicants for a normal diploma may secure from the University Health Center an X-ray plate to accompany the health certificate upon the payment of a fee of five dollars (\$5).

Bureau of Appointments Fee. Candidates seeking teaching positions pay an initial registration fee of five dollars (\$5). A replacement or maintenance charge of two dollars and fifty cents (\$2.50) is charged each subsequent year for persons wishing to remain on the active list.

Certification of Credits from Unaccredited Schools. Credits based on credentials from unaccredited schools offering specialized instruction are accepted only after

*Available only to students registered in the School of Music or to other University students registered for applied music in the School of Music.

**Available only to University students registered for violin lessons in the School of Music.

certification by the departmental examiner, the executive officer of the department, the dean of the college or school concerned, and the Registrar. The fee for such certification shall be five dollars (\$5). Students seeking such certification must secure the proper forms in the Registrar's office.

Military and Naval Uniforms. See pages 161, 163 for details.

Living Costs

Board and room expense varies according to the type of accommodation desired.

1. The Students' Cooperative Association provides room and three meals a day for about \$85 per quarter. Membership is open to both men and women upon payment of an initial membership fee of \$15.

2. Boarding houses will average from \$95 to \$105 per quarter for double room and two meals, or \$110 for three meals.

3. Living cost in the women's residence halls situated on the campus and in fraternity and sorority houses, exclusive of dues, averages about \$120 per quarter for room and three meals.

4. Single rooms in private homes rent from \$10 to \$20 per month.

5. Both the Commons and the Coffee Shop, located on the campus, serve excellent meals at reasonable prices. (See section on Housing, page 72.)

Financial Obligations

The Comptroller and Registrar are instructed to attach credits and withhold delivery of a student's diploma pending final payment of financial obligations to the University. Participation in commencement exercises is in no way affected by this rule and certification of graduation will be furnished where the need exists.

SCHOLASTIC REGULATIONS

Degrees—Requirements

It is not the policy of the University to grant honorary degrees.

1. *Grade Points Required.* To be graduated from the University of Washington with the bachelor's degree, the candidate must have received twice as many grade points as the number of credits recorded for graduation, in no case less than 180 academic credits, plus the required credits in Military or Naval Science and in Physical Education activities.

Any college may make additional requirements for graduation.

See *Senior scholarship for the last quarter in residence* (8), under "Scholarship Rules," page 70.

For rule regarding repetition of courses in which grades of "D" or "E" were obtained, see "Repeating of Course," page 71.

2. *Senior Year Residence.* The work of the senior year consists of 45 quarter credits to be completed at the University of Washington. Of this amount, at least 35 credits must be earned in residence in a minimum attendance of three quarters. This permits a maximum of 10 credits by Extension (University of Washington only) during the senior year.

NOTE: Senior standing is attained when 135 credits and the required credits in Military or Naval Science and Physical Education have been earned.

3. *Applications for Degrees.* A student shall, during the first quarter of his senior year, file with the Registrar a written application for his degree. Each application shall be checked by the Graduation Committee at least six months before the date at which the student expects to be graduated and notice shall be sent to the student by the Registrar of the acceptance or rejection of his application. The accepted list for each quarter shall be submitted at the regular meeting of the faculty for the quarter and, if approved by the faculty, with or without modification,

shall constitute the list of candidates to be recommended for graduation upon the completion of the work requisite for their respective degrees. (No change shall be made in this list unless ordered by a two-thirds vote of the members of the faculty present.)

NOTE: Applicants who are late in filing their applications cannot be assured of recommendations to the faculty, or of consideration of petitions for modification of requirements. Consideration of late applications is a privilege, which may be withheld at the discretion of the officials concerned.

Details concerning issuance of teaching certificates may be obtained from the College of Education section, page 144.

4. *Degrees—Entrance and Graduation Requirements.* A student shall have the option of being held to the graduation requirements of the catalogue under which he enters, or those of the catalogue under which he expects to graduate. All responsibility for fulfilling the requirements for graduation is thrown upon the student concerned.

5. *Degrees—Two at Same Time.* A baccalaureate degree and a master's degree, or two different bachelor's degrees, may be granted at the same time, but a minimum of fifteen quarters must have been occupied in the work for the two degrees, and the total number of academic credits must have reached a minimum of 225.

6. *A Second Bachelor's Degree.* A second bachelor's degree may be granted, but a minimum of three additional quarters in residence must have been occupied in the work for this second degree, and the total number of additional credits must have reached a minimum of 45, and the number of additional grade points, a minimum of 90. Not more than ten extension credits and no credits gained by advanced credit examinations shall constitute any part of the added program.

7. *Degrees—Financial Obligations.* In determining the fitness of a candidate for a degree, his attitude toward his financial obligations to the University shall be taken into consideration.

8. *Degrees with Honors.* Degrees with honors may be conferred upon recommendation of the Honors Committee.

9. *Degrees—Theses.* If a thesis is required for the degree sought, the candidate must deposit two typewritten copies thereof in the Library at least two weeks before the end of the quarter in which he expects to take the degree. The thesis must meet the approval of the librarian as to form. Printed "Instructions for the Preparation of Theses" should be obtained at the thesis desk in the Library.

Commencement Exercises

1. Formal Commencement exercises shall be held only at the close of the spring quarter.

2. Diplomas shall be issued at the end of each quarter to such candidates as have completed requirements at that time.

Military Science Requirements

(See also page 161.)

1. Two years of military science are required of all male undergraduate students except the following:

- a. Men who are twenty-three years of age or over at the time of original entry into the University.
- b. Men entering as juniors or seniors.
- c. Special students.
- d. Men registered for six credits or less.
- e. Men registered in Naval R.O.T.C.

- f. Men who are not citizens of the United States.
 - g. Men who are active members in the Army, Navy, or Marine Corps of the United States, or commissioned officers of the National Guard or Naval Militia, or reserve officers of the military or naval forces of the United States, or members of the Naval or Marine Corps Reserve.
 - h. Entering students who present credits for military science received prior to matriculation. (Such students shall be allowed an exemption from military science up to the value of said credits, but shall be held for physical education.)
 - i. Men who, because of physical condition, are exempted by the University Health Officer.
 - j. Men whose petitions for exemption on other grounds than those listed above have been approved by the Department of Military Science and Tactics.
2. Students, other than those listed under a, b, c, d, e, or f above, must register for the proper course and must attend classes until their requests for exemption have been granted.
3. The Military Science requirement shall normally be satisfied in the first six quarters of residence.
4. Men who are not citizens of the United States and those exempted by petition are required to earn equivalent credits in other courses of the University. This must be done in accordance with the rules governing excess hours.
5. All male students who register for advanced military science in their freshman and/or sophomore years may substitute credits in excess of twelve hours for activity credits in physical education.

Naval Science Requirements

(See also page 163.)

1. Naval Science is a four-year course, but it may be completed in less than four years by attending summer quarter. No students are accepted unless they contemplate completion of the course, are citizens of the United States, have passed a rigorous health examination, and have satisfied the following subject requirements:

- a. High School: Plane geometry.
 - b. High School or College: Plane trigonometry, college algebra.
- Recommended in High School: Advanced algebra, solid geometry, physics.
2. The first two years of naval science normally satisfy the requirement of military science and the requirement of physical education activity courses.

Physical Education Requirements for Men

1. Six quarters of physical education activity courses are required of all male students except men who are twenty-three years of age or over at the time of original entrance to the University, men entering with junior or senior standing, men registered for six credits or less, special students, or men registered in Naval R.O.T.C.

- (a) This requirement must be completed during the first six quarters of University residence.
 - (b) Students who pass the medical examination may elect any activity course with the provision that they participate in one group activity and two individual "carry over" activities during the six quarters of work.
2. All men of junior, senior, and graduate standing, whether by virtue of residence here, or transfer, and all men exempted from the six-quarter activity requirement because of age at entrance, must be formally registered for physical fitness in every quarter of residence.
3. A two-credit academic course in personal health (Physical Education 15) is required of all male students who have not satisfied this requirement in an accredited university or college.
- (a) This requirement should be completed during the first year of University residence.
 - (b) A student may be exempt from the health education course by passing a health knowledge test given the first week of each quarter.

Physical Education Requirements for Women

1. Five quarters of physical education activity courses are required of all women students except women who are twenty-three years of age or over at the time of original entrance to the University, women entering with junior or senior standing, women registered for six credits or less, or special students.

- (a) This requirement must normally be completed during the first six quarters of University residence.
- (b) Students who pass the medical examination may elect activities with the following provisions: one activity from the individual groups (tennis, golf, riding, canoeing, archery, fencing, badminton), one from the rhythmic group (folk, clog or interpretative dancing), one from swimming (unless student passes test). The remaining credits may be selected from the above and from volley ball, basketball, hockey, baseball, and bowling.

2. A five-credit academic course in health education (P.E. 10) is required of all women students who have not satisfied this requirement in an accredited university or college.

- (a) This requirement should be completed by the end of sophomore year.
- (b) A student may be exempt from the health education course by passing a health knowledge test given the first week of each quarter.

Marking System and Scholarship Rules

I. MARKING SYSTEM

1. In all undergraduate courses two indices of scholarship are used to report a student's scholastic achievement: (1) Letter Grades, (2) Rank-in-Class Numbers. Both symbols are recorded on the student's permanent record.

2. *Letter Grades* provide the basis for computing official scholastic averages and are defined and weighted as follows:

| Grade | Grade Pts. | Grade | Grade Pts. |
|----------------|------------|------------------------|------------|
| A—Honor | 4 | D—Poor (low pass)..... | 1 |
| B—Good | 3 | E—Failed | 0 |
| C—Medium | 2 | | |

Passing grades for advanced degrees are "A," "B," and "C," with a "B" average required.

3. *Rank-in-Class Numbers* are used to indicate the student's relative position in class and are defined as follows:

| Number | Grade Pts. | Number | Grade Pts. |
|---------------------------|------------|--------------------------|------------|
| 5—Highest one-tenth | 5 | 2—Next two-tenths | 2 |
| 4—Next two-tenths | 4 | 1—Lowest one-tenth | 1 |
| 3—Next four-tenths | 3 | | |

4. *Other Symbols* shown in the schedule below are used by instructors when appropriate.

I—Incomplete.

N—Satisfactory without grade, used in undergraduate courses.

S—Satisfactory without grade, used in graduate courses.

W—Withdrawal.

UW—Ceased to attend; unofficial withdrawal.

a. A grade of "N" is given in *undergraduate* hyphenated courses in which the grade is dependent upon the work of a final quarter; it indicates that work has been completed to that point but gives no credit until the entire course is completed. (The use of this symbol is optional.)

b. A grade of "S" is given in *graduate* hyphenated courses indicating satisfactory work so far as the course has progressed. In some cases it may be used as a final grade.

c. The grade of "E" is final and a student receiving a grade of "E" in a course can obtain credit for that course only by re-registering for and repeating it.

5. *Graduate Courses*: Letter grades only are used in graduate courses. Graduate courses are defined as those numbered 200 or above.

II. SCHOLARSHIP RULES

1. Three times as many grade points as credits must be earned on the program for an advanced degree.

2. A student who, at any time in a quarter, is reported to the Registrar as doing work below passing grade in any subject shall be so advised.

3. At the end of any quarter in residence, a student who has not made satisfactory progress toward meeting graduation standards shall be reported to the dean of his college. The dean will take appropriate action, which may be to place him on probation or to require him to withdraw from the college. Satisfactory progress will normally be interpreted as a cumulative grade point average of 1.8 for the freshman year, and a 2.0 average thereafter.

Any student in the *Law School* whose grade point average at the end of an academic year is between 1.5 and 1.8 shall be permitted to continue in the Law School for three additional quarters on probation. A student who, at the end of his first year, is placed on probation shall be required to repeat all courses in which he received a grade lower than "C." A student placed on probation shall be required to attain at the end of his succeeding three quarters a cumulative average of 2.0, and in the event he does not do so, he shall be dropped.

4. *Reinstatement* of a student disqualified under the provisions of paragraph (3) above shall be allowed only by the Admissions and Scholarship Board. In general, a student who has been required to withdraw is not permitted to re-enter the same college until one or more quarters have elapsed during which time he shall have successfully engaged in work or study justifying the belief that he is now prepared to make a satisfactory showing in the University.

5. *Probation*: When a student, because of low scholarship, has been placed on probation, the college concerned, through the office of the Dean, shall have complete authority over the student's academic and activity program.

The college concerned is to decide when a student on probation, because of continued low scholarship, shall be dropped from the college, or when, because of an improvement in his work, he shall be removed from probation.

6. In the administration of these rules, required military science and physical education activity courses shall be on the same basis as the academic subjects except as provided for in (7).

7. Colleges and schools may require higher standards of scholarship than those above stated. (See announcement of the college or school concerned, pages 85-206.)

8. *Senior Scholarship rule for the last quarter in residence*. Any senior who has completed the required number of credits for graduation but who has been dropped for low scholarship at the end of his last quarter of residence or who is on probation shall not receive his degree until restored to good standing. In general, he will not receive his degree until one or more quarters have elapsed.

Incompletes

1. An Incomplete is given only in case the student has been in attendance and has done satisfactory work to a time within two weeks of the close of the quarter. Except in the case of one-term summer courses, the two weeks' limit may be extended to three weeks upon the approval of the dean of the college.

2. A student who has received an Incomplete in a course must, to obtain credit, convert it into a passing grade within his next four quarters of residence; otherwise, he must re-register for the course. If the course is not offered in any one of the four quarters referred to, the Incomplete may be converted when the course is next offered, provided that if it is not again offered prior to the time at which the student expects to graduate, he shall have the right to convert it by taking a special examination.

Change of Grade

Except in cases of error, no instructor may change a grade which he has turned in to the Registrar.

Repeating of Course

Students who have received grades of "D" or "E" may repeat the courses in which these grades were obtained, or may with the approval of the dean of their college substitute other courses in their place, and in such cases the grade received the second time, either in the repeated or the substituted course, shall be the one counted in computing the average required for graduation. The provision for substitute courses does not apply to fixed curricula. For the purpose of determining University honors, only the grade received the first time shall be counted.

Final Examinations

1. All students in undergraduate courses are required to take final examinations, provided, however, that in a course for which an examination is not an appropriate test of the work covered, the instructor may, with the consent of the dean of the school or college concerned, dispense with the final examination.

2. The regular class exercises shall end at four o'clock on the fourth day before the end of each quarter. The remaining time of the quarter shall be set aside for two-hour examinations in the several courses as scheduled by the Committee on Schedule and Registration. Examinations in Law School courses will be scheduled by the dean of the school.

3. The scheduled examination period shall be the last meeting of the class. If, however, an instructor holds an examination at some time previous to that regularly scheduled, he nevertheless shall meet his class during the scheduled examination time and shall hold it for the full two-hour period.

4. A student absent from a scheduled final examination either by permission of his dean or through sickness or other unavoidable cause shall be given a grade of Incomplete and he may take another examination in the manner provided for removing Incomplete grades. (See rule governing Incompletes, page 70.) In all other cases of absence from examination, a student shall be given the appropriate grade of "E" or "UW."

5. Reports of all examinations of seniors and of all candidates for graduate degrees shall be in the Registrar's office by 12:00 noon of the Saturday preceding Commencement Day.

Honorable Dismissal and Withdrawal Regulations

Honorable Dismissal. To be entitled to honorable dismissal, a student must have satisfied all financial obligations to the University, and must have a satisfactory record of conduct.

Application for honorable dismissal shall be made at the Registrar's office. (See withdrawal regulations, below.)

Withdrawals. 1. *Withdrawal from the University* is voluntary severance by a student of his connection with the University. It must be approved by the Dean of Men or Dean of Women.

2. *Withdrawal from a course* is voluntary severance by a student of his connection with the course; it must be approved by the dean of his college.

3. In either case, withdrawal is indicated on the student's record as follows:

a. Official withdrawal within the first six weeks of the quarter—"W."

b. Official withdrawal after the sixth week:

(1) If the student's work in the course is satisfactory—"W."

(2) If the student's work in the course is unsatisfactory—"E."

4. Dropping a course without officially withdrawing, at any time in the quarter, is indicated on the student's record as follows:

a. If the student's work in the course is satisfactory—"UW."

b. If the student's work in the course is unsatisfactory—"E."

5. A grade of "UW" or "W" shall not be considered in computing grade point averages.

Withdrawal Regulations for Students Joining the Armed Forces

A student who withdraws from the University during the quarter to join the armed forces shall be given credit, according to the following schedule, for the course work he has completed with passing grades:

1. If the student withdraws during the first, second, third, or fourth week of the quarter, no credit allowance shall be made.

2. If the student withdraws during the fifth, sixth, or seventh week, he shall receive one-third credit for all courses in which his grades are passing. This credit shall be recorded as "unspecified" or "general" credit.

3. If the student withdraws during the eighth, ninth, or tenth week, he shall receive two-thirds credit for all courses in which his grades are passing. This credit shall be recorded as "unspecified" or "general" credit.

4. If the student withdraws during the eleventh or twelfth week, he shall receive full credit for all courses in which his grades are passing.

5. In respect to law students, credit will be granted in accordance with the foregoing provisions, when approved by the law faculty.

6. A senior who withdraws during the seventh, eighth, ninth, tenth, eleventh, or twelfth week of the quarter in which he would normally receive his degree, may be given full credit for the quarter's work and permitted to graduate upon recommendation of his major professor, department head, and college graduation committee.

7. Refund of fees shall continue as per the schedule approved by the Board of Regents in autumn quarter, 1940.

Leaves of Absence

A leave of absence from the University involving excuses from classes may be granted by the dean concerned, except as hereinafter provided:

1. A student absent on account of sickness or for personal reasons who has not made previous arrangements must explain the cause of his absence to his instructors. The legitimacy of a student's verbal explanation of absence shall be determined by the instructors only.

2. Leaves of absence for recognized student activities are issued for women and men students respectively at the discretion of the Dean of Women and the Dean of Men.

STUDENT WELFARE

Housing

The University, through its personnel offices and health service, inspects and approves a wide variety of living accommodations for men and women students. Lists of such places are available at the dean of men's and dean of women's offices. With the exception of four residence halls for women, providing rooms for three hundred students, all accommodations are off the campus, and consist of boarding and rooming houses, private homes, apartments and housekeeping rooms, the student cooperatives, independent organized houses, and fraternity and sorority houses. Residence in the last mentioned awaits invitation to membership, but it is suggested that in all other cases (except apartment houses) residence should be arranged for on the basis of the school quarter, either by written or verbal agreement with the householder or board of trustees of the house. (See section on Living Costs, page 66.)

Women students under twenty-one years of age not living in their own homes, with immediate relatives, in nurses' training school homes, or in homes where they are earning their board and room, or both, are required to live in some type of organized group house, i.e., University residence halls, sorority houses, or independent organized houses approved by the University. If circumstances warrant, exceptions shall be made by the dean of women's office upon request of the parents.

Failure to comply with this regulation will make the student subject to discipline to the extent of cancellation of registration.

Employment

Various agencies of the University do everything possible to assist worthy students in finding employment. All part-time placement for men and women in off-campus jobs, as well as board and room jobs for men, is handled through the University Employment Association, located in Clark Hall. The Y.M.C.A. in Eagleson Hall also assists men to obtain work. Women students desiring to earn room and board with some compensation should apply at the dean of women's office in Clark Hall. In all cases a personal interview is required.

It is important that students who find it necessary to help finance their college education through some type of employment should plan to limit their schedule of college work in proportion to the number of hours of employment.

The National Youth Administration Project affords an opportunity to a limited number of students for work in the various departments of the University. The qualifications for appointment are primarily financial need and a good grade of scholarship. The compensation for undergraduates is \$15 a month for approximately two hours' work per day. Information as to eligibility rules, etc., may be received from Dean Herbert T. Condon, who has been designated as director of the project at the University of Washington.

Loans

There are several loan funds available to both men and women students. Experience has demonstrated the wisdom of limiting such assistance to students who have advanced standing, and who have demonstrated their ability as college students and their sincerity of purpose. Due to the heavy call upon loans, it has seemed necessary to limit the amount of individual loans to the cost of resident tuition and supplies. Funds available for loans usually are exhausted prior to the opening of each quarter. Therefore, students desiring loans should file application at least ten days prior to the day instruction begins. A few small emergency funds are available. These are very limited in amount and time. For information, consult the dean of men or dean of women.

Loans for Women. A number of community organizations maintain loan funds for women. These fall into two classes:

1. Emergency loans. Such loans are for small sums to be returned within the quarter borrowed.
2. Loans for upperclassmen. These loans are for the college expenses of students in their last two years of college work.

Apply to the Dean of Women's office three days in advance for emergency loans and from two weeks to one month for others.

Leona M. Hickman Loan Fund. Loans are limited to qualified young men who are actual residents of King County, Washington, who desire to provide themselves with advanced educational training. Except in special cases, loans cannot exceed \$250 to any one applicant in any school year and not in excess of \$1,000 to any one student. Interest rate is 5 per cent per annum.

Address applications to Peoples' National Bank of Washington, Trustee, Seattle, Washington.

University Health Center

The University maintains a health service which functions primarily in guarding against infectious diseases and incipient ill health due to remediable causes. The work is carried on in two main divisions: viz., a dispensary, and infirmary.

The service is housed exclusively in a modern building, with offices for the doctors and nurses, seventy-five beds with essential accessories, and diet kitchen. A corps of six physicians, nine nurses, and two laboratory technicians, all on full time, constitute the permanent staff. This is augmented temporarily whenever an increased number of patients makes added assistance necessary. Seriously ill students are not retained in the infirmary. They are sent to a general hospital of their own choice and at their own expense.

The dispensary is available to all students during the span of class hours, for emergencies and infectious ailments only. The infirmary is available for the reception of bed patients at all hours.

From the results of the entrance physical examinations the students are classified. Those found to be below standard are re-examined at a later date for evidences of incipient tuberculosis, heart disease or other chronic disabilities. Ordinary medicines are dispensed in small quantities without cost to the student. Close cooperation is maintained with the family physician when one is retained; in no way is the idea of supplanting the family physician contemplated. Outside calls are not made by University physicians.

The infirmary cares for all cases of illness (including physicians' attendance, nursing and medicines) for a period of one week each quarter free of charge. For a period longer than one week a charge of \$2 per day is made. Students confined in the infirmary are permitted to ask for the services of any licensed regular medical practitioner in good standing, at their own expense.

Students are not permitted to remain where proper care cannot be taken of them, or where they may prove to be a source of danger to other students.

Personal and Vocational Guidance

The offices of the dean of men and dean of women are concerned with the general welfare of the students of the University and welcome correspondence and conferences with both parents and students. Students are urged to avail themselves of the opportunity for consultation in regard to social, personal, and vocational problems. These offices, which work closely with the advisory system of the colleges and schools of the University, are in a position not only to counsel students personally, but to direct them to faculty advisers and other sources of information and assistance. Obstacles to successful work in colleges may often be removed through the friendly advice these officials stand ready to give. The Dean of Men's office will be glad to discuss with the students any problems concerning entering military service.

STUDENT ACTIVITIES AND CONDUCT

General Eligibility Rules

In order to participate in any student activity, a student shall comply with the rules and regulations of the committee governing the activity. For students who wish to participate in athletics, this shall be the University Athletic Committee; for students who wish to participate in student affairs, this shall be the Committee on Student Welfare. These committees should work in close cooperation with the dean of the college concerned.

Student Activities

Student activities are governed by the Committee on Student Welfare in accordance with the rules of the faculty. Students are responsible for acting in accordance with the specific rules of the Committee, information regarding which may be secured from the Dean of Men or the Dean of Women.

Pledging to Fraternities or Sororities

1. No student having less than junior standing shall be initiated into a fraternity or sorority until he or she shall have earned successfully 18 resident credits in two quarters or 14 in one quarter, at this University, in addition to the required credits in physical education activity and military or naval science.
2. Candidates for initiation into fraternities or sororities shall secure certification of eligibility from the office of the Dean of Men or the Dean of Women.
3. No student on probation may be pledged to a fraternity or sorority.

Student Publications

1. Only those publications so designated by the Dean of Men and the Director of Student Activities may make use of the good will of the University in soliciting advertising.
2. Permission to issue student publications is obtained from the President's office.

3. The editors of all student publications shall be held responsible for all matter that appears in their respective publications. Correspondents of all other publications shall be held similarly responsible for all items contributed by them to their respective publications.

4. No editions of *The Daily* by special sets of editors shall be allowed, except by express permission of the publications committee of the Board of Control.

Meetings and Speakers at Student Clubs

1. The buildings and campus of the University are primarily devoted to education; they are also used for cultural and recreational purposes incidental to the work of the University.

2. The University buildings and grounds are not available for commercial or other outside uses, except that its assembly halls may, by arrangement with the President's office, be used for graduation exercises and other special assemblages of the public schools.

3. Meetings of student organizations upon the campus are permitted for purposes educational, cultural, and recreational in their nature, connected with the work of the colleges or departments of the University.

4. All student groups desiring to make use of the facilities of the campus for meeting places shall apply at the beginning of each year to Professor Raymond Farwell, chairman of the Executive Council of Student Campus Organizations; if organized during the school year, shall apply to the above committee before holding any meetings on the campus.

5. A student organization or group which is of a strictly professional character, or which is sponsored by an appropriate University department, may invite an outside speaker to address a meeting in a University building or on the campus but shall notify the President's office before the meeting is held. (An "outside speaker" shall be construed to mean any speaker not a registered student or a member of the staff.) Any other student organization or group desiring to invite an outside speaker to address a meeting in a University building or on the campus must have such invitation approved in advance by the Executive Council of the Student Campus Organizations Committee and by the President of the University. The terms "student organization or group" in this rule shall not be construed to refer to classes.

6. Arrangements and programs for meetings held under the sponsorship of a college or department of the University and open to the public shall be first approved by the President of the University. Departments or groups of departments desiring to have speakers for their students only shall apply to the President's office. Special lectures should be held in the afternoon in order not to disrupt regular morning classes.

7. Permission for the use of any space for outside organizations must be obtained by applying to the Secretary of the Board of Regents, Dean H. T. Condon, and to the President of the University. This permission is granted only for educational purposes.

8. Only all-University functions for which classes are generally dismissed may be designated as assemblies.

9. Necessary arrangements for rooms and space to be used between the hours of 8 a.m. and 5 p.m. will be made by applying to the Registrar's office. Rooms and space to be used between the hours of 5 p.m. and 8 a.m. will be secured by applying to the Buildings and Grounds' office.

10. All financial arrangements for the use of space shall be made through the office of the Comptroller of the University.

Cheating

Whenever cheating is detected, the following method of procedure shall be followed:

1. An instructor must dismiss from the course any student who is found cheating, and the student shall be given a grade of failure in the course.

2. Any offender is to be reported to the Registrar, who will inform the Dean of Men or Dean of Women and the Dean of the college concerned as to the facts in the case. The student shall automatically be placed on academic probation.

3. A student reported for a second offense is to be sent to the Committee on Student Discipline which shall suspend the student for the remainder of the quarter or for such longer time as is deemed desirable.

Library Rules

1. A student may borrow books for a period of two weeks, or, with special permission, for four weeks. Renewals may be made for two weeks if the books are not in demand.

2. Books may be recalled for reserve or in an emergency.

3. Books are due on the last date stamped on the date slip inside the back of the cover. A fine of 25 cents per volume will be assessed for books not returned on the date due, increasing to 50 cents per volume on the fourth day and \$1.00 on the ninth day for which they are overdue. (See rule 8.)

4. Reserve books are to be used in the library only; with a few exceptions they are issued for a period of two hours.

5. Books from the Reserve Room, excepting those belonging to the Reference Collection, may be borrowed for home use when the library is to be closed. They are due in the Reserve Room at the hour the library next opens.

6. Failure to return a volume to the Reserve Desk within ten minutes after it is due subjects the borrower to the fine of 25 cents for any part of the first hour and five cents for each additional hour or fraction thereof. All fines are levied when the books are returned and are payable immediately to the Library cashier located at the circulation desk in the main Library. (See rule 8.)

7. Permission to borrow reference material is granted at the discretion of the reference librarian. Borrowers who fail to return such material at the time designated are fined the same as for reserve books. Anyone who takes reference material *without permission* is subject to a fine of 50 cents for the first day and 25 cents for each additional day until the material is returned. (See rule 8.)

8. Registration, transcripts, and diplomas will be withheld until financial delinquencies are paid.

Tutoring

1. Students seeking the services of a tutor may obtain assistance in the Student Employment Office, in the offices of the Dean of Men and the Dean of Women, or in the office of the proper major department.

2. No person shall tutor for compensation in a course with which he has any connection as part of the teaching staff.

3. The tutor shall secure the approval of the head of the department for all tutoring for compensation secured on a form provided for the purpose, giving the names of the student or students and the tutor. In cases where the tutor is in the rank of instructor or higher, the approval of the dean must also be secured.

4. Forms may be obtained in the Registrar's office. When proper signatures have been obtained by the tutor, forms should be filed in the office of the dean of the college concerned.

ASSOCIATIONS AND CLUBS

Alumni Association. All graduates of the University of Washington and all persons who have completed satisfactorily one year of collegiate work are eligible for membership in the association. Members receive: One year's subscription to the *Washington Alumnus*, library, football, swimming, voting privileges, etc. The membership fee is three dollars (\$3) per year, being good for twelve months from date of payment. Dual memberships for man and wife, or for two persons living at the same address, are four dollars and fifty cents (\$4.50) per year, including one copy of the *Washington Alumnus* and all other advantages of a single mem-

bership. A Board of Trustees, consisting of twenty-three members, is the governing body of the Association.

Associated Students. The Associated Students of the University of Washington (A.S.U.W.) is the central organization which conducts the activities of the student body. Membership is required of all regularly enrolled undergraduate students. The fees are as follows: autumn quarter five dollars (\$5), winter quarter two dollars and fifty cents (\$2.50), spring quarter two dollars and fifty cents (\$2.50), summer quarter one dollar (\$1).

This fee gives each student a membership in the corporation, including a free subscription to the *University of Washington Daily* and free or reduced admission to such football, basketball, baseball games, tennis, track and wrestling meets, crew regattas, debates, oratorical contests, musical concerts as may be designated by the Board of Student Finance.

The management of the Associated Students is vested in the office of the Director of Student Activities. The administration of the affairs of the Associated Students is carried on through an annually elected Board of Student Finance and the Student Council.

The Board of Student Finance is composed of the seven following members: The Director of Student Activities of the University of Washington, the President of the Associated Students of the University of Washington, the President of the Associated Women Students, a representative appointed by the Director of Student Activities and three representatives appointed by the President of the University of Washington.

The Student Council is composed of the following members: The President, the Vice President, and Secretary of the Associated Students of the University; the President of the Associated Women Students; the Presidents of the Senior, Junior, Sophomore, and Freshman classes; a representative of the Managerial Council, Engineering Council, Inter-Fraternity Council, Adelphi, Phrateres, Panhellenic, and an ex officio member, the editor of the *Daily*.

HONOR AWARDS, FELLOWSHIPS, SCHOLARSHIPS, PRIZES AND AWARDS

(Subject to sufficiency and availability of funds.)

Honor Awards

Presentation of honor awards is made as follows:

1. The President's Medal is presented at Commencement to the member of the graduating class who has the highest scholastic standing for his entire course.
2. The following are presented by the President in the name of the Faculty at the annual President's Assembly in the autumn quarter:
 - a. The Junior Medal, awarded to the Senior having the highest scholastic standing for the first three years of his course.
 - b. The Sophomore Medal, awarded to the Junior having the highest scholastic standing for the first two years of his course.
 - c. Certificates of High Scholarship, awarded to Seniors, Juniors, and Sophomores for excellence in scholarship in their Junior, Sophomore, and Freshman years respectively.

Fellowships and Scholarships for Graduates

University Fellowships. The various departments of the University grant fellowships each academic year which provide \$180 per quarter and exemption from tuition and incidental fees. The graduate student receiving such a fellowship divides his time equally between his studies and assistance in the teaching work of the department in which he is enrolled.

University Graduate Scholarships. Each year the University grants a number of scholarships to graduate students engaged in activities closely related to teaching,

such as reading, laboratory assistance, etc., in the various colleges. Remuneration is in proportion to services performed with a maximum compensation of \$45 per quarter in addition to exemption from tuition and incidental fees.

University Honorary Fellowships. Three honorary fellowships have been established by the University. These, like the Sarah Loretta Denny fellowships, are open to students in any department of the University. They carry no stipend, and are designed to furnish recognition of exceptional scholastic excellence in the case of graduate students who are not eligible for the Sarah Loretta Denny or the Arthur A. Denny fellowships, either because they do not need financial assistance or because they are not giving their entire time to their work in the University.

Sarah Loretta Denny Fellowships. Three fellowships are open to graduate students in any department of the University. Not to be awarded for 1942-1943.

Arthur A. Denny Fellowships. Six fellowships open to graduate students in the departments of civil engineering, education, English, history, mining engineering, and pharmacy, respectively. Awarded by the departments concerned on the basis of scholastic excellence and general merit, but only to residents of the State of Washington who need financial assistance. Not to be awarded for 1942-1943.

Research Fellowships. The College of Mines offers four fellowships for research in coal and other non-metallic mineral substances, in cooperation with the United States Bureau of Mines. The fellowships are open to graduates of universities and technical colleges who are properly qualified to undertake research investigations. The value of each fellowship is about \$720 to the holder, for the 12 months beginning July 1. Fellowship holders register as graduate students and become candidates for the degree of master of science in the proper subject in the College of Mines, unless an equivalent degree has previously been earned.

Each applicant should send a copy of his collegiate record from the Registrar of the college from which he has been graduated, or will be graduated in June. He should also send a photograph and a detailed statement of his professional experience, if any, and give the names and addresses of at least three persons who are familiar with his character, training, and ability. Applications should be submitted by April 1, and should be addressed to the Dean, College of Mines, University of Washington, Seattle, Washington.

Appointees to the fellowship report for duty on July 1, and are required to be on duty for a full year, except that in case of reappointment for a second year, the fellowship holder is given a vacation from June 15 to July 1. For the year 1942-1943, problems of the following nature will be selected for investigation: 1. *Coal.* Problems in the treatment and utilization of coal and coke. 2. *Non-metallics.* Problems in kaolin, olivine, talc, soapstone, silica sand, diatomite, and other industrial minerals.

The Agnes Healy Anderson Research Fellowships in Forestry. The income from the Agnes Healy Anderson Research Fellowship Fund is available for graduate research fellowships to be awarded on a competitive basis. The terms of the fund allow some leeway in the number of fellowships and the amount of each.

The E. C. Neufelder Scholarship. The E. C. Neufelder scholarship, established by the will of Lily C. Neufelder, is open to any graduate student who has already completed at least one quarter of graduate work in residence or who has finished his undergraduate work at the University of Washington. Award is made on the basis of excellent scholarship and financial need.

The Seattle Branch of the American Association of University Women Scholarship. This scholarship of \$100 is awarded annually to a deserving woman student enrolled in some department of the Graduate School, preferably in her second year of graduate enrollment. Award is made on the basis of scholastic ability, character, financial need, and promise.

The Alpha Chi Omega Alumnae Scholarship. Iota Iota Alumnae Chapter of Alpha Chi Omega offers annually, in the spring quarter of each year, a scholarship of \$100 to a woman student who has satisfied the University of Washington's requirements for graduation and is returning the following year for further work preparatory to taking a professional or Master's degree. She must be partially or wholly self-supporting, must have a fine character, personality, and ability that shows promise.

The Arlien Johnson Scholarship. A scholarship of \$150 is awarded annually to a beginning student in the Graduate School of Social Work on the basis of scholarship and need. The holder of this scholarship may also arrange to render service to the University for which he may receive the equivalent of tuition charges. Applications should be made directly to the chairman of the Scholarship Committee of the Graduate School of Social Work.

The I. P. Callison and Son's Research Fellowship. This company has made available \$100 per month to a graduate student from the College of Pharmacy for research towards the establishment of Standards for Cascara Bark.

The School of Drama Scholarships. Each year the School of Drama grants sixteen tuition scholarships to deserving graduate and undergraduate drama students. Awards are made on the basis of scholarship, talent, character, and financial need. The value of each scholarship is \$92.50, the amount of resident tuition for the regular college year. When considered advisable, a scholarship may be divided equally between two candidates.

Scholarships for Undergraduates

(Subject to sufficiency and availability of funds.)

The Iota Sigma Pi Scholarship. The Oxygen Chapter of Iota Sigma Pi has established a scholarship for \$100 a year to be given to a woman majoring in chemistry, with sophomore standing or above, who has a meritorious academic record and other qualifications.

The Phi Beta Kappa Scholarship. This scholarship of \$100 is awarded annually in the spring quarter to a student returning to the University the following year as a senior. Award is made on the basis of high scholarship, character and promise, and payment is made in two installments of \$50 each at the beginning of the autumn and winter quarters.

The Isabella Austin Scholarships. The Isabella Austin Memorial Fund offers two kinds of scholarships, one for a sophomore woman and three for freshmen women. The sophomore scholarship of \$100 is awarded on the basis of work done in the first three quarters of residence. The freshmen scholarships, sufficient for fees for one quarter, are awarded on the basis of work done in high school. It is expected that students using the freshmen scholarships will use them in connection with part time employment. All of these scholarships are based on high scholarship, strength of personality, and financial need.

The Kappa Alpha Theta Alumnae Scholarship. The Seattle Alumnae of Kappa Alpha Theta offer an annual scholarship of \$100 to the woman student who has to complete one more year in college to receive the degree of Bachelor of Science in Home Economics. She must be a student of high scholastic attainments, must be wholly or partially self-supporting, and must have a character and personality which show unusual promise.

The University of Washington Alumnae Association Scholarship. The Alumnae Association of the University of Washington offers an annual scholarship of \$100 to a woman student entering her senior year. She must be a student of promising character and personality, must have an outstanding record for high scholarship and participation in activities, and must be partially or wholly self-supporting.

The City Panhellenic Scholarship. The City Panhellenic Association offers an annual scholarship of \$100 to a fraternity woman registered in her senior or

fifth year who has been a student in the University of Washington since her freshman year and has merited the award on the basis of her character, scholastic attainment, activity in campus affairs, and financial need.

The Gamma Phi Beta Scholarship. The Seattle Alumnae of Gamma Phi Beta offer an annual scholarship of \$100 to that woman among the English major students who most nearly fulfills the following conditions: partial or complete financial self-dependence, high scholarship, strength of personality, wholesomeness of influence and promise.

Beecher Kiefer Memorial Scholarship. This scholarship is awarded annually to the most talented man student of violin. This award is subject to competition before a committee from the School of Music. Not offered in 1942-1943.

Mu Phi Epsilon Scholarship. Mu Phi Epsilon, national honorary music sorority, offers to a woman student a scholarship of one lesson a week for a school year, in vocal or instrumental music. Auditions spring quarter.

Phi Mu Alpha Scholarship. Phi Mu Alpha, national music fraternity, awards to a man student a scholarship of one lesson a week in vocal or instrumental study. Auditions autumn quarter.

The William Mackay Scholarship in Mining. The income from a gift by the late William Mackay of Roslyn, Washington, is available for a scholarship of \$250 to be awarded to a junior or senior student in the College of Mines on the basis of character, scholarship, and need of assistance. Applications to the dean of the College of Mines are due in March.

The McKesson-Robbins Drug Company Scholarship. The McKesson-Robbins Drug Company of Portland, Seattle and Spokane has established a \$50 cash scholarship for a worthy senior of the College of Pharmacy. The award is based on the scholastic record of the student during his freshman, sophomore and junior years.

The Women's Auxiliary of the Washington State Pharmaceutical Association Scholarship. This organization gives a cash award of \$50 to a worthy student selected by the faculty of the College of Pharmacy. Selection is made on the basis of good scholarship and of financial need.

The Pio de Cano Scholarships. Mr. Pio de Cano, Seattle business man, offers two \$25 scholarships for Filipino students, one for a sophomore and one for a junior. These are awarded for excellence in scholarship combined with financial need.

The Advertising Club Scholarship. An annual scholarship of \$25 awarded to a student majoring in advertising either in journalism, economics and business or the College of Arts and Sciences, on the basis of high scholastic ability and financial need.

The Bob Doble Memorial Scholarship. A fund established by Mrs. James Marshall in memory of her son: \$150 awarded each year to an outstanding third-year journalism student.

The Helen Nielson Rhodes Memorial Scholarship. The Lambda Rho Alumnae offer an annual scholarship of \$50 to a junior or senior student in the School of Art who has shown unusual ability in creative work. Applications should be made to the School of Art in March.

Sigma Epsilon Sigma Scholarship. Two or more scholarships of \$25 are awarded annually to women students who have completed one year of college work. They must be high in campus citizenship as well as scholarship, and must be partially self-supporting.

The Wealthy Ann Robinson Scholarships. The Wealthy Ann Robinson Scholarship Fund provides one or two \$100 scholarships each year for graduate nurses majoring in public health nursing during the senior or graduate years. Selection is based on need, good scholarship, and professional ability.

The Mu Phi Epsilon Alumnae Scholarship. The Seattle Alumnae Chapter of Mu Phi Epsilon offers to a student member of Tau Chapter a scholarship of one lesson a week in vocal or instrumental music. Previous winners of the Mu Phi Epsilon Scholarship shall not be eligible for the Alumnae Scholarship. Auditions spring quarter.

School of Drama Scholarships. See page 79.

University Scholarships. A limited number of scholarships are available to upperclassmen enrolled at the University and information concerning them may be obtained from the deans of the various colleges.

Scholarships Open to Entering Freshmen

(Subject to sufficiency and availability of funds.)

The A.S.U.W. Annual Scholarship. A \$100 tuition-scholarship to be awarded annually by the Associated Students of the University of Washington to the graduate from any state high school outside the city of Seattle, voted the state's outstanding candidate for admission to the University of Washington. Candidates shall be judged on the basis of financial need, conduct while in high school, use of leisure time for worth while high school activities, scholarship, and general personality. Applications should be submitted by April 13 to the Associated Students of the University of Washington.

The Paul Karshner Memorial Scholarships. Scholarships of \$100 each, given by W. M. Karshner, M. D., and Ella H. Karshner, awarded to a boy and to a girl who are graduates of the Puyallup high school. Not offered in 1942-1943.

The Isabella Austin Scholarships. See page 79.

The Pi Lambda Theta Tuition Scholarship. Tuition for the fall quarter will be given to an entering freshman woman selected by Pi Lambda Theta on the basis of scholarship, personality, promise, and need.

Prizes and Awards

Philo Sherman Bennett Prize. The Philo Sherman Bennett prize of approximately \$15 is awarded every year "for the best essay discussing the principles of free government."

The Carkeek Prize. The Vivian M. Carkeek cash prize of \$50 is awarded annually "for the best student contribution to *The Washington Law Review* on a point of Washington law, or any point of peculiar interest to Washington attorneys."

The Western Printing Company Prize. An award made annually to that student rendering the most valuable service to *The Washington Law Review*.

The Frank W. Baker Award. This annual award of \$250 is to be made "to the student in the Law School who shall prepare and submit to the Dean of the Law School the best thesis on a topic which will foster and promote an understanding of the duty of an American citizen to uphold and preserve the Constitution of the United States and the supremacy of the Supreme Court, and to counteract the tendency of students to succumb to the specious arguments of advocates of subversive doctrines."

Nathan Burkan Memorial Competition. The American Society of Composers, Authors and Publishers awards annually in each of the approved law schools of the country a prize of \$100 for the best paper by a graduating student on a subject within the field of Copyright Law.

The Ruth Nettleton Award. In memory of Ruth Nettleton, who died while a senior at the University of Washington, a few of her friends have established the Ruth Nettleton Memorial Fund, the interest from which is offered each year as a prize in sculpturing.

The Charles Lathrop Pack Prize. The late Charles Lathrop Pack, for many years president of the American Tree Association, has provided an annual prize of \$25 for the best essay by a student majoring in forestry. The subject shall be chosen with reference to interesting the general public in forestry matters.

The Washington State D. A. R. Ada McCleary Prize. The Washington State Society, D. A. R., offers an annual prize of \$25 to a girl majoring in Home Economics at the end of her freshman year and intending to complete the course. The award is made on the basis of scholarship, financial need, personality and patriotic ideals.

The Lehn and Fink Medal. The Lehn and Fink Drug Company of New York City awards each year a gold medal to a graduating senior in pharmacy, selected for this honor by the pharmacy faculty. The award is based on scholastic standing.

The Rho Chi Society Prize. Rho Chapter of Rho Chi Society, pharmacy honorary, grants a prize each year to the freshman completing the year's work with the highest grade point average of his class.

The Alpha Kappa Psi Plaque and Medallion Award. Rho Chapter of Alpha Kappa Psi, a professional fraternity in commerce, awards annually the Alpha Kappa Psi Scholarship Medallion to the male student pursuing a degree in the College of Economics and Business, who has attained the highest scholastic average for three years of collegiate work in this University.

The Alpha Rho Chi Medal. The Alpha Rho Chi Medal is awarded annually to that graduating senior of each school of architecture who has shown ability for leadership, performed willing service for his school, and given promise of real professional merit through his attitude and personality.

The A.S.U.W. Award. The Associated Students of the University of Washington offer a silver cup to those members of the Varsity Discussion squads who have been members for three years and have participated in public discussions during their senior year.

The American Institute of Architects' Awards. A medal for general excellence in design is annually awarded by the American Institute of Architects to a graduating senior. Two other outstanding graduating students receive one copy each of *Mont Saint Michel and Chartres*.

The Chi Omega Prize in Sociology. An annual award of \$25 is made by the Chi Omega sorority to a woman who has majored in sociology, graduating with high scholarship and recommended for achievement.

Circolo Italiano Universitario Award. A medal is awarded each year by the Circolo Italiano Universitario (Italian Club of the University of Washington), to the student making the best record in *Italian 2*, second-quarter Elementary Italian.

Delta Phi Alpha Prize. The national chapter of Delta Phi Alpha, honorary German fraternity, offers annually a book prize to each of its chapters. The Iota Chapter of the University of Washington awards this prize to that senior who has maintained the highest average in German courses throughout the four-year program.

Beta Gamma Sigma Alumnae Prize. The Alumnae of Gamma Epsilon Pi (now merged with Beta Gamma Sigma) give a prize of \$15 to the girl in the College of Economics and Business having the highest scholastic average in her first three quarters in the University.

Sigma Delta Chi Scholarship Award. Plaques or certificates are awarded to students of either sex. The award is made on the basis of one plaque or certificate for each ten of the graduating students in journalism.

Phi Sigma Award. A medal awarded for excellence in biological work to a student not necessarily a member of Phi Sigma.

The Robert T. Pollard Memorial Prize. The Robert T. Pollard Memorial Fund provides an annual cash prize for the purpose of recognizing scholastic merit among the students of the Far Eastern Department and related fields. It may be used as a loan fund at the discretion of the committee administering it.

The Alumni Prizes in Architecture. Three or more awards, aggregating \$100, are offered for solution of an architectural problem; offered to fourth and fifth year students. The prize money is donated by the Architecture Alumni group of the University.

The Beta Gamma Sigma Plaque and Certificate Award. Alpha chapter of Beta Gamma Sigma, Commerce scholastic honorary, awards annually a certificate to the sophomore man student having the highest grade record for the first five quarters of his University career and also inscribes his name on a bronze plaque which is hung in the corridor of Commerce Hall.

The Beta Gamma Sigma Alumnae Cup and Certificate Award. The Alumnae of Gamma Epsilon Pi (now merged with Beta Gamma Sigma) award annually a certificate to the girl having the highest record for her first two years in the College of Economics and Business. Her name is engraved on the cup which is kept in the College office.

The Sebastian Karrer Prize in Physics. A prize of \$50 each year is awarded to a graduate student nominated by the staff of the Department of Physics and approved by the President of the University.

The Howard Brown Woolston Prizes. Two prizes of \$15 each are awarded annually by Alpha Kappa Delta to the undergraduate and graduate students who submit the best reports showing the results of independent research in sociology.

Fellowships and Scholarships Administered by Other Organizations

National Research Fellowships. Fellowships in physics and chemistry, offered by the National Research Council, are open to promising research students, who have already taken the doctor's degree or have equivalent qualifications. A successful candidate can pursue his research at any university or research institute chosen by him which is acceptable to the appointing board. The salary will ordinarily be \$1800 for the first year. Fellows are eligible for successive reappointments ordinarily with increase in salary. For details address the dean of the Graduate School or the heads of the departments.

The Family Society of Seattle Fellowships. Three fellowships with the Family Society of Seattle are available to advanced students in the Graduate School of Social Work. The holders of these fellowships devote an equal part of their time to the agency and to their professional studies. These fellowships provide monthly stipends of approximately \$60 per student. Those who render service to the University may receive the equivalent of tuition charges. Applications should be made to the chairman of the Scholarship Committee of the Graduate School of Social Work.

The Washington Children's Home Society Fellowship. One fellowship with the Washington Children's Home Society is available to an advanced student in the Graduate School of Social Work. The holder of this fellowship devotes an equal part of his time to the agency and to his professional studies. This fellowship provides a monthly stipend of approximately \$60. The holder of this

fellowship may also arrange to render service to the University, for which he may receive the equivalent of tuition charges. Application should be made directly to the chairman of the Scholarship Committee of the Graduate School of Social Work.

The Ryther Child Center Fellowships. Two work-study fellowships for men and women are available at Ryther Child Center, Seattle. These fellowships are of one or two years' duration and pay \$35 per month and full maintenance. Service is given the Center by the student through work on the House Staff, with the privilege of staff participation. The holder of this fellowship may also arrange to render services to the University, for which he may receive the equivalent of tuition charges. Applications should be made directly to the chairman of the Scholarship Committee of the Graduate School of Social Work.

The Rhodes Scholarship. A scholarship of £400 a year at Oxford University is granted by The Rhodes Trust to a student between 18 and 25 years of age and of at least junior standing who wins one of four appointments annually made in six Northwest states. Has been discontinued for the duration of World War II.

Woman's Auxiliary of the American Institute of Mining and Metallurgical Engineers Scholarships. Annual scholarships awarded on the basis of character, scholastic standing, and the need of assistance of the student. Applications for appointment for the following academic year are made in November through the College of Mines, to the North Pacific Section of the Woman's Auxiliary.

Honor Societies

Phi Beta Kappa

Tau Beta Pi

Sigma Xi

Order of the Coif

Various societies in departmental and professional fields

ANNOUNCEMENT OF CURRICULA

COLLEGE OF ARTS AND SCIENCES

Edward H. Lauer, Dean, 121 Education Hall

The College of Arts and Sciences is a regular four-year college offering a wide range of courses leading generally to the degrees of bachelor of arts or bachelor of science.

The College aims to give pre-professional work to those going into professional fields such as law, medicine, librarianship, dentistry, teaching and so forth. It offers further, for those not specializing in any particular profession, an opportunity for a general educational course with a major emphasis on some art or science. The College is also developing a program of General Studies aiming to provide a broad cultural college course without specialization in any single subject.

Fellowships, Scholarships, Prizes. See page 77.

Student Counselling

The college recognizes that many students, particularly entering freshmen, need assistance in working out educational programs which will contribute maximally to their after-college plans. Each department and school within the college, therefore, provides opportunity for its students to consult faculty advisers relative to this and to other problems. The Office of the Dean maintains a staff of advisers to counsel with students who have not yet affiliated themselves with a major department. (See Pre-Major, page 87.)

Entrance Requirements

For detailed information concerning University fees, expenses, and admission requirements, see pages 55-66. In addition to the all-University entrance requirements, the College of Arts and Sciences requires two units of one foreign language, one unit of laboratory science, and one unit of a social science.

General Requirements

English 1 and 2 (10 credits) or the equivalent, after passing the Preliminary Freshman English Test, are required of all students. English 3 is required of the majority of freshmen. For English 2, journalism students substitute Journalism 51, *News Writing*. For English 1 and 2, fine arts students may substitute English 4, 5, 6, nine credits.

English 1 and 2 may not be counted in fulfillment of the group requirements listed below under curricula. These are general courses required by the College, and may not be counted toward a major or minor. Admission to these courses is gained by a satisfactory grade in the English placement test, supplemented by extemporaneous and prepared papers and conferences where deemed necessary. As this test is graded for entrance and for placement, several assignments are possible in order to enroll the student in the courses most profitable to him. The usual groupings are (1) exemption from English 1 and 2, usually granted only to mature persons with writing experience; (2) assignment to 1, 2, and 3; (3) English A, a non-credit course required for entrance into English 1. In the College of Forestry, the grade in English 1 is contingent upon good work in English in subsequent forestry courses.

CURRICULA

The departments and schools in the College of Arts and Sciences are grouped according to subject material into the three broad fields of knowledge indicated below. Wherever the terms Group I, Group II, Group III are used, reference is made to these divisions.

| GROUP I | GROUP II | GROUP III |
|------------------------|------------------------|----------------------|
| <i>Humanities</i> | <i>Social Sciences</i> | <i>Sciences</i> |
| Architecture | Anthropology | Anatomy |
| Art | Economics | Astronomy |
| Classical Languages | Geography | Bacteriology |
| Drama | History | Botany |
| English | Home Economics | Chemistry |
| Far Eastern | Nursing Education | Fisheries |
| General Literature | Philosophy | Geology |
| Germanic Languages | Physical Education | Mathematics |
| Journalism | Political Science | Physics |
| Liberal Arts | Psychology | Zoology & Physiology |
| Librarianship | Sociology | Oceanography 1 |
| Music | | Pharmacy 15 |
| Romanic Languages | | |
| Scandinavian Languages | | |
| Speech | | |

Courses from other colleges or schools, or from other divisions of the University, may be placed under these groups in evaluating the work of transfer students. The courses of any given department may be allocated to one group only.

The curricula available in the College are classified according to the amount of electives permitted as: (1) prescribed departmental curricula, (2) elective departmental curricula, (3) non-departmental curricula. Students will elect one of these three curricula.

1. Prescribed Departmental Curricula

Some departments have outlined courses of study which definitely prescribe the work the student must complete for the bachelor's degree. Students who desire a major of this type should consult a faculty adviser in the department of their choice at the earliest possible date.

2. Elective Departmental Curricula

Elective departmental majors are more flexible than prescribed majors. Students choosing a major of this type must earn thirty-six or more credits in the subject represented by the department concerned. They are expected to complete, during the first two years, a minimum of thirty credits in one group, twenty credits in a second group and ten credits in the remaining group. Departments may add to these requirements if they so desire. At least sixty credits of the total 180 required for graduation must be in upper division courses.

Students will plan their work under the direction of faculty advisers. The degree conferred will be Bachelor of Arts or Bachelor of Science, depending upon the major selected.

3. Non-Departmental Curricula

A. General Studies. The division of General Studies offers courses of study even more flexible than elective departmental majors. Here an effort is made to meet the needs of those students whose interests are not professional or are too broad for the limitations of a single department. When necessary the resources of several departments or of other colleges are drawn upon in building curricula to coincide with the interests of the student concerned. (See General Studies, page 103 for detailed requirements.)

Students majoring in General Studies are assigned to faculty advisers for guidance in planning programs. The degree will be Bachelor of Arts or Bachelor of Science depending upon the relative preponderance of scientific or non-scientific subjects in the curriculum.

B. Pre-Major. Students usually decide upon a major before entering the University. However, some make this decision one or more quarters after entering. Students in this latter group may come in as pre-majors.

Pre-major students must meet general University and College requirements in the same manner as do students in any of the regular departments or schools—English 1-2, Physical Education, Military Science, and Group requirements.

Pre-majors are under direct jurisdiction of the Dean's office. They are assigned to faculty advisers who assist them in program planning, developing interests, and in deciding upon majors in keeping with these interests. Normally, students remain as pre-majors for only one year.

Major Requirements and Special Curricula in the Various Departments and Schools

Below are gathered together the major requirements and set curricula for the College of Arts and Sciences, and teaching major and minor requirements for the College of Education. Deviations from the college requirements for graduation may be authorized by the College Graduation Committee upon the recommendation of the student's major department.

For requirements for advanced degrees, see Graduate School section, p. 174.

ANATOMY

John L. Worcester, Executive Officer, Anatomy Building

(See Biological Sciences, page 93)

ANTHROPOLOGY

Erna Gunther, Executive Officer, 211 Museum

DEGREE: Bachelor of Arts

| | Credits | | Credits |
|--|---------|--|---------|
| 51, 52, 53. Introduction to Anthropology..... | 15 | 141. Primitive Literature..... | 3 |
| 101. Basis to Civilization or | | 142. Primitive Religion..... | 3 |
| 105. Culture Growth or | | 143. Primitive Art..... | 3 |
| 107. Methods of Archaeology..... | 3 or 5 | 150. General Linguistics..... | 3 |
| 111. Indian Cultures of Pacific N.W. or | | 160. History of Anthropology..... | 2 |
| 112. Peoples of the Pacific or ... | | 185. Primitive Soc. & Pol. Institutions..... | 5 |
| 114. Peoples of Central and Northern Asia.... | 3 | 193-195. Reading..... | † |
| 120. Cultural Problems of Western America... 3 | | | |
| | | | 45 |

A 2.5 grade point average in anthropology is required of all majors in the field.

†To be arranged

This major should be supported by appropriate courses in psychology, zoology, geology, geography according to special interests. It is necessary, if graduate work in the field is contemplated, to take French and German through Scientific Reading or to offer its equivalent.

ARCHITECTURE

Harlan Thomas, Director Emeritus, Physiology Hall

Arthur P. Herrman, Executive Officer, 301 Physiology Hall

Member of Association of Collegiate Schools of Architecture

DEGREE: Bachelor of Architecture

Requirements for Degree. The credit requirement for graduation (outside of military or naval science and physical education) is set by this curriculum at 225 credits. No deviation or substitution of courses will be permitted except by consent of the director of the school. In the courses of design, Arch. 54, 55, 56 are known as Grade I; Arch. 104, 105, 106, 107, Grade II; and Arch. 154, 155, 156, 157, 158, Grade III. However, a student may in some cases advance more rapidly; by perfection of work the requirements of a grade may be satisfied without technical registration for all quarters of that grade. The total number of credits hereby reduced must not be below the University minimum of 180 credits for a four-year course and 225 credits for the five-year course.

**Curriculum in Architecture Leading to the Degree of
Bachelor of Architecture**

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|-----------------------------|----------------|
| Arch. 1. Arch. Appreciation | 2 | Arch. 2. Arch. Appreciation | 2 | Arch. 3. Arch. Appreciation | 2 |
| Arch. 4. Elem. of Design.. | 4 | Arch. 5. Elem. of Design.. | 4 | Arch. 6. Elem. of Design.. | 4 |
| Arch. 7. Graphics..... | 1 | Arch. 8. Graphics..... | 1 | Arch. 9. Graphics..... | 1 |
| G.E. 47. Elements of Building Construction .. | 3 | G.E. 48. Elements of Building Construction... | 3 | Art 34. Draw. & Sculpture | 3 |
| Art 32. Draw. & Sculpture | 3 | Art 33. Draw. & Sculpture | 3 | English 6. Composition... | 3 |
| English 4. Composition... | 3 | English 5. Composition... | 3 | P.E. 10 or 15..... | 5 or 2 |
| M.S. and P.E. or N.S.... | + | M.S. and P.E. or N.S.... | + | M.S. and P.E. or N.S.... | + |

SECOND YEAR

| | | | | | |
|----------------------------|---|----------------------------|---|----------------------------|---|
| Arch. 40. Water Color.... | 3 | Arch. 41. Water Color.... | 3 | Arch. 42. Water Color.... | 1 |
| Arch. 51. History..... | 2 | Arch. 52. History..... | 2 | Arch. 53. History..... | 2 |
| Arch. 54. Design Gr. I.... | 5 | Arch. 55. Design Gr. I.... | 5 | Arch. 56. Design Gr. I.... | 5 |
| Arch. 61. Ornament..... | 2 | Arch. 62. Ornament..... | 2 | Arch. 63. Ornament..... | 2 |
| Math. 54. Arch. Math.... | 3 | Math. 55. Arch. Math.... | 3 | Math. 56. Arch. Math.... | 3 |

THIRD YEAR

| | | | | | |
|----------------------------|---|----------------------------|---|-----------------------------|---|
| Arch. 101. History..... | 2 | Arch. 102. History..... | 2 | Arch. 103. History..... | 2 |
| Arch. 104. Design Gr. II.. | 5 | Arch. 105. Design Gr. II.. | 5 | Arch. 106. Design Gr. II.. | 5 |
| Arch. 120. Working Draw. | 2 | Arch. 121. Working Draw. | 2 | Arch. 122. Working Draw. | 2 |
| C.E. 170. Struct. Engin... | 3 | C.E. 117. Struct. Engin... | 3 | Arch. 118. Struct. Engin... | 3 |
| E.E. 105. Elec. Wiring.... | 2 | C.E. 151. Plumb. & San... | 2 | M.E. 110. Heat & Vent... | 2 |
| | | Arch. 125. Pencil Sketchng | 1 | Arch. 126. Pencil Sketchng | 1 |

FOURTH YEAR

| | | | | | |
|----------------------------|---|----------------------------|---|----------------------------|---|
| Arch. 107. Design Gr. II.. | 5 | Arch. 154. Design Gr. III. | 5 | Arch. 155. Design Gr. III. | 5 |
| Arch. 123. Working Draw. | 2 | Art 161. Life Draw..... | 3 | Art 162. Life Draw..... | 3 |
| Art 160. Life Draw. | 3 | Arch. 152. Theory..... | 2 | Arch. 153. Theory..... | 2 |
| Electives | 5 | Electives | 5 | Electives | 5 |

FIFTH YEAR

| | | | | | |
|----------------------------|---|----------------------------|----|-----------------------------|---|
| Arch. 151. History..... | 2 | Arch. 157. Design Gr. III. | 5 | Arch. 158. Design Gr. III. | 5 |
| Arch. 156. Design Gr. III. | 5 | Arch. 168. Materials..... | 2 | Arch. 169. Specifications.. | 2 |
| Arch. 167. Materials..... | 2 | Electives | 10 | Electives | 7 |
| E.B. 57. Business Law.... | 3 | | | | |
| Electives | 3 | | | | |

Physical Education 4, 6, 8 or 10 must be included in all women's schedules and Physical Education 15 must be included in all men's schedules.

Curriculum in City Planning Leading to the Degree of Bachelor of Architecture in City Planning

FIRST YEAR, SECOND YEAR, THIRD YEAR—Same as present curriculum in Architecture.

FOURTH YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------|----------------|------------------------------|----------------|------------------------------|----------------|
| (Same as Architecture) | | Arch. 152. Theory Arch... 2 | | Arch. 153. Theory..... 2 | |
| | | Electives 2 | | C.E. 150. San. Eng.&P.H. 3 | |
| | | G.E. 21. Surveying..... 3 | | C.E. 152. Mun. Eng..... 3 | |
| | | Arch. 180. Prin. of Plan.. 2 | | Arch. 181. Prin. of Plan.. 2 | |
| | | Arch. 190. C. P. Design.. 5 | | Arch. 191. C. P. Design... 5 | |

FIFTH YEAR

| | | |
|------------------------------|------------------------------|------------------------------|
| Arch. 151. History..... 2 | Electives 2 | Geog. 155. Inf. Geo. Env.. 5 |
| E.B. 57. Sur. Bus. Law... 3 | E.B. 3. Economics..... 3 | Arch. 183. Prin. of Plan.. 2 |
| †Soc. 165. The City..... 5 | †E.B. 109. Prin. Real Est. 5 | Arch. 194. C. P. Design |
| Arch. 182. Prin. of Plan.. 1 | Arch. 193. C. P. Design... 5 | (Thesis) 7 |
| Arch. 192. C. P. Design... 5 | | |

†Courses with prerequisites which must be adjusted.

Physical Education 4, 6, 8, or 10, must be included in all women's schedules and Physical Education 15 must be included in all men's schedules.

ART

Walter F. Isaacs, Director, 404 Education Hall

DEGREE: Bachelor of Arts

Advanced standing in this school is granted only on presentation of credentials from art schools or university art departments whose standards are recognized by this school. Ordinarily, the presentation of samples of work done will be required before advanced standing will be considered.

Curricula

REQUIRED FOR THE FIRST YEAR

| | <i>Credits</i> |
|---|----------------|
| Art 5, 6, 7. Drawing and Painting..... | 9 |
| Art 9, 10, 11. Design..... | 9 |
| English 4, 5, 6. English Composition..... | 9 |
| Modern Foreign Language..... | 15 |
| Electives..... | 3 |
| Military Science and Physical Education or Naval Science..... | + |

Major in Painting and Design

| <i>Second Year</i> | <i>Credits</i> | <i>Third Year</i> | <i>Credits</i> | <i>Fourth Year</i> | <i>Credits</i> |
|-------------------------------|----------------|------------------------------|----------------|------------------------------|----------------|
| Art 12. Art History..... 5 | | Arch. 3. Architec. Apprec. 2 | | Art 20. Modern Sculpture 2 | |
| Art 53, 54, 55. Design..... 9 | | Art 103, 104 or 157, 158.. 6 | | Art 62. Essentials of | |
| Art 56, 57, 58. Drawing | | Art 126. Hist. Mod. Paint. 2 | | Interior Design..... 2 | |
| and Painting 9 | | Art 160, 161, 162. Life... 9 | | Art 150. Illustration..... 5 | |
| Art 72. Sculpture..... 3 | | Approved Design 3 | | Art 163 or 164. Comp.... 5 | |
| Phys. Educ. 10* or Phys. | | Econ., Pol. Sci. or Soc... 5 | | Electives31 | |
| Educ. 15 plus Electives.19 | | Lab. Science (see note)...10 | | | |
| M.S. and P.E. or N.S....+ | | Electives 8 | | | |

Preferred electives for students interested in Costume Design, Art 169, 170, 171; 179, 180, 181; Home Economics courses in clothing and textiles 12, 25, 47; 101, 102; 160, 161 and 198.

* Phys. Educ. 4, 6, and 8 may be taken in place of Phys. Educ. 10.

NOTE: Only courses in the following departments will be recognized: botany, zoology, chemistry, physics (except photography), geology.

Major in Art Education

Students wishing to prepare for teaching may follow the public school art curriculum of this school leading to the bachelor of arts degree, or the public school art curriculum in the College of Education leading to the degree of bachelor of arts. In either case the major and minor are both in art, but the candidate is expected to complete a second minor in some field other than art. An average standing of "B" in art subjects is required of all teaching candidates.

| First Year | Credits | Second Year | Credits | Third Year | Credits |
|--|---------|--------------------------------|---------|---|---------|
| Art 5, 6 7. Drawing and Painting | 9 | Arch. 3. Arch. Apprec.... | 2 | Art 103, 104 or 157, 158.. | 6 |
| Art 9, 10, 11. Design.... | 9 | Art 12. Art History..... | 5 | Art 105, 106..... | 6 |
| English 4, 5, 6. Composit'n | 9 | Art 53, 54, 55. Design.... | 9 | Art 160 or 161 or 162. Life | 3 |
| Educ. 1. Orientation..... | 2 | Art 56, 57, 58. Dr. & Pt.. | 9 | Sculpture (3) or Cost. Des. | |
| Sociology 1† | 5 | Lab. Science (see note)... | 10 | (2) plus Electives..... | 12 |
| Phys. Educ. 10* or Phys. | | Psych. 1. General..... | 5 | Educ. 9. Psych. Sec. Educ. | 3 |
| Educ. 15 plus Electives.11 | | Electives | 5 | Educ. 60. Secondary Educ. | 3 |
| M.S. and P.E. or N.S....+ | | M.S. and P.E. or N.S....+ | | Educ. 70. Methods..... | 5 |
| | | It is necessary to have 20 or | | Educ. 90. Measures..... | 2 |
| | | 25 credits of major work be- | | Political Science 1†..... | 5 |
| | | fore taking Education courses. | | | |
| Fourth Year | Credits | Fifth Year | Credits | The bachelor's degree will be awarded upon the completion of the requirements of the four-year course. The normal diploma will be awarded upon the completion of the requirements for the fifth year. | |
| Art 20. Modern Sculpture | 2 | Educ. 71, 72. Cadet Teach. | 8 | | |
| Art 100. Elem. Crafts.... | 2 | Educ. 120. Educ. Psych.... | 3 | | |
| Art 101. Elem. Int. Des.... | 2 | History 164. | 5 | | |
| Art 102. Applied Design.... | 2 | Phil. 129. Esthetics..... | 5 | | |
| Art 126. Hist. Mod. Paint. | 2 | Electives | 24 | | |
| Art 150. Illustration..... | 5 | | | | |
| Art 163 or 164. Comp.... | 5 | | | | |
| Educ. 75A. Methods..... | 2 | | | | |
| Econ. 4† | 5 | | | | |
| Electives | 18 | | | | |

†The social science requirement may be satisfied by 15 credits in one or more of the following departments: sociology, economics, political science. Not to be taken by first quarter freshmen.

*Phys. Educ. 4, 6, and 8 may be taken in place of Phys. Educ. 10.

NOTE: Only courses in the following departments will be recognized: botany, zoology, chemistry, physics (except photography), geology.

Major in Interior Design

| Second Year | Credits | Third Year | Credits | Fourth Year | Credits |
|---|---------|---|---------|---|---------|
| Arch. 1, 2, 3. Appreciation | 6 | Art 12. Art History..... | 5 | Arch. 101, 102, 103. History | |
| Arch. 4, 5, 6. Elements of Design | 12 | Art 58. Water Color.... | 3 | of Architecture | 6 |
| Arch. 7, 8, 9. Graphics.... | 3 | Art 62. Essentials of Interior Design | 2 | Art 20. Modern Sculpture. | 2 |
| Art 80, 81, 82. Furn. Des.. | 9 | Art 110, 111, 112. Interior Design | 15 | Art 126. History of Modern Painting | 2 |
| Art 83. Hist. of Furn..... | 2 | Econ., Pol. Sci., or Soc.... | 5 | Art 172, 173, 174. Interior Design | 15 |
| Phys. Educ. 10* or Phys. | | Lab. Science (see note)... | 10 | H.E. 25. Textiles..... | 5 |
| Educ. 15 plus Electives.13 | | Electives | 5 | H.E. 41 or 47 plus Elec.. | 15 |
| M.S. and P.E. or N.S....+ | | | | | |

*Phys. Educ. 4, 6, and 8 may be taken in place of Phys. Educ. 10.

NOTE: Only courses in the following departments will be recognized: botany, zoology, chemistry, physics (except photography), geology.

Major in Painting or Sculpture

PAINTING

| Second Year | Credits | Third Year | Credits | Fourth Year | Credits |
|--|---------|-----------------------------|---------|----------------------------|---------|
| Art 12. Art History..... | 5 | Arch. 3. Arch. Apprec.... | 2 | Art 160, 161, 162. Life... | 9 |
| Art 56, 57, 58. Drawing and Painting | 9 | Art 20. Modern Sculpture. | 2 | Art 163, 164. Composition. | 10 |
| Art 65, 66, 67. Drawing and Painting | 9 | Art 107, 108, 109. Portrait | 9 | Electives | 26 |
| Art 72. Sculpture..... | 3 | Art 126. Hist. Mod. Paint. | 2 | | |
| Phys. Educ. 10* or Phys. | | Approved Design | 6 | | |
| Educ. 15 plus Electives.19 | | Econ., Pol. Sci. or Soc.... | 5 | | |
| M.S. and P.E. or N.S....+ | | Lab. Science (see note)... | 10 | | |
| | | Electives | 9 | | |

SCULPTURE

| Second Year | Credits | Third Year | Credits | Fourth Year | Credits |
|---|---------|------------------------------|---------|-----------------------------|---------|
| Art 12. Art History..... | 5 | Arch. 3. Arch. Apprec.... | 2 | Art 132, 133, 134. Sculp... | 9 |
| Art 56, 57, 58. Drawing and Painting | 9 | Art 20. Mod. Sculpture.... | 2 | Art 136, 137, 138. | |
| Art 72, 73, 74. Sculpture. 9 | | Art 103, 104. Pottery.... | 6 | Sculpture Comp. | 9 |
| Phys. Educ. 10* or Phys. | | Art 122, 123, 124. Sculp... | 9 | Art 160, 161, 162. Life... | 9 |
| Educ. 15 plus Electives.22 | | Art 126. Hist. Mod. Paint. 2 | | Electives | 18 |
| M.S. and P.E. or N.S....+ | | Econ., Pol. Sci., or Soc.... | 5 | | |
| | | Lab. Science (see note).... | 10 | | |
| | | Electives | 9 | | |

Preferred electives—Architectural Design and History of Ornament.

*Phys. Educ. 4, 6, and 8 may be taken in place of Phys. Educ. 10.

NOTE: Only courses in the following departments will be recognized: botany, zoology, chemistry physics (except photography), geology.

Teaching Major and Minor in the College of Education

MAJOR IN ART EDUCATION

The following art courses are required for the degree of bachelor of arts.

For the normal diploma recommendation an average grade of "B" or better is required. Both the major and minor are in art, and the candidate is expected to have a second minor in another field.

Applicants for the normal diploma are required to complete the curriculum of the current catalogue, unless the diploma is granted within five years from the date of entrance.

Samples of art work must be presented to the Director of the School of Art if advanced credit is desired. Creditable work done elsewhere may be substituted for equivalent required courses.

| Major | Credits | First Minor for Art Majors | Credits |
|---------------------------------------|----------|---|---------|
| 5, 6, 7. Drawing and Painting..... | 9 | 12. Art History..... | 5 |
| 9, 10, 11. Design..... | 9 | 20. Modern Sculpture..... | 2 |
| 53, 54, 55. Design..... | 9 | 100. Elementary Crafts..... | 2 |
| 56, 57, 58. Drawing and Painting..... | 9 | 101. Elementary Interior Design..... | 2 |
| Sculpture or Costume Design..... | 3 or 2 | 102. Applied Design..... | 2 |
| 150. Illustration | 5 | 103, 104 or 157, 158. Ceramics or Metals. 6 | |
| 160 or 161 or 162. Life..... | 3 | 105, 106. Lettering, Commercial Design.... | 6 |
| 163 or 164. Composition..... | 5 | 126. History of Modern Painting..... | 2 |
| | | Arch. 3. Architecture Appreciation..... | 2 |
| Minimum total | 52 or 51 | Minimum total | 29 |

Suggested Electives: 15, 116, 161, 162, 164.

| Second Minor for Non-Majors | Credits |
|------------------------------------|---------|
| 5, 6, 7. Drawing and Painting..... | 9 |
| 9, 10, 11. Design..... | 9 |
| 12. Art History..... | 5 |
| 53, 54. Design..... | 6 |
| 101, 102 | 4 |
| 105. Lettering | 3 |
| Minimum total | 36 |

MINOR OPEN TO HOME ECONOMICS MAJORS
IN TEXTILES AND CLOTHING

| | Credits |
|--------------------------------------|---------|
| Art 5, 6. Drawing..... | 6 |
| Art 9, 10, 11. Design..... | 9 |
| Art 53, 54, 55. Advanced Design..... | 9 |
| Art 105. Lettering..... | 3 |
| Art 169, 170. Costume Design..... | 4 |
| Minimum total | 31 |

BACTERIOLOGY*B. S. Henry, Executive Officer, 420 Johnson Hall***DEGREE: Bachelor of Science**

Ten credits of botany or zoology, 10 credits of physics and Chemistry 23, 111, 131, and 132 are required of all bacteriology majors.

A grade point average of 2.5 in courses in chemistry and biology shall be required for admission to Bacteriology 100 and sponsorship by the department. A grade point average of 2.5 in all courses in bacteriology shall be required for graduation.

Transfer students entering the undergraduate curricula shall be considered by a departmental committee and any examinations deemed necessary shall be required.

For the degree of bachelor of science with a major in bacteriology, 36 credits in approved courses in bacteriology and satisfaction of the College of Arts and Sciences group requirements are necessary.

For the degree of bachelor of science in bacteriology the set course below must be followed; the selection of an optional group in the third and fourth years depends upon the type of specialization desired. Ten undergraduate credits prerequisite to graduate work.

DEGREE: Bachelor of Science in Bacteriology**FIRST YEAR**

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|----------------------------|----------------|----------------------------|----------------|------------------------------|----------------|
| English 1. Composition.... | 5 | English 2. Composition.... | 5 | Psych. 1. General..... | 5 |
| Chem. 1 or 21. General.... | 5 | Chem. 2 or 22. General.... | 5 | Chem. 23. Qual. Analysis.... | 5 |
| Zool. 1 or 3. Introduction | | Zool. 2 or 4. Introduction | | Soc. 1. Survey..... | 5 |
| or | | or | | M.S. and P.E. or N.S..... | + |
| Bot. 1. Elementary..... | 5 | Bot. 2. Elementary..... | 5 | | |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | | |

SECOND YEAR

| | | | | | |
|-----------------------------|---|-----------------------------|---|-----------------------------|----|
| Chem. 131. Organic..... | 5 | Chem. 132. Organic..... | 5 | Chem. 111. Quan. Analysis.. | 5 |
| Physics 1 or 4. General.... | 5 | Physics 2 or 5. General.... | 5 | Bact. 100. Fundamentals | |
| Elective*..... | 5 | Elective*..... | 5 | of Bacteriology..... | 10 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N. S..... | + |

*Students planning to take option "a" (see below) in their third and fourth years are urged to use these electives for foreign language courses.

THIRD YEAR

Group options: (a) Bacteriologist; (b) Medical Laboratorian; (c) Industrial Laboratorian. In the curricula below, the letters (a), (b), and (c) refer to these options respectively.

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-------------------------------|----------------|-----------------------------|----------------|------------------------------|----------------|
| Bact. 105. Infec. Diseases... | 5 | Bact. 102. Sanitary and | | | |
| Anat. 105. Histology..... | 6 | Clinical Methods..... | 5 | | |
| <i>Group Option</i> | | <i>Group Option</i> | | <i>Group Option</i> | |
| (a) Biology elective..... | 5 | (a) Chem. 140. Physical.... | 3 | (a) Chem. 141. Physical.... | 3 |
| (b) Bact. 103. Pub. Hygiene | 5 | Biology elective..... | 5 | Bact. 104. Serology..... | 5 |
| (c) Elective..... | 5 | Elective..... | 2 | Bact. 120. Applied..... | 5 |
| | | (b) Elective..... | 5 | Elective..... | 2 |
| | | Anat. 100. Lecture..... | 3 | (b) Bact. 104. Serology..... | 5 |
| | | Anat. 101. General..... | 3 | Zool. 107. Parasitology... | 5 |
| | | (c) Elective..... | 5 | Elective..... | 5 |
| | | Bact. 107. Control of | | (c) Bact. 120. Applied..... | 5 |
| | | Micro-Org. | 5 | Bot. 115. Yeasts & Molds | 5 |
| | | | | Elective..... | 5 |

FOURTH YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-------------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|
| Bact. 110. Pathology..... | 5 | Bact. 121. Applied..... | 5 | Elective..... | 5 |
| Elective..... | 5 | Electives..... | 5 | | |
| <i>Group Option</i> | | <i>Group Option</i> | | <i>Group Option</i> | |
| (a) Chem. 161. Physiological | 5 | (a) Chem. 162. Physiological | 5 | (a) Electives..... | 10 |
| (b) Bact. 120. Applied..... | 5 | (b) Zool. 121. Microscopic | | (b) Bact. 122. Applied..... | 5 |
| (c) Bact. 130. Industrial.... | 5 | Technique..... | 3 | Elective..... | 5 |
| | | Elective..... | 2 | (c) Bact. 132. Industrial.... | 5 |
| | | (c) Bact. 131. Industrial.... | 5 | Bact. 122. Applied..... | 5 |

The total number of credits must include Phys. Educ. 15 for men, or Phys. Educ. 4, 6, 8, or 10 for women.

Cooperating Laboratories

Children's Orthopedic Hospital Lab.; director: Hildur Truesdon, B.S.
 Physicians' Clinical Laboratory; director: G. A. Magnusson, M.D.
 Polyclinic Laboratory; director: Homer Wheelon, M.D.
 Providence Hospital Laboratory; director: Alfred Balle, M.D.
 Seattle Department of Health Laboratory; director: Marie Mulhern, B.S.
 State Board of Health Laboratory; director: A. U. Simpson, M.D.
 Swedish Hospital Laboratory; director: D. H. Nickson, M.D.
 U. S. Bureau of Agriculture, Chemistry, and Engineering, Western Regional
 Research Laboratories; director: T. L. Swenson, Ph.D.
 U. S. Bureau of Fish and Wild Life, Technology Laboratory; director: Roger
 W. Harrison, M.S.
 Virginia Mason Hospital Laboratory; director: Freda Holmes, M.S.

BIOLOGICAL SCIENCES

Anatomy—John L. Worcester, Executive Officer, Anatomy Building

Botany—C. L. Hitchcock, Executive Officer, 306 Johnson Hall

Zoology and Physiology—Trevor Kincaid, Executive Officer, 202 Johnson Hall

DEGREE: Bachelor of Science in Anatomy, Botany, or Zoology,
 depending upon which science is selected

In this curriculum the student must select a major in anatomy, botany, or zoology. On selecting his major subject, the student should at once consult his major department, a member of which will act as his adviser. The adviser will plan a special curriculum for the student, fitting him for his chosen work.

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|----------------------------|----------------|----------------------------|----------------|-----------------------------|----------------|
| English 1. Composition.... | 5 | English 2. Composition.... | 5 | Mathematics or Elective.... | 5 |
| Botany or Zoology..... | 5 | Botany or Zoology..... | 5 | Electives..... | 10 |
| Electives..... | 5 | *Math. or Elective..... | 5 | M.S. and P.E. or N.S..... | + |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | | |

SECOND YEAR

| | | | | | |
|---------------------------|---|---------------------------|---|---------------------------|----|
| Chemistry or Physics..... | 5 | Chemistry or Physics..... | 5 | Major..... | 5 |
| Major..... | 5 | Major..... | 5 | Electives..... | 10 |
| Electives..... | 5 | Electives..... | 5 | M.S. and P.E. or N.S..... | + |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | | |

THIRD YEAR

| | | | | | |
|------------------------------|---|------------------------------|---|----------------|----|
| Major..... | 5 | Major..... | 5 | Major..... | 5 |
| Pol. Sci., Soc., or Econ.... | 5 | Pol. Sci., Soc., or Econ.... | 5 | Electives..... | 10 |
| Electives..... | 5 | Electives..... | 5 | | |

FOURTH YEAR

| | | | | | |
|----------------|----|----------------|----|----------------|----|
| Major..... | 5 | Major..... | 5 | Electives..... | 15 |
| Electives..... | 10 | Electives..... | 10 | | |

*Two and one-half years of mathematics required, which may be taken in high school or University.
 The total number of credits must include Phys. Educ. 15 for men or Phys. Educ. 10 or Phys. Educ. 4, 6 and 8 for women.

BOTANY*C. L. Hitchcock, Executive Officer, 306 Johnson Hall*

(See Biological Sciences, page 93)

Students who wish to specialize in botany may choose between the group requirements on page 86 which lead to the degree of bachelor of science and the curriculum in Biological Sciences on page 93 which leads to the degree of bachelor of science in botany.

Students majoring in botany as a means of securing a liberal education may find the group requirements more advantageous. Students preparing for professional work in botany will probably prefer the curriculum in Biological Sciences.

There are several lines of professional work for which the preparation should consist of basic work in botany and supporting sciences followed by special training for the particular field chosen by the student. In some lines the special training can be advantageously taken here, while in other lines it would be better for the student to go to some other institution for the last year.

Among the lines of work in which persons with botanical training are employed are landscape gardening, floriculture, hydroponics (growth of plants without soil), seed testing, seed production, and various lines of industry and civil service.

Students intending to major in botany should come to the office of the department, 306 Johnson Hall, for a conference to plan their work. It is desirable that this conference should be held at the beginning of the freshman year. If students transfer to botany from another department of the University or from another institution, the conference should be held at the time of transfer.

Teaching Major or Minor in the College of Education

| Major | | Minor | |
|---|----------------|---|----------------|
| <i>Courses</i> | <i>Credits</i> | <i>Courses</i> | <i>Credits</i> |
| 1. Elementary Botany or its equivalent.. | 5 | 1. Elementary Botany or its equivalent. | 5 |
| 3. Elementary Botany..... | 5 | 2. Elementary Botany | 5 |
| 8. Heredity | 3 | 3. Elementary Botany | 5 |
| 101. Ornamental Plants..... | 3 | 101. Ornamental Plants | 3 |
| 24 or 25. Plant Propagation..... | 5 | Other courses to make a minimum total of 25 | |
| 105 or 106 or 107. Morphology & Evolution | 5 | | |
| Other courses to make a minimum of.....40 | | | |

CHEMISTRY*H. K. Benson, Executive Officer*

For all chemistry majors in the College of Arts and Sciences, a grade point average of 2.5 in chemistry courses and a grade point average of 2.5 in all courses, shall be required for graduation. Upon completion of the first 90 credits (equivalent to the work of the freshman and sophomore years) every student will be passed upon by a departmental committee which shall consider his academic record and other qualifications, and give any comprehensive examinations deemed necessary, to determine whether or not the department desires to sponsor the student in further work in his curriculum. All students from other schools entering the undergraduate curricula shall first be considered by a departmental committee, which shall pass on the credentials presented in chemistry courses and give any examinations that may be deemed necessary to determine the proper place to begin courses in this department.

Elective Curriculum

DEGREE: Bachelor of Science

The elective curriculum is designed for those desiring to major in chemistry as part of a broad general education or in preparation for teaching (see below),

or preliminary to entering medicine. The following courses or their equivalent shall constitute the minimum requirements for the elective major: Chemistry 1 or 21, 2 or 22, 23, 111, 131, 132, 140, 141 (in lieu of 140-141, pre-medical students may present 161-162); 15 credits each in college mathematics and physics; 10 credits in French or German. At least 20 credits in chemistry and 10 credits in physics should be completed among the first 90 credits (end of the sophomore year). The intention of the student to graduate with a major in chemistry should be declared not later than the end of the sophomore year.

Prescribed Curriculum

DEGREE: Bachelor of Science in Chemistry

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-----------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|
| Chem. 1 or 21. General..... | 5 | Chem. 2 or 22. General..... | 5 | Chem. 23. Qual. Analysis..... | 5 |
| Math. 4. Plane Trig..... | 5 | Math. 5. College Algebra..... | 5 | Math. 6. Anal. Geom..... | 5 |
| English 1. Composition.... | 5 | English 2. Composition..... | 5 | ¹ Electives..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

SECOND YEAR

| | | | | | |
|------------------------------|---|-------------------------------|---|-------------------------------|---|
| Chem. 109. Quant. Analysis | 5 | Chem. 110. Quant. Analysis.. | 5 | Chem. 101. Adv. Qual. Anal. | 5 |
| Physics 1 or 97. General.... | 5 | Physics 2 or 98. General..... | 5 | Physics 3 or 99. General..... | 5 |
| Math. 107. Calculus..... | 5 | Math. 108. Calculus..... | 5 | Math. 109. Calculus..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

THIRD YEAR

Group options: (a) General; (b) Industrial; (c) Biochemical; (d) Oceanographical. In the curricula below, the letters (a), (b), (c), and (d) refer to these options respectively.

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|---|----------------|--|----------------|--|----------------|
| Chem. 131. Organic..... | 5 | Chem. 132. Organic..... | 5 | Chem. 133. Organic..... | 5 |
| ² Electives..... | 5 | ² Electives..... | 5 | ² Electives..... | 5 |
| <i>Group Option</i> | | <i>Group Option</i> | | <i>Group Option</i> | |
| (a) Electives..... | 5 | (a) Electives..... | 5 | (a) Electives..... | 5 |
| (b) ³ Chem. 121. Chem. of Eng. Materials..... | 5 | (b) Chem. 122. Inorganic Chem. Industries..... | 5 | (b) Chem. 123. Organic Chem. Industries..... | 5 |
| (c) Physiol. 151. Adv. or Bact. 101. General.... | 5 | (c) Physiol. 152. Adv. or Bact. 102. Sanitation.. | 5 | (c) Physiol. 153. Adv. or Bact. 103. Public Hygiene..... | 5 |
| (d) ⁴ Phys. 101. Intro. Mod. Theories..... | 3 | (d) ⁴ Phys. 102. Intro. Mod. Theories..... | 3 | (d) ⁴ Electives..... | 5 |
| Elective..... | 2 | Elective..... | 2 | | |

FOURTH YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|---|----------------|
| Chem. 181. Physical and Theoretical..... | 5 | Chem. 182. Physical and Theoretical..... | 5 | Chem. 183. Physical and Theoretical..... | 5 |
| Electives..... | 2 | Chem. 190. History of Chem. | 2 | Chem. 191. History of Chem. | 2 |
| <i>Group Option</i> | | <i>Group Option</i> | | <i>Group Option</i> | |
| (a) Electives..... | 8 | (a) Electives..... | 8 | (a) Electives..... | 8 |
| (b) Chem. 171. Unit Operations..... | 5 | (b) Chem. 172. Unit Operations..... | 5 | (b) Electives..... | 8 |
| Chem. 176. Chemical Engineering Thesis... | 3 | Chem. 177. Chemical Engineering Thesis... | 3 | (c) Chem. 163. Biological... | 3 |
| (c) Chem. 161. Biological... | 3 | (c) Chem. 162. Biological... | 5 | Electives..... | 5 |
| Electives..... | 3 | Chem. 166. Biochemical Preparations..... | 3 | (d) Electives..... | 8 |
| (d) ⁴ Chem. 161. Biological or Elective..... | 5 | (d) ⁴ Chem. 162. Biological or Elective..... | 5 | | |
| Elective..... | 3 | Elective..... | 3 | | |

¹ Electives must be approved by department.

² In addition to the subjects specially listed above, 10 credits in either French or German are required to be completed before the end of the third year.

³ Chem. 51 and 52 (Chemical Calculations) are suggested before registering for Chem. 121.

⁴ Twenty-five credits of electives must be taken in the biological sciences or geology.

The total number of credits for graduation must include Phys. Educ. 15 for men, or Phys. Educ. 4 6, 8 or 10 for women.

Major in Chemical Engineering

See College of Engineering, page 152.

Teaching Major or Minor in the College of Education

For a teaching major in chemistry, the following courses are required, to make a minimum total of 36 credits: Chem. 1-2 or 21-22, 23, 111, 131, 132, 140-141. One year of college physics is required. For the teaching minor, the student should present the following courses, making a minimum total of 25 credits: Chem. 1-2 or 21-22, 23, 101 and 111, or 131-132. At least high school physics is required for the minor.

Grades of "C" or above must be obtained in all required chemistry courses, with a grade point average of 2.5 therein and in all courses. It is recommended that candidates have at least 15 credits in mathematics.

Applicants for teaching certificates in chemistry, who are transfers from other institutions, must earn a minimum of nine credits in this University in order to secure a departmental recommendation.

CLASSICAL LANGUAGES AND LITERATURE
(Latin and Greek)

H. B. Densmore, Executive Officer, 213 Denny Hall

DEGREE: Bachelor of Arts

Greek

For an undergraduate major at least 36 credits are required. These must be in courses above 1-2 and at least one-half of them must be in courses numbered 100 or higher. Two years of Latin in high school or Latin 1-2, 3 in the University are required, as is also a satisfactory showing in the Senior Examination given at the end of the senior year. A reading knowledge of German is recommended.

Latin

For an undergraduate major, the requirement is 36 credits, at least. These must be in the courses above 6 and at least half of them must be in courses numbered 100 or higher. Fifteen credits in Greek are required and, at the end of the senior year, the Senior Examination must be passed with a satisfactory grade.

NOTE: Courses in Classical Antiquities do not count towards a major or minor in Greek or Latin.

Teaching Major or Minor in Latin in the College of Education

For the teaching major, Greek 1-2, 3 are required, in addition to thirty-five approved credits in Latin and the senior examination. At least 18 credits must be in upper division courses.

Twenty approved credits, including Latin 106, are required for the minor. The student will be given an examination planned to test his knowledge of the Latin ordinarily taught in a standard four-year high school.

The prerequisite for any work toward either a major or a minor in Latin is three and one-half years of high school Latin or its equivalent. Courses 1-2, 3, 4, 5, 6, 11, 13 do not count toward a major or a minor.

DRAMA

Glenn Hughes, Director, 410 Denny Hall

DEGREE: Bachelor of Arts

In drama, the major and minor are the same for graduation in the College of Arts and Sciences and for a normal diploma in the College of Education. Usually, supplementary studies in literature are required. These should include English 64, 65 and two courses from 170, 171, 172.

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credits</i> |
|---|----------------|---|----------------|
| Drama 1, 2. Introduction to the Theatre..... | 4 | Drama 1, 2. Introduction to the Theatre..... | 4 |
| Drama 46, 47, 48. Theatre Speech..... | 9 | Drama 46, 47, 48. Theatre Speech..... | 9 |
| Drama 51, 52, 53. Acting | 9 | Drama 51, 52, 53. Acting (2 qtrs.)..... | 6 |
| Drama 103. Scene Construction..... | 3 | Drama 103. Scene Construction..... | 6 |
| Drama 104. Scene Design..... | 3 | Drama 104. Scene Design..... | |
| Drama 105. Theatrical Costume Design and Construction..... | 3 | Drama 105. Theatrical Costume Design and Construction..... | 6 |
| Drama 106. Make-up..... | 3 | Drama 106. Make-up..... | |
| Drama 114. Stage Lighting..... | 3 | Drama 114. Stage Lighting..... | 6 |
| Drama 121, 122, 123. Advanced Acting (2 quarters)..... | 6 | Drama 127, 128, 129. Hist. of the Theatre.. or | |
| Drama 127, 128, 129. Hist. of the Theatre... 6 | | Drama 151, 152, 153. Rep. Plays (2 qtrs.)... } | 6 |
| Drama 151, 152, 153. Representative Plays... 9 | | | |
| Drama 181, 182, 183. Directing (1 quarter)... 2 | | | |
| Drama 197. Theatre Organ. & Management... 2 | | Drama 197. Theatre Organ. & Management... 2 | |
| Senior Major Examination..... | 0 | | 33 |
| | 62 | | |

ECONOMICS

H. H. Preston, Dean, College of Economics and Business, 210 Commerce Hall

DEGREE: Bachelor of Arts

The major in Economics in the College of Arts and Sciences appeals particularly to four classes of students: (1) those who wish to take advantage of the opportunity to acquire a general training in economic principles; (2) students desiring to enter the School of Law and who wish to have a fundamental background training in economics; (3) students looking forward to a career in government service; and (4) students desiring preparation for pursuing graduate study in the social sciences.

Majors in economics in the College of Arts and Sciences must meet the general requirements of that college. They must take Economics and Business 1-2, 59, 105, 185, 187, and four additional courses selected from the following: 103, 104, 105, 106, 107, 108, 109, 120, 121, 125, 131, 141, 142, 161, 162, 163, 164, 171, 172, 175, 177, 181.

Courses 103 to 109 are intermediate courses and may be taken in the third quarter of the sophomore year.

Teaching Major or Minor in the College of Education

Students choosing economics as either their teaching major or minor should consult with the executive officer of the department of economics or the professor in charge of advanced economics with regard to a proper selection of courses. An academic major or minor in economics must include the following:

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credits</i> |
|---|----------------|---|----------------|
| E.B. 1-2. General Economics..... | 10 | E.B. 1-2. General Economics..... | 10 |
| E.B. 60. Statistical Analysis..... | 5 | E.B. 185. Advanced Economics..... | 5 |
| E.B. 105. Economics of Labor..... | 5 | Additional credits chosen from the following list..... | 5 |
| E.B. 185. Advanced Economics..... | 5 | | |
| E.B. 187. Develop. of Econ. Thought..... | 5 | | |
| Additional credits chosen from the following list..... | 20 | | 20 |
| | 50 | | |

Electives from which to choose additional credits: E. B. 103, 104, 105, 106, 107, 108, 121, 131, 141, 142, 161, 162, 163, 171, 172, 175, 177, 181, 187.

ENGLISH**Composition and Creative Writing
English Language and Literature***D. D. Griffith, Executive Officer, 107 Parrington Hall***DEGREE: Bachelor of Arts****Major Curricula in the College of Arts and Sciences and Major and Minor
Curricula in the College of Education**

Majors and minors in English may be earned by credit in accordance with the schedules listed below. Variation in the schedules is permitted if approved in writing by the department and if the variation represents a coordinated study program. Normally, from 45 to 60 credits are required for a major of which 50 per cent must be upper division.

Majors in either of the divisions of English may be offered in the College of Arts and Sciences or in the College of Education. Minors may be offered in the College of Education for a normal diploma and are presented here for others who desire a basic organization of English work requiring fewer credits than the major. The minor is normally from 29 to 38 credits.

Note that there is some variation in schedules below for those desiring professional certification as teachers of English. Education 75H, I, or J is required of majors in literature, or composition. A grade point average of 2.25 in upper division English courses is required of majors and minors desiring certification for a normal diploma. English 1 and 2 are general college requirements and may not be counted toward a major or a minor.

At the end of the senior year, all majors in the College of Arts and Sciences and in the College of Education are required to pass the senior examination given by the division of English in which the major falls. These examinations are divided into two parts, the first testing the general knowledge of the field of the major and the second testing the student's knowledge of two special fields and his ability to write stylistically effective and well organized papers in these special fields. The major is responsible for review of his previous courses, independent reading which will advance him in the knowledge and the scholarly methods of his chosen field, and for continual growth in speaking and writing skills. For schedules leading toward the degree of master of arts or doctor of philosophy with major work in English, see Graduate School section, page 174.

Composition and Creative Writing

As the individual student objectives vary, no formal schedule is outlined for a major in Composition. In general, the requirements are eighteen credits from the Composition and Creative Writing major courses listed below, supplemented by English 58, 64, 65, 66, and ten credits selected from literature major courses (Shakespeare recommended) and from English 104, 106, 148, 166. For a teaching major, Speech 79 and English 117 are added to the above requirements.

- English 110, 111, 112. Advanced Verse Writing.
- English 131, 132, 133. Advanced Non-Fictional Writing.
- English 137, 138, 139. Advanced Short Story Writing.
- English 156, 157, 158. Novel Writing.
- English 184, 185, 186. Creative Writing Conference.
- Drama 111, 112, 113. Playwriting.
- Drama 144, 145, 146. Dramatic Writing.
- Journalism 173, 174-175. Short Story Writing.

It should be noticed that these are all upper division courses for which there are lower division prerequisites.

The first minor in Composition and Creative Writing requires fifteen credits from the writing courses listed above, supplemented by English 58, 64, 65, 66.

The second minor requires fifteen credits of advanced writing courses (English 51 and above), supplemented by English 58 and at least one other literature course chosen from the list given above under the major.

English Language and Literature

In literature, various types of courses are offered to satisfy the objectives of students desiring to elect English studies or to major in English. In English literature, English 64, 65, 66 comprise a survey which emphasizes the principal classics and their relations to their historic periods. Similarly, in American literature (English 67) important American writers are studied. English 117, 140, 148, include more than one historic period and emphasize important influences on modern thought.

Other courses are organized to develop the student's ability to understand literature of various types. Such courses are English 57, 58, 73, 96, 104, 106, and 166. All of these courses are designed both for the general student and the English major.

Courses known as *major* courses are intended for those desiring to continue English studies as an intellectual interest, as a history of culture, or in preparation for advanced studies. The courses of this type are provided and recommended as year courses: 180, 181, 182; 150, 151, 153; 170, 171, 172 and/or 154; 167, 168, 169; 144, 145, 177; 177, 178, 148; 174, 175, 176 or 106; 161, 162, 163.

The department also accepts for elective credit toward an English major, courses in General Literature, courses in foreign literatures offered by the ancient and modern language departments in English translation, and courses in speech and drama.

| <i>Major</i> | <i>Credits</i> |
|---|----------------|
| English 64, 65, 66..... | 15 |
| English 151 | 5 |
| English 170, or 168, or 144, or 145..... | 5 |
| English 177, or 174, or 162..... | 5 |
| Continuation of one major course..... | 5 |
| Composition, Literature, Speech, Drama, elective..... | 15 |
| Senior Examination | 0 |
| | <hr/> 50 |

For a teaching major in the College of Education, the above electives must include Speech 79, English 117, and three credits of advanced composition.

| <i>First Minor</i> | <i>Credits</i> | <i>Second Minor</i> | <i>Credits</i> |
|--------------------------------------|----------------|---|----------------|
| English 64, 65, 66..... | 15 | English 64, 65, 66 or 57, 58, 117..... | 15 |
| Two major courses..... | 10 | Advanced Composition | 3 |
| English, Speech, Drama elective..... | 11 | English, Speech, or Drama elective..... | 6 |
| | <hr/> 36 | | <hr/> 24 |

For a teaching first minor in the College of Education, the above electives must include Speech 79 and either advanced composition or English 117.

FAR EASTERN

George Edward Taylor, Executive Officer, 228 Denny Hall

DEGREE: Bachelor of Arts

One general and four specialized curricula are offered to students desiring to major in the Far Eastern Department, of which the student is required, after consultation, to select one. This choice must ordinarily be made not later than the sophomore year.

GENERAL MAJOR

| | <i>Credits</i> |
|--|----------------|
| 10. Problems of the Pacific..... | 5 |
| 40, 41. Chinese Civilization, or Japanese Civil. | 5 |
| 114, 115, 116. History of Religion..... | 9 |
| Elect. in Lit.: 50, 52, 170, 171, min. of U.D. cr..... | 10 |
| Hist. elect.: 90, 91, 180, 181, minimum of..... | 15 |
| Read. course elect.: 190, 192, 194.....min. of | 3 |
| | <hr/> 47 |

MAJOR IN JAPANESE STUDIES

| | <i>Credits</i> |
|--|----------------|
| 10. Problems of the Pacific..... | 5 |
| 1-2, 3. Japanese Language..... | 15 |
| 107, 108, 109. Japanese Lang. 2nd year..... | 15 |
| 170. Chinese Literature in Translation..... | 5 |
| 171. Japanese Literature in Translation..... | 5 |
| Elect.: 41, 91, 115, 181, minimum of..... | 3 |
| | <hr/> 48 |

In addition to the above the following courses are strongly recommended: F.E. 44-45, 46, Chinese Language, and 110, 111, Japanese Language, third year.

MAJOR IN CHINESE STUDIES

| | Credits |
|--|----------|
| 10. Problems of the Pacific..... | 5 |
| 44-45, 46. Chinese Language..... | 15 |
| 146, 147, 148. Chinese Language, 2nd year..... | 15 |
| 90 or 180. Chinese History..... | 5 |
| 115. History of Religion..... | 3 |
| 170. Chinese Literature in Translation..... | 5 |
| Approved elect.: 40, 192, minimum of..... | 3 |
| | <hr/> 51 |

MAJOR IN SLAVIC STUDIES

| | Credits |
|--|----------------|
| 7-8, 9. Russian Language..... | 15 |
| 140, 141, 142. Russian Language, 2nd year..... | 9 |
| 162, 163. Russian Language, 3rd year..... | 6 |
| 130. Russian Literature..... | 5 |
| 136. Modern Russian History..... | 5 |
| 10. Problems of the Pacific, or | |
| 116. History of Religion..... | 3 or 5 |
| Appr. elect.: 40, 190, 196, min. of..... | 5 |
| | <hr/> 48 or 50 |

MAJOR IN ORIENTAL LANGUAGES

| | Credits |
|---|----------|
| 10. Problems of the Pacific..... | 5 |
| Language electives (Hebrew, Sanskrit, Arabic, Aramaic, Chinese, Japanese) min. of.. | 45 |
| Approved electives: 50, 52, 115, 116, 170, 171, or reading courses..... | 15 |
| | <hr/> 65 |

FISHERIES

W. F. Thompson, Director, 2 Fisheries Building

DEGREE: Bachelor of Science—elective course

DEGREE: Bachelor of Science in Fisheries

Effective since the fall quarter of 1939, there is required for graduation from the School a grade point average of 2.5 in fisheries courses and a grade point average of 2.5 in all other courses.

Admission to the third year of the School of Fisheries requires 90 credits in accord with the requirements of the School and a grade point average of 2.5.

Prescribed Curriculum in Fisheries

DEGREE: Bachelor of Science in Fisheries

FIRST YEAR

| Autumn Quarter | Credits | Winter Quarter | Credits | Spring Quarter | Credits |
|-----------------------------|---------|-----------------------------|---------|------------------------------|---------|
| English 1. Composition.... | 5 | English 2. Composition..... | 5 | Elective..... | 5 |
| Zool. 1. Animal Biology.... | 5 | Zool. 2. General Zool..... | 5 | Zool. 5. Embryology..... | 5 |
| Chem. 1 or 21. General..... | 5 | Chem. 2 or 22. General..... | 5 | Chem. 23. Qual. Analysis.... | 5 |
| Fish. 108..... | 1 | Fish. 109..... | 1 | Fish. 110..... | 1 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

SECOND YEAR

| | | | | | |
|--|---|--|---|--|---|
| *German or French..... | 5 | *German or French..... | 5 | Elective..... | 5 |
| Zoology or Fisheries (see options A, B, or C)..... | 5 | Zoology or Fisheries (see options A, B, or C)..... | 5 | Zoology or Fisheries (see options A, B, or C)..... | 5 |
| Math. 4 or 31..... | 5 | Math. 5 or 32..... | 5 | Math. 6, 13 or 33..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

*German is recommended. Any language substitution must be approved by the School of Fisheries.

NOTE: These requirements are listed in the order in which it is recommended that they be taken. They may be postponed and subjects required or permitted in the third and fourth years may be substituted, on approval by the School of Fisheries. Physical Education 15 must be included.

THIRD AND FOURTH YEARS

One of the following optional courses should be chosen: (A) General Fisheries Biology; (B) Life History and Conservation, Vertebrates or Invertebrates; (C) Hatchery Biology, the Propagation and Rearing of Fish. Under each option five hours of fisheries are required each quarter and in addition the Seminar meetings, Fisheries 195, 196, 197, are required in the fourth year. The remaining elective credit hours under options B and C must be chosen from subjects recommended by the School of Fisheries.

Option A. General Fisheries Biology. Fish. 101, 102, 103, 105, 106, 107 are required. A student must earn not less than 39 credits in fisheries and not over 96 credits in any two departments. The remaining elective credits must be approved by the School of Fisheries. Zoology 129 and 130 are recommended to students interested in fresh water fish and game management.

Option B. Life History and Conservation. Fish. 101, 102, 103, 105, 106, 107, 157, 158 are required. Courses 125, 126 may be substituted for 157 and 158. In addition 15 credits of mathematics besides that specified in the second year are required.

Option C. Hatchery Biology, Propagation and Rearing of Fish. Fish. 101, 102, 103, 105, 106, 107, 151, 152, 153, 154 are required. Fish. 125 or 157 may be substituted for 103. Chem. 144 (or 161-162), *Biological*; Bacteriology 101, *General*, are required.

Recommended Electives. In options (B), and (C), any fisheries, zoological or oceanographical course may count as an elective. The following additional subjects are recommended as electives: Chemistry: 109, 110, or 111, *Quantitative Analysis*; 131, 132, 133, *Organic*; 161-162, *Biological*. Mathematics: 13, *Statistics*; 41, 42, or 107, 108, 109, *Calculus*. Bacteriology: 101, *General*; 102, *Sanitary*. Physics: 1, 2, 3, or 4, 5, 6, *General*. Physiology: 115, *General*, 139, *Comparative*. Geology: 1, *Survey*, or 6, *Physiography*, or 7, *Historical*. Botany: 1, 2, or 3, *Elementary*.

Elective Curriculum in Fisheries

DEGREE: Bachelor of Science

Students may choose the elective departmental major when they do not wish to follow the prescribed curriculum in fisheries.

The requirements, other than those here specified, will be as for elective departmental majors in the College of Arts and Sciences, page 86. In connection with these requirements, the departments of the College are divided into three groups.

For the first two years in the School of Fisheries, there is required a minimum of thirty credits in Group III, 20 credits in either Group I or II and 10 credits in the remaining group, subject to the approval of the School. At least thirty-nine credits must be completed in Fisheries for the major.

FOOD TECHNOLOGY

B. S. Henry, Chairman, 420 Johnson Hall; W. L. Beuschlein, H. C. Douglas, E. R. Norris, E. J. Ordal, E. I. Raitt, J. I. Rowntree

A major in food technology provides training for students who intend to enter the field of food production as control or research laboratory workers. Emphasis may be placed upon bacteriology, chemistry, or food utilization by selection of various optional courses in the fourth year. Women interested in Home Economics research or teaching food and nutrition in college should follow this curriculum. Further flexibility is permitted in that a course may be substituted for any regularly scheduled course with the consent of the committee members representing the department in which the eliminated course is given.

Group options (a) and (b) in the third and fourth years are designed to provide specialization. Group (a) is for students primarily interested in laboratory work concerned with food production while group (b) is for those expecting to teach nutrition in college or to carry on work in laboratories conducting food preparation studies.

For all food technology majors, a grade point average of 2.5 in bacteriology, chemistry and home economics, and a grade point average of 2.5 in all other subjects shall be required for graduation.

DEGREE: Bachelor of Science in Food Technology

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|---------------------------|----------------|---------------------------|----------------|--|----------------|
| Chem. 1. General..... | 5 | Chem. 2. General..... | 5 | Chem. 23. Qual. Analysis. | 5 |
| English 1. Composition... | 5 | English 2. Composition... | 5 | Physics 3. General..... | 5 |
| Physics 1. General..... | 5 | Physics 2. General..... | 5 | Math. 1 or 4..... | 5 |
| M.S. and P.E. or N.S.... | + | M.S. and P.E. or N.S.... | + | P.E. 15 or P.E. 10, or exemption exam. | 2-5 |
| | | | | M.S. and P.E. or N.S.... | + |

SECOND YEAR

| | | | | | |
|----------------------------------|---|--------------------------|---|----------------------------|----|
| Chem. 131. Organic..... | 5 | Chem. 132. Organic..... | 5 | Chem. 111. Quant. Analysis | 5 |
| Zool. 1. Animal Biology... or | 5 | Zool. 2. General..... | 5 | Bact. 100. Fundamentals.. | 10 |
| Bot. 1. Elementary..... | 5 | Bot. 2. Elementary..... | 5 | M.S. and P.E. or N.S.... | + |
| M.S. and P.E. or N.S.... | + | M.S. and P.E. or N.S.... | + | | |
| <i>Group Option</i> | | <i>Group Option</i> | | | |
| (a) Math. 4 or 5..... | 5 | (a) Math. 5 or 6..... | 5 | | |
| (b) H.E. 15. | 5 | (b) H.E. 115. | 3 | | |
| | | Elective | 2 | | |

THIRD YEAR

| | | | | | |
|-----------------------------|---|---------------------------|---|---------------------------|---|
| Chem. 161. Biochem..... | 5 | Chem. 162. Biochem..... | 5 | Chem. 104. Food Anal.... | 4 |
| Soc. Science Elective..... | 5 | Chem. 140. Elem. Physical | 3 | Chem. 141. Elem. Physical | 3 |
| | | Bact. 107. Spoilage..... | 5 | Bot. 115. Yeasts & Molds. | 5 |
| <i>Group Option</i> | | <i>Group Option</i> | | <i>Group Option</i> | |
| (a) Bact. 105. Infect. Dis. | 5 | (a) Elective | 2 | (a) †H.E. 110. Food Prep. | 3 |
| (b) H.E. 107. Nutrition.. | 5 | (b) H.E. 108. Nutrition.. | 3 | †H.E. 111. Nutrition. | 3 |

FOURTH YEAR

| | | | | | |
|-----------------------------|---|----------------------------|---|----------------------------|----|
| Bact. 130. Industrial..... | 5 | Bact. 131. Industrial..... | 5 | Bact. 132. Industrial..... | 5 |
| Optional* | 5 | Optional* | 5 | | |
| <i>Group Option</i> | | <i>Group Option</i> | | <i>Group Option</i> | |
| (a) Chem. 121. Industrial. | 5 | (a) Chem. 122. Industrial. | 5 | (a) Elective | 6 |
| (b) Bact. 105. Infect. Dis. | 5 | (b) Elective | 5 | Chem. 123. Industrial. | 5 |
| | | | | (b) Elective | 10 |

*Practical work in food plant, federal, state, or private laboratory, institution kitchen or formal course work, to be decided upon by student in consultation with the committee.

Additional recommended courses: colloidal chemistry, microscopic technic, histology, entomology, calculus, experimental cookery.

†Offered alternate years.

GENERAL LITERATURE

Allen R. Benham, Executive Officer, 132 Parrington Hall

The Department of General Literature offers a synthetic view of European literature and considers literature in general as a form of human expression.

A major in general literature requires a reading knowledge of two foreign languages. French and German are especially recommended. Satisfaction of requirement is determined by department offering instruction in language selected. General Literature 101 and 191, 192, 193, and sufficient other literature courses to make a total of 36-60 credits are also required.

Preparatory to his major, the student should earn 18 credits in lower division courses in either English, Latin, Oriental, or Romance literature.

For his major, the student should select in supplementary courses from history (especially History 3 and 4, *Survey of Western Civilization*), philosophy (especially Esthetics and the History of Philosophy), English, and translated literature in Chinese, German, Greek, Japanese, Latin, Persian, Romance, Russian, Sanskrit and Scandinavian. Such preparatory and supplementary courses are:

| | |
|---|---|
| English Literature: 57, 58, 64, 65, 66, 104, 106, 140. | Italian: 121, 122, 123; 181, 182; 184. |
| Far Eastern: 50, 52, 130, 170, 171. | Latin: 11, 13. |
| French: 118, 119, 120; 154, 155, 156. | Romanic Languages: 34, 35, 36; or 134, 135, 136. |
| General Literature: 51-52-53. | Scandinavian Literature: 109, 110, 111; 180, 181, 182. |
| German: 100, 103. | Spanish: 118, 119, 120. |
| Greek: 11, 13, 17, 18. | |

The student should consult his adviser as early as possible and arrange a logical sequence of courses. This sequence should include a comprehensive survey of at least one national literature, some studies in several, and detailed knowledge of one.

GENERAL STUDIES

H. B. Densmore, Chairman, 213 Denny Hall

DEGREE: Bachelor of Arts or Bachelor of Science

Enrollment in General Studies is open to students who fall within the following classifications: (1) those who can spend only a limited time in the University and wish guidance in making up a program of work from this or other colleges adapted to their special needs; (2) those who wish to follow through to graduation the study of a field of knowledge or a subject of special interest not provided for in the usual departmental curricula. To be admitted to this division the student must have maintained at least a "C" average in his preceding educational experience, and must complete his transfer not later than his third quarter preceding graduation.

The requirements for graduation in General Studies are:

1. A 10-20-30 distribution of credits in the lower division groups with a grade point average of 2.0.
2. The early selection, with the help of an adviser, of a special field or subject of interest as a major to focalize and give direction to the student's work. The special fields at present are:

Social Science

Language and Literature

Physical Science

Biological Science

Fine Arts

Special subjects may include any phase of thought or vocational objective from any branch of knowledge that can be handled effectively in General Studies with the help of the instructors in the other departments concerned.

3. Formulation of a curriculum covering the final two years or more of the course, to be recommended by the adviser and approved by the committee.
4. Completion of at least 36 credits in the chosen field or subject. Because work will usually be drawn from several contributory departments or colleges, the number of credits required in this major will usually exceed the maximum of 60 usually allowed. The Bachelor of Arts degree is awarded when the major subject is in Group I or II; the Bachelor of Science, when the major subject is in Group III.
5. Completion of at least sixty upper division credits. This number may need to be increased considerably in order to meet the further requirement that at least half of the credits in the major be upper division.
6. A senior study embodying the reactions of the student to the work done in pursuing his major interest.

Prospective majors should consult the chairman for assignment to an adviser on courses of study and major interest.

Curricula developed in General Studies give admission to the School of Librarianship and to the Graduate School of Social Work. There are at present special curricula for the blind, in Radio Production and Management, the less specialized aspects of Industrial Management, Advertising, Art and Ceramics, and Personnel Work, in addition to the numerous programs made out to supply the special needs of individual students.

Latin-American Studies. The major in Latin-American Studies is directed by an interdepartmental committee (Professors H. L. Nostrand, *chairman*; H. B. Densmore, *ex-officio*; and department representatives as follows: *Economics and Business*, Professor Macy Skinner; *Geography*, Professor Albert L. Seeman; *History*, Professor W. Stull Holt; *Political Science*, Professors Linden A. Mander and Maxim von Brevner; *Romanic Languages*, Professors G. W. Umphrey and Carlos García-

Prada). The objectives of the major are, first, the student's general education, pursued through a many-sided and coherent study of a foreign culture; and secondarily, preparation for possible service to inter-American relations, presumably as an expert in some branch of science, technology, business, finance, government or scholarship. The program of study is adapted to individual cases, but it must meet the requirements for graduation in General Studies, and should include the following courses as a minimum:

| | <i>Credits</i> |
|--|----------------|
| Economics. | |
| 4. Survey of Economics and Business..... | 5 |
| 131. Principles of Foreign Trade..... | 5 |
| Geography. | |
| 7. Economic Geography | 5 |
| 105. Geography of South America..... | 5 |
| 109. Geography of Middle America..... | 3 |
| History. | |
| (To be arranged)..... | 10 |
| Political Science. | |
| 123. Foreign Relations of the United States: The Americas..... | 3 |
| Spanish. | |
| 101, 102, 103. Advanced Composition..... | 9 |
| 104, 105, 106. Survey of Spanish Literature..... | 6 |
| Latin-American Literature | 12 |

For advice as to additional courses in any of these fields, the student should consult the member of the committee who represents the college or school concerned.

GEOGRAPHY

Howard H. Martin, Executive Officer, Social Sciences Hall

DEGREE: Bachelor of Arts

Major in Geography

| | <i>Credits</i> | | <i>Credits</i> |
|---|----------------|--|----------------|
| Geog. 1-101. Regional Geography <i>or</i> | | Geog. 102. United States..... | 5 |
| Geog. 7. Economic Geography..... | 5 | Geog. 155. Influences of Geog. Environment.. | 5 |
| Geog. 11-111. Climate..... | 5 | Geog. 170. Conserv. of Natural Resources... | 5 |
| Geog. 121. Regional Climatology <i>or</i> | | Approved geography electives..... | 15 |
| Geog. 2. Physical Geography..... | 5 | | 45 |

Majors should elect courses in economics, political science, history, sociology, and anthropology. Students desiring to specialize in climatology or meteorology should consult with the department concerning a program.

Teaching Major or Minor in the College of Education

| <i>Major</i> | <i>Credits</i> | <i>First Minor</i> | <i>Credits</i> |
|---|----------------|---|----------------------|
| Geog. 1-101. Regional Geog. <i>or</i> | | Geog. 1-101. Regional Geog., <i>or</i> | |
| Geog. 7. Economic Geography..... | 5 | Geog. 7. Economic Geography..... | 5 |
| Geog. 11-111. Climate..... | 5 | Geog. 102. United States..... | 5 |
| Geog. 102. United States..... | 5 | Geog. 110. Pacific Northwest..... | 3 |
| Geog. 110. Pacific Northwest..... | 3 | Geog. 170. Conservation..... | 5 |
| Geog. 140. Geog. in the Social Studies..... | 3 | Geog. 140. Geog. in the Social Studies..... | 3 |
| Geog. 155. Influence of Environment..... | 5 | Approved Electives..... | 5 |
| Geog. 170. Conservation..... | 5 | | Minimum total.....26 |
| Approved electives..... | 14 | | |
| Minimum total..... | 45 | | |

Second Minor

| | <i>Credits</i> |
|--|----------------|
| Geog. 1-101. Regional Geography. <i>or</i> | |
| Geog. 7. Economic Geography | 5 |
| Geog. 102. United States..... | 5 |
| Geog. 110. Pacific Northwest..... | 3 |
| Geog. 125. Geographic Background of History..... | 3 |
| Geog. 140. Geography in the Social Studies..... | 3 |
| Minimum total | 19 |

GEOLOGY

G. E. Goodspeed, Executive Officer, 114 Johnson Hall

DEGREE: Bachelor of Science

Recommendations applying to all undergraduate curricula in Geology:

A grade point average of at least 2.5 shall be required for geology 5 or 105, 6 or 106, 7 or 107 for admission to any courses in geology with a number over 100.

Majors in geology not taking the "set" professional course must, unless given special permission by the department, complete the following geology courses: 5 or 105, 6 or 106, 7 or 107, 101, 112 or 113, 121, 123, 124, 131, 132, 142—a total of 53 credits. A grade point average of 2.5 in all courses in geology shall be required of geology majors for graduation.

DEGREE: Bachelor of Science in Geology

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-----------------------------|----------------|------------------------------|----------------|--------------------------------|----------------|
| Chem. 1 or 21. General..... | 5 | Chem. 2 or 22. General..... | 5 | Chem. 23. Qual. Analysis.... | 5 |
| Math. 4. Trigonometry..... | 5 | Math. 5. College Algebra.... | 5 | English 1. Composition..... | 5 |
| G.E. 1. Engin. Drawing..... | 3 | G.E. 2. Engin. Drawing..... | 3 | G.E. 21. Plane Surveying.... | 3 |
| Elective..... | 2 | Elective..... | 2 | G.E. 3. Drafting Problems... 3 | |
| M.S. and P.E. or N.S.....+ | | M.S. and P.E. or N.S.....+ | | M.S. and P.E. or N.S.....+ | |

SECOND YEAR

| | | | | | |
|-----------------------------|---|---------------------------------|---|-------------------------------|---|
| Geol. 5. Rocks & Minerals.. | 5 | Geol. 6. Elem. Physiography | 5 | Geol. 7. Historical Geology.. | 5 |
| Physics 1. General..... | 5 | Physics 2. General..... | 5 | Geol. 121. Mineralogy..... | 5 |
| Zool. 1. Elementary..... | 5 | Lit. 67. Sur. American Lit... 5 | | English 2. Composition..... | 5 |
| M.S. and P.E. or N.S.....+ | | M.S. and P.E. or N.S.....+ | | M.S. and P.E. or N.S.....+ | |

THIRD YEAR

| | | | | | |
|---|---|---|---|---|---|
| Geol. 123. Optical Mineralogy..... | 5 | Geol. 124. Petrography and Petrology..... | 5 | Geol. 125. Petrography and Petrology..... | 5 |
| Pol. Sci., Soc., Geog., or other Group 2 electives... | 5 | Geol. 130. Paleontology.... | 5 | Geol. 132. Invertebrate Paleontology..... | 5 |
| French or German..... | 5 | French or German..... | 5 | French or German..... | 5 |

FOURTH YEAR

| | | | | | |
|---|---|---------------------------------|---|------------------------------|---|
| Geol. 126. Sedimentary Petrography..... | 5 | Geol. 127. Ore Deposits.... | 5 | Geol. 190. Thesis..... | 5 |
| Geol. 101. History of Geol. 3 | | Geol. 142. Structural Geol... 5 | | Geol. 122. Field Methods.... | 5 |
| Pol. Sci., Soc., Geog., or other Group 2 electives... 5 | | *Professional electives..... 5 | | *Professional elective..... | 5 |
| *Professional electives..... 3 | | | | | |

*For those who desire to specialize in stratigraphical geology, the professional electives should include such courses as Mesozoic geology, Tertiary geology and stratigraphy. For petrological geology, courses in physical chemistry and quantitative analysis are essential, and for mining geology, courses in mining engineering, metallurgy and metallurgical analysis. For physiographic geology, courses in map interpretation, geomorphology and glacial geology are necessary.

A fifth year may be necessary for the completion of the above schedule, if all of the important professional electives are to be included.

The total number of credits must include Physical Education 15 for men, or Physical Education 4, 6, 8, or 10 for women.

Teaching Major or Minor in the College of Education

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credits</i> |
|--|----------------|---|----------------|
| Geol. 5 or 105. Rocks and Minerals..... | 5 | Geol. 1. Introduction to Earth Science..... | 5 |
| Geol. 6 or 106. Physiography..... | 5 | Geol. 5 or 105. Rocks and Minerals..... | 5 |
| Geol. 7 or 107. Historical Geology..... | 5 | Geol. 6 or 106. Physiography..... | 5 |
| Geol. 112. Physiography of Eastern U. S..... | 5 | Approved electives..... | 5 |
| Geol. 113. Physiography of Western U. S..... | 5 | | |
| Approved electives..... | 11 | Minimum total..... | 20 |
| Minimum total..... | 36 | | |

GERMANIC LANGUAGES AND LITERATURE*Curtis C. D. Vail, Executive Officer, 111 Denny Hall***DEGREE: Bachelor of Arts**

Students becoming majors in this department should have had college German 1, 2, 3, plus three credits of second-year German, or the high school equivalent, to be determined by the executive officer of the department.

Departmental Requirements

| | <i>Credits</i> |
|--|----------------|
| Ger. *4, 7, 10, 30. Second year work, about..... | 5 |
| Ger. 120, 121, 122. Grammar and Composition..... | 6 |
| Ger. 128. Phonetics..... | 2 |
| Electives..... | 23 |
| | <hr/> 36 |

*Two credits of this 5-credit course count toward a major or a minor.

For the major, 31 credits must be chosen from the departmental offerings numbered 120 or above. Majors are not permitted to count scientific German, or courses in English translation.

Students preparing for library work may substitute literary courses in German (not courses offered in translation, however) in lieu of the departmental major requirements, German 120, 121, 122, 128. These latter are demanded of prospective teachers.

It is advised that the student distribute his major work over the entire college course, in order to avoid periods of disuse.

Teaching Major or Minor in the College of Education

For the major in the College of Education, the requirements are the same as for the major in the College of Arts and Sciences. For the minor at least 15 credits must be chosen from courses numbered 120 or above, to make a minimum total of 20.

Grades of "C" or above must be obtained in all required German courses; for a major, one-third of the grades in upper-division courses must be "B" or above.

All students who wish a major or minor recommendation in German must present Education 75L, the teachers' course. Students presenting a minor in German with a major in another foreign language may, with special permission, be excused from this requirement.

HISTORY*W. Stull Holt, Executive Officer, 308B Social Sciences Hall***DEGREE: Bachelor of Arts****Departmental Requirements**

Majors in history shall offer for the bachelor of arts degree 50 credits in history, of which at least 50 per cent must be in upper division courses. History 1-2, *Medieval and Modern European History*, and a survey in American history, either History 7 or 21-22, are the only required courses.

Advanced Degrees. See Graduate School section, page 174, for requirements for advanced degrees.

Teaching Major or Minor in the College of Education

For the teaching major, a minimum of 50 credits in history is required, including History 1-2, 5-6, 7 or 21-22, 72-73, and at least ten additional hours in American history. The remaining credits are to be selected from upper division courses.

For the teaching minor, a minimum of 30 credits in history is required, including History 1-2, 7 or 21-22, 164 (required by State law). The remaining credits are to be selected as follows: ten credits of upper division European history, including English; or 72-73; or ten credits of upper division American history.

HOME ECONOMICS

Effie I. Raitt, Director, 201 Home Economics Hall

Non-Professional Curricula

Two majors are offered: a *General Major*, for the degree of bachelor of science, and a *Textile, Clothing and Art Major*, for the degree of bachelor of arts. These require a total of 180 plus 5 physical education credits. The minimum requirements for the first two years are those established in the College of Arts and Sciences in curricula involving majors.

General Major. Students who anticipate graduate work and need a background of foreign language and extended work in the basic sciences may find the General Major best suited to their needs. Required Home Economics courses include the following: H.E. 12, 15, 25, 107-108, 141, 144, 145, 147, 181, 190, and their prerequisites.

Textiles, Clothing and Art Major: Required home economics courses include: H.E. 12, 25, 112, 113, 114, 133, 144, 145, 147, 181, and at least 9 credits from the following: H.E. 101, 102, 188, 189, 198. In addition, 30 credits in art are required. If the major interest is merchandising instead of designing, the director of the School should be consulted concerning substitution of courses in economics and business for equivalent art requirements.

Students who have not been accepted for a professional curriculum must have the permission of the instructor to enroll in the following courses: Educ. 75NA, 75NB, H.E. 123, 124, 160, 161, 175, 191.

Professional Curricula

(A minimum of 20 credits of language, English, or history is required for graduation in all professional curricula. Application for admission to these curricula is required after completion of 75 credits.)

Teacher Training

Bachelor of Science in Home Economics

This curriculum requires the completion of 225 credits plus five quarters of physical education. Students may, with the consent of the director, substitute ten credits in other subjects for home economics courses.

Students who do not intend to teach but wish to combine Home Economics and Social Work, may omit Education courses.

Students interested in home economics in business may, with the consent of the director, substitute Speech 40, Journalism 130, and H.E. 126 for courses in Education.

Five years of college training are required for the three-year normal diploma, requisite for high school teaching in the State of Washington. Completion of the teacher-training curriculum in general home economics, together with the completion of the requirements for the three-year normal diploma, entitles a graduate to a certificate to teach vocational education in any high school which is subsidized by the federal government under the Smith-Hughes and George-Deen acts.

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|---|----------------|
| English 1..... | 5 | English 2..... | 5 | H.E. 12 or 25..... | 5 |
| H.E. 7..... | 2 | Chem. 1 or 21. General..... | 5 | Chem. 2 or 22. General..... | 5 |
| Art 9..... | 3 | Elective in Language, English or History..... | 5 | P.E. 6..... | 2 |
| Elective in Language, English or History..... | 5 | Physical Education..... | + | Arch. 3..... | 2 |
| Physical Education..... | + | | | or Lang., English or Hist. or English 3 elective..... | 3 |
| | | | | Physical Education..... | + |

SECOND YEAR

| | | | | | |
|-----------------------------|---|-----------------------------|---|---------------------------|---|
| Physics 89..... | 5 | Physiol. 7. Elementary..... | 5 | Physics 90..... | 5 |
| Chem. 135. Organic..... | 4 | Chem. 136. Organic..... | 4 | H.E. 25. Textiles..... | 5 |
| H.E. 15. Food Preparation.. | 5 | H.E. 12. Costume Design.... | 5 | Psych. 1. General..... | 5 |
| Educ. 1 Orientation..... | 2 | P.E. 4..... | 2 | N.Ed. 5. Home Nursing.... | 3 |
| Physical Education..... | + | Physical Education..... | + | | |

THIRD YEAR

| | | | | | |
|----------------------------|---|--|---|--|---|
| H.E. 107. Nutrition | 5 | H.E. 108. Nutrition | 3 | Bact. 101. General | 5 |
| H.E. 115. Food Preparation | 3 | H.E. 116. Advanced Food Preparation | 5 | H.E. 114. Costume Design. | 3 |
| H.E. 112. Costume Design. | 3 | H.E. 113. Costume Design. | 3 | Zoology 17. Eugenics..... | 2 |
| E.B. 4. Survey | 5 | Soc. 1. Survey | 5 | Educ. 9. Psychology of Secondary Education... | 3 |
| | | or Soc. 150. General Soc. ... | 5 | | |

FOURTH YEAR

| | | | | | |
|---|---|---|---|---------------------------|---|
| Educ. 70. Intro. to H.S.Pro- cedure..... | 5 | H.E. 181. Consumer Probs... 3 | | Educ. 75NA..... | 3 |
| H.E. 147. Home Furnishing. | 5 | H.E. 145. Fam. Relationships. 3 | | H.E. 144. Income Mgmt.... | 3 |
| Soc. 112. The Family..... | 5 | Educ. 120. Educ. Sociol.... | 3 | H.E. 190. Child Care..... | 5 |
| | | H.E. 141. The House, Equipment, Management.. | 5 | Hist. 164. Northwest..... | 5 |

FIFTH YEAR

Education 71N-72N, *Cadet Teaching*; Home Economics 195, *Research*, and 148, *Home Management House*, must be taken concurrently as a unit, in either autumn, winter, or spring quarter.

| | <i>Credits</i> | | <i>Credits</i> |
|-----------------------------|----------------|--|----------------|
| Educ. 30. State Manual..... | 0 | Educ. 60. Principles | 3 |
| Educ. 90. Measurement | 2 | and Electives to total 225 credits. | |

For secondary certification, History 164 and fifteen quarter credits of contemporary social problems must be included. Courses in current history, political science, economics and sociology will satisfy this requirement.

Preferred electives: Language; Literature; History; Psychology 131, *Child Psychology*; S.W. 176, *The Rural Community*; H. E. 130, *Problems of Family Credit*.

Students who have high school chemistry may substitute Chem. 137 for Chem. 135-136.

A teaching minor requires Home Economics 12, 25, 147, 112, 113, 114, and Art 9.

A Bachelor of Science degree will be awarded upon the completion of 180 credits plus 5 credits of Physical Education as scheduled in the first four years in the Teacher-Training curriculum.

Institution Administration

Bachelor of Science in Home Economics

This curriculum requires the completion of 195 credits plus five quarters of physical education. Students may, with the consent of the director, substitute ten credits in other subjects for home economics courses.

Students interested in home economics in business may, with the consent of the director, substitute Speech 40, Journalism 130, and H.E. 126 for H. E. 121, 122, 123, 124. Students who have credit in high school physics may omit Physics 89-90.

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|---------------------------------|----------------|---------------------------------|----------------|---------------------------------|----------------|
| English 1..... | 5 | English 2..... | 5 | Chem. 2 or 22. General..... | 5 |
| H.E. 7..... | 2 | Chem. 1 or 21. General..... | 5 | P.E. 6..... | 2 |
| Art 9..... | 3 | Lang., Engl., or Hist. elect. 5 | | Arch. 3..... | 2 |
| Lang., Engl., or Hist. elect. 5 | | Physical Education..... | + | or | |
| Physical Education..... | + | | | Lang., Engl., or Hist. elect. 3 | |
| | | | | Physical Education..... | + |

SECOND YEAR

| | | | | | |
|-----------------------------|---|--------------------------------|---|-------------------------|---|
| Physiol. 7. Elementary..... | 5 | Physics 89..... | 5 | Physics 90..... | 5 |
| Chem. 135. Organic..... | 4 | Chem. 136. Organic..... | 4 | Bact. 101. General..... | 5 |
| H.E. 15. Food Preparation.. | 5 | E.B. 1. Principles..... | 5 | E.B. 2. Principles..... | 5 |
| Physical Education..... | + | P.E. 4. Health Education... 2 | | Psychology 1..... | 5 |
| | | H.E. 131. Clothing Section.. 2 | | | |

THIRD YEAR

| | | | | | |
|------------------------------|---|---------------------------------|---|-------------------------------|---|
| H.E. 107. Nutrition..... | 5 | H.E. 108. Nutrition..... | 3 | Chem. 144. Physiological... 5 | |
| H.E. 115. Food Preparation 3 | | H.E. 120. Adv. Food Prep... 3 | | H.E. 121. Institution Food | |
| H.E. 147. Home Furnishing. 5 | | E.B. 62. Prin. of Accounting. 5 | | Preparation..... | 5 |
| H.E. 144. Income Mgmt.... 3 | | Educ. 9. Psychology or | | H.E. 181. Consumer Probs... 3 | |
| | | Educ. 70. H.S. Procedure... 5 | | | |

FOURTH YEAR

| | | | | | |
|--------------------------|---|--------------------------------|---|-------------------------------|---|
| Soc. 1. Survey..... | 5 | H.E. 123. Instit. Mgmt. I... 3 | | H.E. 191. Diet Therapy..... 3 | |
| or | | Soc. 112. The Family..... 5 | | H.E. 190. Child Nutrition | |
| Soc. 150. General..... | 5 | H.E. 122. Institution | | and Care..... | 5 |
| H.E. 141. The House, | | Purchasing..... | 3 | H.E. 145. Family | |
| Equipment, Management. 5 | | H.E. 26. Institution | | Relationships..... | 3 |
| Elective..... | 5 | Textiles..... | 3 | H.E. 124. Inst. Mgmt..... 3 | |
| | | H.E. 124. Inst. Mgmt. II... 3 | | | |

FIFTH YEAR

Electives to total 195 credits.

Preferred electives: See Teacher Training Curriculum, also H.E. 175.

To become a member of the American Dietetic Association, the student must follow this curriculum by a year's internship in an approved hospital course or in one of the administrative dietitian interne courses.

The University Commons and Residence Halls are operated under the supervision of the School of Home Economics. They are used as practice fields for students in Institution Administration.

Textiles, Clothing and Art

Bachelor of Arts in Home Economics

This curriculum requires the completion of 180 credits plus five quarters of physical education.

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|-------------------------|----------------|-------------------------|----------------|
| English 1..... | 5 | English 2..... | 5 | Hist. 1. Med. & Mod. | |
| H.E. 7. Introduction to | | Chem. 1. General..... | 5 | European History..... | 5 |
| Home Economics..... | 2 | Art 10. Design..... | 3 | Chem. 2. General..... | 5 |
| Art 9. Design..... | 3 | Art 5. Drawing..... | 3 | Art 11. Design..... | 3 |
| P.E. 10. Physical Educ.... 5 | | Physical Education..... | + | Art 6. Drawing..... | 3 |
| Physical Education..... | + | | | Physical Education..... | + |

SECOND YEAR

| | | | | | |
|--------------------------|---|------------------------------|---|----------------------------------|---|
| H.E. 25. Textiles..... | 5 | H.E. 12. Costume Design... 5 | | H.E. 147. Home Furnishing... 5 | |
| Hist. 2. Med. & Mod..... | 5 | E.B. 4. Survey..... | 5 | Soc. 1. Survey of Sociology... 5 | |
| Elective..... | 5 | Elective..... | 5 | Arch. 3. Appreciation..... 2 | |
| Physical Education..... | + | Physical Education..... | + | Elective..... | 3 |

THIRD YEAR

| | | |
|-------------------------------|-------------------------------|-------------------------------|
| H.E. 112. Costume Design... 3 | H.E. 113. Costume Design... 3 | H.E. 114. Costume Design... 3 |
| Art 169. Costume Design... 2 | Art 170. Costume Design... 2 | Art 171. Costume Design... 2 |
| Soc. 112. The Family... 5 | H.E. 144. Income Mgmt... 3 | Psych. 1. General... 5 |
| Elective... 5 | Elective... 7 | Elective... 5 |

FOURTH YEAR

| | | |
|---|---|--|
| H.E. 181. Consumer Probs... 3 | H.E. 198. Historic Textiles... 3 | H.E. 133. Hist. of Costume... 5 |
| Hist. 114. Culture of the Renaissance... 5 | H.E. 145. Family Relationships... 3 | Phil. 1. Introduction to Philosophy... 5 |
| H.E. 188. Adv. Textiles... 3 | H.E. 161. Adv. Costume Design and Construction... 5 | Elective... 5 |
| H.E. 160. Adv. Costume Design and Construction... 5 | Elective... 2 | |

A total of 30 credits in Art is required.

Preferred Electives: Art 20, 53, 54, 55, 62, 83, 101, 105, 126, 129, 157, 158, 159, 182, 183; H.E. 101, 102, 189; E.B. 106, 135.

Preferred Language: French.

Teaching Major or Minor in the College of Education

See Teacher Training curriculum, page 107.

Teaching Major in General Home Economics—College of Education

Students in Home Economics may satisfy the requirements for a major and one minor by work in Home Economics.

| | <i>Credits</i> |
|---|----------------|
| H.E. 12. Costume Design and Construction... | 5 |
| H.E. 15. Food Preparation | 5 |
| H.E. 25. Textiles | 5 |
| H.E. 107-108. Nutrition | 8 |
| H.E. 112, 113, 114. Costume Design and Construction... | 9 |
| H.E. 115, 116. Food Preparation... | 8 |
| H.E. 141. Household Management... | 5 |
| H.E. 144, 145. Household Management and Family Relationships... | 6 |
| H.E. 147. Home Furnishing | 5 |
| H.E. 148. Home Management House... | 2 |
| H.E. 181. Consumer Buying | 3 |
| H.E. 190. Child Nutrition and Care... | 5 |
| Minimum total..... | 66 |

Prerequisites: Art 9, Chem. 1 and 2, Chem. 135-136, Physiol. 7.

Related courses that should be included: Physics 89-90; Arch. 3; Bact. 101; Nursing 5; Zool. 17; Econ. 4; Sociol. 1; Psych. 1. Major must include Educ. 75NA.

Home Economics and Journalism

Bachelor of Science in Home Economics

195 credits required

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|------------------------------|----------------|---|----------------|
| English 1. | 5 | English 2. | 5 | English 3 or Lang., Lit., or Hist. | 5 |
| H.E. 7. | 2 | Chem. 1 or 21. | 5 | Chem. 2 or 22. | 5 |
| Art 9. | 3 | Lang., English, or Hist... 5 | | Physical Education | +1 |
| Journ. 1. | 1 | Physical Education | +1 | | |
| Lang., English, or Hist... 5 | | | | <i>Group Option</i> | |
| Physical Education | +1 | | | a. Physiol 7. | 5 |
| | | | | b. P.E. 10. | 5 |

SECOND YEAR

| | | |
|----------------------------|----------------------------|----------------------------|
| Soc. 1. 5 | Econ. 1. 5 | Econ. 2. 5 |
| Physical Education+1 | Psych. 1. 5 | Journ. 51. 5 |
| <i>Group Option</i> | Physical Education+1 | H.E. 181. 3 |
| a. H.E. 15. 3 or 5 | <i>Group Option</i> | Physical Education+1 |
| Chem. 137. 5 | a. H.E. 24. 2 | <i>Group Option</i> |
| b. H.E. 12. 5 | <i>or</i> | a. H.E. 131. 2 |
| Physiol. 7. 5 | H.E. 25. 5 | <i>or</i> |
| | b. H.E. 25. 5 | H.E. 12. 5 |
| | | b. Art elective 3 |

THIRD YEAR

| | | |
|---------------------|----------------------------|---------------------|
| H.E. 144. 3 | H.E. 145. 3 | H.E. 141. 5 |
| <i>Group Option</i> | Lang., English or Hist.. 5 | <i>Group Option</i> |
| a. H.E. 41. 3 | <i>Group Option</i> | a. H.E. 190. 5 |
| H.E. 107. 5 | a. H.E. 108. 3 | Electives 5 |
| H.E. 115. 3 | H.E. 116. 5 | b. H.E. 114. 3 |
| b. H.E. 147. 5 | b. H.E. 113. 3 | Electives 5 |
| H.E. 112. 3 | Electives 5 | |
| Art elective 2 | | |

FOURTH YEAR

| | | |
|---------------------|--------------------|--------------------|
| Pol. Sci. 1. 5 | Journ. 149. 5 | Journ. 152. 5 |
| Journ. 147. 5 | Journ. 150. 5 | Journ. 153. 5 |
| Journ. 148. 5 | Journ. 151. 5 | Journ. 154. 5 |

Preferred electives: H.E. 126, Speech 40, Speech 161, Economics 54.

FIFTH YEAR

Electives to total 195 credits.

Advanced Degrees

For requirements for advanced degrees, see Graduate School section, page 174.

JOURNALISM

Vernon McKenzie, Director, Lewis Hall

DEGREE: Bachelor of Arts

Admission. Students to qualify as third-year majors in journalism in the College of Arts and Sciences must complete 90 scholastic credits, including the lower division requirements of the college, plus the required six quarters in military or naval science and physical education. Students not having upper division standing may be admitted, on recommendation of the director, to upper division courses in the School of Journalism if they (1) are proficient in English composition and typing, (2) have had sound training in history, economics, politics, and sociology, and (3) have had not less than a year's experience in newspaper work or other professional writing. No other lower division students are allowed to enroll in upper division journalism courses. Credit toward graduation is not granted for newspaper work except when such work is done under the direct supervision of an accredited instructor.

Sixth Quarter Conference. Students planning to major in journalism must have a conference with a member of the School of Journalism faculty before being enrolled in Third Year Journalism. This will normally take place when the student is in his sixth quarter. The purpose of this conference is to discuss the aptitude of the student, not only for a major in journalism, but for following the specialized courses in journalism which he may decide to elect.

Transfers. Students planning to transfer with junior standing, from normal schools, junior colleges, or from other universities, are strongly advised to communicate with the head of the Journalism school before registering. Only in ex-

ceptional cases will these transfer students be permitted to enroll, during their first year on the University of Washington campus, in Third Year Journalism, which is a complete year's course which must be started in October and concluded the following June. Transfer students are advised to take their non-journalism required and elective subjects during their first transfer year. They are advised to take the complete Third Year Journalism in their graduating year.

Graduation Date. Transfers and other students who take Third Year Journalism in their graduating year will not be awarded degrees formally until August. Because the Third Year Journalism comprehensive final examinations do not take place until the concluding week of spring quarter it is not possible for the Journalism faculty to make returns to the Registrar's office in time to permit awarding of June diplomas. Such students, however, may participate in graduation exercises in June; their diplomas will be available at the end of the summer quarter.

Journalism Curriculum. From the beginning of the freshman year a specific curriculum of studies is required of students expecting to major in journalism. Courses in the profession of journalism, the newspaper and society, news writing and contemporary affairs are open to lower division students. Entrance to Third Year Journalism is granted on ability shown by the individual in these courses to do newspaper work successfully.

Typewriting. All written work in the School of Journalism must be done on a typewriter. Students who have not had one semester of typing in high school must present credentials from a business college showing they are capable of making an average speed of 45 words per minute on the typewriter.

Graduation. The curriculum of the School of Journalism leads to the degree of bachelor of arts for which 180 credits must be obtained, plus five quarters in physical training and six quarters of military or naval science. Forty of these credits must be in required upper-division journalism and seven in prescribed lower-division pre-journalism. An average class grade of "B" or better must be earned in all journalism subjects. At the discretion of the journalism faculty, any student not maintaining this grade may be dropped as a journalism major.

A student holding a bachelor's degree from a recognized college or university may, with the consent of the director of the School, take Third Year Journalism. This work cannot be counted toward an advanced degree.

Students transferring to the University of Washington with less than 90 quarter credits will be held rigidly to the requirements specified in the journalism curriculum. Students transferring with 90 or more quarter credits (that is, upper division standing) may be exempted from certain requirements—other than those specified by the University for the degree in the College of Arts and Sciences—on application to, and at the discretion of, the director of the School of Journalism.

Graduate Study. Advanced degrees are not given in journalism, but a minor in journalism, toward the Master of Arts degree, may be arranged by agreement with the departments of history, economics, political science, sociology, and English.

CURRICULUM

Requirements for the degree of bachelor of arts, major in journalism, are scheduled below. A student seeking this degree is required to take the College of Arts and Sciences lower division requirement; seven credits of specified pre-journalism; 40 credits of additional journalism; 30 credits of English; and 20 credits in one of the fields of sociology, political science, psychology, history, home economics, geography, or economics. By special arrangement with the heads of the departments concerned, a student may elect his "secondary minor" in a field other than these seven above specified. If a student so desires he will find it possible to elect more than one "secondary minor," although only one is required.

Freshman Registration

Freshmen planning to enter the School of Journalism will register for the first year schedule given below. Thirty-seven credits are required and 10 credits of science must be selected from Group III. (By special arrangement certain geography courses may be substituted for a laboratory science elective.)

FIRST YEAR—Required

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|---------------------------|----------------|---------------------------|----------------|---------------------------|----------------|
| English 1..... | 5 | English 64..... | 5 | English 65..... | 5 |
| Geog. 70..... | 5 | Psych. 1..... | 5 | E.B. 1..... | 5 |
| Journ. 1..... | 1 | Pol. Sci. 1..... | 5 | Elective science..... | 5 |
| Elective Science..... | 5 | Journ. 2..... | 1 | M.S. and P.E. or N.S..... | + |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | | |
| | 16+ | | 16+ | | 15+ |

SECOND YEAR—Requirements (25 credits), and suggested electives (20 credits)¹

| | <i>Credits</i> | | <i>Credits</i> |
|--|----------------|---|----------------|
| †Journ. 51. Preliminary News Writing..... | 5 | E.B. 54, 55. Business Law..... | 10 |
| Journ. 91, 92. Contemporary Affairs..... | 2 | E.B. 100. Statistical Analysis..... | 5 |
| †Soc. 1. ² Survey of Sociology..... | 5 | †Speech 38. ³ Essen. of Argumentation..... | 5 |
| Soc. 55. Human Ecology..... | 5 | or | |
| Soc. 66. Group Behavior..... | 5 | †Speech 40. ³ Essentials of Speaking..... | 5 |
| Psych. 2. Psychology of Adjustment..... | 5 | Speech 41. Advanced Speaking..... | 3 |
| Pol. Sci. 61. Municipal Government..... | 5 | Speech 43. The Speaking Voice..... | 3 |
| Pol. Sci. 71. Great Personalities: | | Drama 51, 52, 53. Elementary Acting..... | 2 |
| Continental Europe..... | 3 | English 58. Introduction to Fiction..... | 5 |
| †Hist. 2. Medieval & Mod. European History | 5 | English 97, 98, 99. The Bible as Literature .. | 2 |
| Hist. 5. English Pol. & Social History..... | 5 | L.A. 1. Intro. to Modern Thought..... | 5 |
| Hist. 57-58. American History from | | L.A. 11. Intro. to Study of Fine Arts..... | 5 |
| 1607 to the Present Time..... | 10 | Art 9, 10, 11. Art Structure..... | 3 |
| Hist. 155. Social & Econ. History of Canada | 5 | Music 72, 73, 74. Music Lit. and History.... | 2 |
| †E.B. 2. Principles of Economics..... | 5 | | |

NOTES:

E.B. 1 is hyphenated. Students are required to take E.B. 2 in sophomore year.
Science requirements, 10 credits, are elective. Two laboratory sciences are strongly recommended.
A student may not elect more than five credits of non-laboratory science.
A modern foreign language "deficiency" must be cleared up in the sophomore year, except by special arrangement.

P.E. 10 or P.E. 15 must be taken by all students. P.E. 10 (for women), 5 credits, should be substituted in freshman year for one elective science. If not taken in freshman year, it must be taken as early as possible in sophomore year. P.E. 15 (for men) may be taken in third quarter of freshman year; if not then taken, it must be included in sophomore schedule as early as possible in that year.

†Courses so marked are required. Select your courses with your minor field in mind. If possible, take 10 credits (of the required 20) of your minor field during your freshman and sophomore years. In any event, not more than 15 credits of the minor may be deferred until the fourth year.

¹ In making up schedules students should also refer to Descriptions of Courses section, page 209, for listing of other courses.

² Soc. 1 or Soc. 150 will fulfill this sociology requirement. If taken in sophomore year, it will be Soc. 1; if taken in senior year, Soc. 150. Soc. 150 may not be taken by students who have had Soc. 1.

³ Speech requirements may be fulfilled by either 38 or 40. It should be kept in mind that Speech 40 is the prerequisite for several upper division speech subjects.

A student graduating from the School of Journalism must have a total of 25 credits in English, of which 15 (as noted above) are required. Suggestions for additional courses are listed above, as well as below.

THIRD YEAR—Non-elective

Journ. 147-148; 149-150-151; 152-153-154.

Pre-journalism students completing 90 scholastic credits, and passing their sixth quarter staff conferences, may then register for the non-elective Third Year. The Third Year starts at the beginning of the autumn quarter and concludes at the end of the spring quarter.

Pre-journalism students who have completed a minimum of 80 scholastic credits may apply and, if grades are sufficiently high, be permitted to register for the above non-elective year's work.

In the third year no grades or credits will be awarded to students doing satisfactory work until the end of the year. (For purposes of fraternity and sorority records, extra-curricular activities, etc., any student presenting a grade card will receive either a "Satisfactory" or "Unsatisfactory" thereon.) At the end of each quarter students whose work as journalism majors is unsatisfactory will be awarded grades ("C", "D" or "E") and such journalistic credit as they may have earned.

They must then arrange with their advisers in the College of Arts and Sciences to choose another major.

Majors in journalism in the Third Year will take their regular quarter examination in Geog. 102, and be awarded their grades in the usual way.

Majors in journalism in the Third Year will take a comprehensive examination, written and/or oral, covering seven days, during the final month of the spring quarter. Those receiving "A" or "B" grades will be eligible to continue toward their degrees, with a major in journalism. Those falling below "B" will be forced to change their major field. Credit, however, will be given in the latter case as well as in the former.

Students who fail to make the grade standing required in the Junior Journalism year may not repeat the course a subsequent year, except by permission of the director of the School of Journalism.

FOURTH YEAR—Wholly Elective

Advertising Sequence^a

| | Credits |
|---|---------|
| Journ. 130. Fundamentals of Advertising..... | 5 |
| Journ. 131. Display Advertising..... | 5 |
| Journ. 132. Advertising Typography..... | 5 |
| Pol. Sci. 116. Propaganda as a Social and Political Force..... | 5 |
| Journ. 201. Propaganda Seminar..... | 5 |
| Soc. 150. ^b General Sociology..... | 5 |
| Soc. 194. Public Opinion..... | 3 |
| Speech 161-162-163. Radio Speech..... | 2 |
| Speech 188. Advanced Problems in Speaking..... | 5 |
| E.B. 100. Statistical Analysis I..... | 5 |
| E.B. 106. Economics of Marketing and Advertising..... | 5 |
| E.B. 134. Wholesaling..... | 5 |
| E.B. 135. Retailing..... | 5 |
| E.B. 136. Advertising..... | 5 |
| E.B. 193 A, B, C. Problems of Wholesaling, Retailing and Advertising..... | 5 |

General Sequence^c

| | Credits |
|--|---------|
| Journ. 171-172. Magazine and Feature Writing..... | 3 |
| Journ. 173, 174-175. Short Story Writing..... | 5 |
| Journ. 201. Propaganda..... | 5 |
| Drama 111, 112, 113. Playwriting..... | 5 |
| Psych. 117. Superstition and Belief..... | 2 |
| Psych. 118. Social Psychology..... | 5 |
| Psych. 122. Thinking and Voluntary Action..... | 2 |
| Psych. 126. Psychology of Maladjustment..... | 5 |
| Soc. 150. ^b General Sociology..... | 5 |
| Hist. 124. Economic History of Europe Since the Industrial Revolution..... | 5 |
| Hist. 131. Europe Since 1870: The War and Its Backgrounds..... | 5 |
| E.B. 103. Money and Banking..... | 5 |
| E.B. 175. Business Fluctuations..... | 5 |
| Journ. 225, 226, 227. ^d Advanced Short Story Writing..... | 2 to 4 |

Editorial Sequence^e

| | Credits |
|---|---------|
| Journ. 90, ⁹¹ , 92. ⁷ Contemporary Affairs..... | 2 |
| Journ. 160. Editorial Writing..... | 3 |
| Journ. 191, 192, 193. Advanced Journalism..... | 2 |
| Journ. 199. Problems of Journalism..... | 2 to 4 |
| Pol. Sci. 116. Propaganda as a Social and Political Force..... | 5 |
| Journ. 201. Propaganda Seminar..... | 5 |
| Soc. 150. ^b General Sociology..... | 5 |
| Speech 161-162-163. Radio Speech..... | 2 |
| Soc. 194. Public Opinion..... | 3 |
| E.B. 103. Money and Banking..... | 5 |
| E.B. 175. Business Fluctuations..... | 5 |

^a Soc. 1 or Soc. 150 will fulfill this sociology requirement. If taken in sophomore year it will be Soc. 1; if taken in the senior year, Soc. 150. Soc. 150 may not be taken by students who have had Soc. 1.

^b The advertising sequence is designed primarily for those who plan to go into general advertising, newspaper advertising or agency work.

^c The general sequence is designed primarily for those who plan to go into radio continuity work; into magazine work; into publicity work; or into free lance writing.

^d The editorial sequence is designed primarily for those who plan to go into daily or weekly newspaper, editorial and reportorial work, or into one of the press services.

^e Journ. 90, 91 and 92 may each be taken for credit more than once, as the subject matter changes each quarter.

^f Journ. 225, 226 and 227 are graduate courses, and may not be taken in the fourth year except by an exceptional student who may have taken 173, 174-175, by special permission, in the sophomore year; or by a student who may have attained professional status.

Psych. 117, *Superstition and Belief*, two credits, Soc. 194, *Public Opinion*, three credits, and Journ. 201, five credits, may be included either under sociology or psychology, as well as under journalism.

Major in Home Economics and Journalism

See School of Home Economics, page 110.

Minor Fields

A minimum of 20 credits will be required to complete the work in a Minor Field. The Minors recommended are: sociology, psychology, political science, geography, history or economics. For guidance of journalism students the following sequences in the Minor Fields are suggested:

Sociology: †1, 2, 55, 66, 112, 165, 194.

Psychology: †1, 2, 112, 117, 118, 122, 126.

Political Science: †1, 61, 71, 113, 126, 152, 157.

Geography: †7, 103, 104, 105, 106, 111, 155.

History: †2, 5, 10, 57-58-59, 124, 131.

Economics and Business: †1-2, 103, 171, 172, 175.

Home Economics: 12, †15, 25, 41, †104, 131, †141, 144, 145, 181, 190.

Teaching Major or Minor in the College of Education

Major students in education who have had Jour. 1, 2, and 51, as prerequisites may obtain a major in journalism by completing the work in Third Year Journalism. An average class grade of "B" or better must be earned in all journalism subjects by education students majoring in journalism.

Minor in Journalism. Students wishing to minor in Journalism, regardless of major, must include the following courses in their minor: Jour. 1, 2, 51, 147, 149, and 125. These courses shall constitute the standard minor sequence and no substitutions will be permitted.

† Courses so marked are required. Select your courses with your minor field in mind. If possible, take 10 credits (of the required 20) of your minor field during freshman and sophomore years. In any event, not more than 15 credits of the minor may be deferred until the fourth year.

MATHEMATICS

A. F. Carpenter, Executive Officer, 237 Physics Hall

DEGREE: Bachelor of Arts or Bachelor of Science

For a major in mathematics the following courses in mathematics are required.

Prerequisite, ½ unit advanced algebra, ½ unit solid geometry in high school or university.

| | Credits |
|--|---------|
| 4. Plane Trigonometry..... | 5 |
| 5. College Algebra..... | 5 |
| 6. Analytical Geometry..... | 5 |
| 107, 108, 109. Differential and Integral Calculus..... | 15 |
| Electives (upper division)..... | 12 |
| Minimum total credits..... | 42 |

Students planning to elect any of the above courses subsequent to course 31 must consult the department before registering.

DEGREES: Bachelor of Science in Mathematics
Bachelor of Arts in Mathematics

Minimum requirements for the degree of Bachelor of Science in Mathematics.
In addition to the regular University requirements in English composition, physical education and military or naval science, the student shall earn the indicated number of credits in the following groups:

| Subjects | Credits |
|---|---------|
| Mathematics, an academic major plus eight approved U.D. credits..... | 50 |
| Physics, chemistry..... | 15 |
| Astronomy, geology, zoology, botany..... | 15 |
| Language, literature, art, architecture, music..... | 15 |
| History, political science, economics, sociology, psychology, philosophy..... | 15 |

†Students who expect to proceed to graduate work in mathematics should acquire a reading knowledge of both German and French.

Minimum requirements for the degree of Bachelor of Arts in Mathematics.
The same as above, except that a minimum of 15 credits in science (physics, chemistry, astronomy, geology, zoology, botany) is allowed; and the preponderance of the student's credits, including mathematics, should be in liberal arts courses.

The foregoing requirements can be met in a great variety of ways, depending upon the student's high school preparation and his individual needs.

Teaching Major or Minor in the College of Education

| Major | Credits | Minor | Credits |
|---|---------|------------------------------------|---------|
| 4. Plane Trigonometry..... | 5 | 4. Plane Trigonometry..... | 5 |
| 5. College Algebra..... | 5 | 5. College Algebra..... | 5 |
| 6. Analytical Geometry..... | 5 | 6. Analytical Geometry..... | 5 |
| 107, 108, 109. Diff. & Integral Calculus..... | 15 | U.D. Electives in Mathematics..... | 10 |
| Approved Electives in Mathematics..... | 15 | | |
| Minimum total..... | 45 | Minimum total..... | 25 |

Before beginning the above program, the student should have had in high school advanced algebra and solid geometry. Otherwise their equivalents, Math. 1 and Math. 2, must be taken without credit toward the major or minor.

Mathematics 1 can be taken concurrently with Mathematics 4; Mathematics 2 can be taken concurrently with 4, 5, 6, 107, and 102.

Mathematics 11 will not count toward a teaching major or minor.

Students who select mathematics as an academic major or minor must earn a grade of "C" or higher in a total of 45 and 25 hours respectively, exclusive of courses 1 and 2.

MUSIC

Carl Paige Wood, Director, 101 Music Building

DEGREES: Bachelor of Arts in Music
Bachelor of Arts

General Information

The School of Music offers three types of service: (1) cultural courses and participation groups for students in other fields; (2) a four-year curriculum for those who wish to major in music with a broad background in liberal arts; (3) professional training for those planning to be executants, teachers or composers.

High school music courses are not required for entrance to the School of Music, but their election in schools where they are adequately taught may make it possible to enter more advanced courses in the University. Modern language, history, and literature are desirable high school electives for students intending to major in music.

The equivalent of the first two years of the state course of study for high school credits in piano, or Music 9AX, is required of all music majors. Freshmen deficient in piano may be accepted as majors by demonstrating marked proficiency on other approved instruments, but must arrange to make up the deficiency immediately as a prerequisite to courses in harmony. For this purpose, elementary piano instruction is offered in groups at a small fee.

Freshmen will not ordinarily be given advanced credits in music, but will substitute other approved courses for those omitted.

Students other than freshmen whose training and proficiency in music, gained before entering the University, may warrant advanced standing, must make application during their first quarter of residence. In no case will more than 18 credits in vocal or instrumental music be allowed students entering with advanced standing.

Classification of Courses

I. Materials and Composition

| | |
|--------------------------|---|
| 14, 15, 16. Fundamentals | 112, 143. Form and Orchestration |
| 51, 52, 53, 101. Harmony | 147, 148, 149, 157, 158, 159. Composition |
| 109, 163. Counterpoint | |

II. Music Literature and History

| | |
|--|--|
| 21, 22, 23, 24. Courses for non-majors | 193. Music History Reading Course |
| 4, 72. Introduction to Music History | 87, 105, 106, 145, 151, 153, 160, 161, 162, 181, |
| 54, 55. Sophomore courses. | 187, 190, 191, 192. Elective courses |
| 132. Haydn, Mozart, and Beethoven | |

III. Music Education

| | |
|------------------------------------|-------------------------------|
| 40, 41, 42. Orchestral Instruments | 127, 128. Choral Music |
| 113, 116, 155. School Music | 165, 166, 167. Piano Pedagogy |

IV. Choral Ensembles

| | |
|-------------------------------|---------------------------------|
| 10, 11, 12. University Chorus | 80, 81, 82. University Choir |
| 65, 66, 67. Glee Clubs | 121, 122, 123. Madrigal Singers |

V. Instrumental Ensembles

30, 31, 32. Elementary Band
 37, 38, 39, 139. Piano Ensemble
 43. Elementary Orchestra
 124, 125, 126. Chamber Music

90, 91, 92. Concert Band
 93, 94, 95. Symphony Orchestra
 138. Accompanying

VI. Conducting

136, 195. Choral Conducting

180. Orchestral Conducting

VII. Vocal and Instrumental Music

1, 2, 3, 7, 8, 9. Group Instruction
 18, 19, 20, 48, 49, 50, 68, 69, 70, 118, 119, 120,
 168, 169, 170. Individual Instruction

60, 62. Advanced Orchestral Instruments
 199. Senior Recital

VIII. Courses for Graduates

200. Introduction to Musicology
 201, 202, 203. Composition
 204, 205, 206. Individual Research

207, 208, 209. Thesis
 210, 211, 212, 221, 222, 223. Hist. & Literature
 218, 219, 220. Vocal and Instrumental Music
 230, 233. Seminars

Organizations and Activities

The courses in choral and instrumental ensemble are open to any student in the University who can qualify, and may be taken for credit or participated in as activities. Auditions are held during the first week of the autumn quarter.

The choral organizations are the University Chorus, the Men's Glee Club, the Women's Glee Club, the University Choir and the Madrigal Singers.

The instrumental organizations include the University Orchestra, the Concert Band, the Marching Band, and smaller units such as string quartets.

Concerts and Student Recitals

In addition to the concerts given by the various ensemble organizations, the School of Music schedules a number of student recitals which provide opportunity for individual public performance. All music students are urged to attend these recitals.

The University Broadcasting Studios make it possible for students to study recordings of their own performances and to appear on occasional public broadcasts.

CURRICULA IN MUSIC

In addition to the specific requirements listed below, all music majors must satisfy the University requirements in Physical Education, Military Science, and English Composition. Not less than twenty credits must be earned in Group II of the College of Arts and Sciences (see page 86), and ten credits in Group III.

Each student who registers for Music 14, 15, or 16 (Fundamentals) is given a placement examination at an early meeting of the class. As a result of this examination he may be required to change his registration, either to make up deficiencies or to enter a more advanced class.

*Prescribed Curricula***Bachelor of Arts in Music**

A total of eighteen credits must be earned in ensemble courses, so distributed that not less than six are in choral groups and six in instrumental groups. An ensemble course may be repeated once with credit.

The total required in vocal or instrumental music varies from eighteen to thirty-six credits, according to the major chosen.

| <i>First Year</i> | <i>Credits</i> | <i>Second Year</i> | <i>Credits</i> |
|---|----------------|--------------------------------------|----------------|
| Music 4. Intro. to Music History..... | 2 | *Music 52, 53. Harmony..... | 8 |
| Music 15, 16. Fundamentals..... | 6 | Music 54 or 55. History and Lit..... | 2 |
| †Music 40 or 41, and 42. Orches. Instrum. 6 | 6 | Music 109. Counterpoint..... | 5 |
| Music 51. Harmony..... | 5 | Music 127. Choral Literature..... | 2 |
| Vocal or Instrumental Music..... | 6-9 | Vocal or Instrumental Music..... | 6-9 |
| Ensemble..... | 3-6 | Ensemble..... | 3-6 |
| | | Physics 50. Sound..... | 5 |
| | | †Education 1..... | 2 |

†Except for Voice majors.

*Students in Music 51 will be given a test for exemption from Music 52.

†For Music Education majors only.

After the first two years the requirements are as follows:

I. Major in Vocal or Instrumental Music

A student must show marked talent for performance before proceeding further. Of the 36 credits required in Vocal or Instrumental Music, 30 must be in the major branch (e.g., piano) in addition to the Senior Recital (Music 199). No course below Music 48 may be included in these 30 credits.

| | <i>Credits</i> | | <i>Credits</i> |
|--|----------------|---------------------------------|----------------|
| Music 101, 112, 143, 147..... | 18 | Music 199. Senior Recital..... | 2 |
| Music 132, 193..... | 7 | Ensemble (4 years)..... | total 18 |
| U.D. Music electives..... | 6 | Philosophy 129. Aesthetics..... | 5 |
| Vocal or Instrumental Music (4 yrs.) total | 36 | | |

Voice majors take Music 160, Literature 57, ten credits of German and ten credits of either French or Italian. The requirement of Music 40, 42, and 147 is omitted.

Piano majors take Music 138, 139, 165, 166, 167.

Organ majors take Music 145 and 163.

II. Major in Music Education

A grade point average of 2.5 must be maintained with an average grade of "C" in required music courses.

As a prerequisite to cadet teaching, students must demonstrate proficiency in piano and voice equivalent to Music 9AX and 9CX.

| | <i>Credits</i> | | <i>Credits</i> |
|---------------------------|----------------|--|----------------|
| Music 101, 112, 128..... | 12 | Music 136, 180..... | 6 |
| Music 113, 116..... | 8 | Vocal or Instrumental Music (4 yrs.) total | 18 |
| Music 132, 193..... | 7 | Ensemble (4 years)..... | total 18 |
| U.D. Music electives..... | 6 | Education 9, 70, 75R, 90..... | 12 |
| | | Psychology 1..... | 5 |

The Bachelor of Arts in Music degree will be awarded upon completion of the foregoing requirements.

To qualify for the state teacher's certificate it is desirable to choose, not later than the junior year, a teaching minor in two academic fields. The three-year teacher's certificate will be awarded upon satisfactory completion of 45 additional credits including the following requirements:

| | <i>Credits</i> | | <i>Credits</i> |
|--------------------------|----------------|------------------------------------|----------------|
| Music 155..... | 3 | Vocal or Instrumental Music..... | 6 |
| U.D. Music elective..... | at least 5 | Education 30, 60, 71, 72, 120..... | 14 |

The total of 225 credits must include 15 credits in contemporary social problems. Courses in current history, political science, economics and sociology will satisfy this requirement.

III. Major in Composition

| | <i>Credits</i> | | <i>Credits</i> |
|---|----------------|--|----------------|
| Music 101, 112, 143, 163..... | 20 | Vocal or Instrumental Music (4 yrs.) total | 18 |
| Music 136, 180..... | 6 | Ensemble (4 years)..... | total 18 |
| Music 132, 193..... | 7 | Philosophy 129. Aesthetics..... | 5 |
| Music 147, 148, 149, 157, 158, 159..... | 18 | | |
| U.D. Music Electives | 6 | | |

In addition to the foregoing three prescribed curricula leading to the degree of Bachelor of Arts in Music, the School of Music offers a broader non-professional curriculum leading to the degree of Bachelor of Arts.

Elective Curriculum in Music

Bachelor of Arts

The minimum requirements for the first two years include twenty credits in Group II of the College of Arts and Sciences and ten credits in Group III (see p. 86).

At least 60 of the total 180 credits shall be in upper division courses.

| | | | |
|-------------------------------------|----|-----------------------|----|
| Music Fundamentals and Harmony..... | 16 | Ensemble..... | 6 |
| Music History and Literature..... | 18 | *Music Electives..... | 12 |

*Major students in this curriculum will be given an examination in vocal or instrumental music not later than the end of their second year, and may be required to take additional work in this field.

Teaching Major or Minor in the College of Education

Students in the College of Education desiring a major or minor in music must satisfy the department of music as to their qualifications. These include the equivalents of Music 4 and 16 as prerequisites to the courses listed below.

Proficiency in piano equivalent to Music 9AX must be demonstrated not later than the junior year.

In required music courses a grade average of "C" or better must be earned.

Majors in music must take cadet teaching in music (Education 71-72).

Minors in vocal school music must earn six credits in vocal music above the level of Music 9CX.

Minors in instrumental school music must demonstrate satisfactory proficiency in both wind and string instruments.

| <i>Major</i> | <i>Credits</i> | <i>Minor (for non-music majors)</i> | <i>Credits</i> |
|--|----------------|--|----------------|
| Music 51, 53. Harmony..... | 10 | Music 40, 41 or 42. Orchestral Instr..... | 3 |
| Music 109. Counterpoint..... | 5 | Music 51, 53. Harmony..... | 10 |
| Music 40 or 41, and 42. Orches. Instrum.. | 6 | Music 116, Educ. 75R. School Music..... | 5 |
| Music 54 or 55, and 132. Lit. and Hist.... | 4 | Music 127. Choral Music..... | 2 |
| Music 127, 128 Choral Music..... | 4 | Music 136, 180. Conducting..... | 6 |
| Music 113, 116, 155, Educ. 75R. | | Vocal or Instrumental Music..... | 6 |
| School Music | 13 | | 32 |
| Music 136, 180. Conducting..... | 6 | | |
| Vocal and Instrumental Music..... | 12 | | |
| Minimum total | 60 | | |
| | | <i>Minor (for vocal school music)</i> | |
| <i>Minor (for majors in music)</i> | | Music 51. Harmony..... | 5 |
| <i>Minor (for majors in music)</i> | | Music 127, 128. Choral Music..... | 4 |
| Music 112. Form..... | 5 | Music 136, 195. Conducting..... | 6 |
| U.D. Music electives..... | 10 | Educ. 75R. High School Music..... | 2 |
| | 20 | Vocal Music | 6 |
| | | | 23 |
| | | <i>Minor (for instrumental school music)</i> | |
| | | Music 40, 41, 42. Orchestral Instr..... | 9 |
| | | Music 51. Harmony..... | 5 |
| | | Music 127. Choral Music..... | 2 |
| | | Music 136, 180. Conducting..... | 6 |
| | | Educ. 75R. High School Music..... | 2 |
| | | | 24 |

NURSING EDUCATION

Elizabeth S. Soule, Director, Nursing Education Building

Admission Requirements

Basic and advanced courses in nursing require full matriculation in the College of Arts and Sciences, subject to its admission requirements.

Students in basic nursing curriculum "A" seeking affiliation for professional instruction are subject to the entrance requirements of the hospital division selected. A limited number of basic students will be admitted to the Harborview division in any one quarter.

Entrance requirements for the one-year preliminary hospital course, curriculum B, are high school graduation and recommendation of the hospital superintendent of nurses.

Students in post-graduate nursing curricula such as public health and nursing supervision must be graduates of approved hospitals, with services in the four major fields: obstetrics, medicine, surgery, and pediatrics. A deficiency in one of these basic services may be made up through post graduate work in an institution offering a course approved by the University of Washington. These students must supply a transcript of their record and recommendations from their schools of nursing together with evidence of their professional registration in the State of Washington.

Correspondence relative to affiliation for institutional or field work should be addressed to the School of Nursing Education, University of Washington, and should specify the institution in which the applicant is interested.

Health. Students in basic and advanced nursing courses must be in sound physical and mental condition upon entrance. Recommendations for entrance to professional divisions will not be given without evidence as to the state of the applicant's health. The University Health Service has general supervision over the health of all students. Nursing Education students are required to have a special health examination, chest X-ray, and inoculations for smallpox, typhoid, and diphtheria before hospital entrance or field practice. Any defects which can be corrected must be cared for by the student at her own expense. Serious physical defects will bar the student from entrance or may terminate her course at any time on recommendation of the Health Service.

A second physical examination is made by the affiliating hospital before accepting the student. Medical care and health service, including infirmary care not to exceed two weeks at any one time, are provided by the affiliating hospital for students in residence. Hospitalization is given only in emergency and is subject to institutional rule. No responsibility is assumed in case of illness arising from defects which existed on entrance. Students must request and receive all types of medical care through the nursing office, or must sign a release of the hospital from any responsibility.

Expenses

Student Expenses: The student in the School of Nursing Education must plan to finance her complete course. She must maintain herself and pay tuition and personal expense during all periods of campus residence. While in the hospital division she receives maintenance in the nurses' residence, but must provide her own uniforms, text-books and special supplies.

Basic students receive no salary for nursing service but their University tuition is paid through the hospital division student education funds.

For post-graduate nurses where professional service is rendered of value exceeding educational program offered in return, salary may be graded according to type of maintenance, service and course. Adjustment is subject to institutional, educational and professional regulations. Post-graduate students provide their own uniforms, textbooks, and special supplies and pay their own University tuition.

CURRICULA

Students entering the School of Nursing Education may take up curricula in one of three main groups:

- I. Basic courses leading to the degree of bachelor of science in nursing.
- II. Courses for graduate nurses:
 - a. Leading to the degree of bachelor of science in nursing
 - b. Leading to the certificate in public health nursing
 - c. Leading to the certificate in nursing supervision
- III. Courses leading to the degree of master of science or master of nursing.

Group I. Basic Courses

CURRICULUM A

Quarters in Campus Division

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-----------------------------|----------------|-----------------------------|----------------|-----------------------------|----------------|
| Physics 89. Home..... | 5 | Physics 90. Home..... | 5 | Chem. 2 or 22. General... 5 | |
| N.Ed. 1. History..... | 3 | English 5. Composition... 3 | | Psych. 1. General..... 5 | |
| English 4. Composition... 3 | | Chem. 1 or 21. General... 5 | | Anat. 100. Lectures 3 | |
| Elective | 5 | Elective | 3 | Anat. 101. Gen. Human... 3 | |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| Chem. 137. Organic..... 5 | | Bact. 102 Sanitary and | | Home Econ. 105. Advanced | |
| Bact. 101. General..... 5 | | Clinical Methods | 5 | Nutrition | 5 |
| Physiol. 53. Human | 5 | Home Econ. 9. Nutrition.. 6 | | Soc. 1. Survey | 5 |
| Physical Education | 1 | Physiol. 54. Human | 5 | Elective | 5 |
| | | Physical Education | 1 | | |

Quarters in Hospital Division

| | | | |
|-----------------------------|-----------------------------|-----------------------------|---|
| Anat. 105. Pathology..... 3 | Phar. 61. Therapeutics... 3 | N.Ed. 125. Prin. Med. Surg. | |
| Phar. 51. Elementary..... 2 | N.Ed. 121. Adv. Nursing. 3 | Spec. & Nurs. Care..... 5 | |
| N.Ed. 120. Elem. Nurs... 5 | N.Ed. 123. Intro. Hosp. & | N.Ed. 128. Medical Nursing | |
| N.Ed. 122. Intro. Hosp. & | Spec. Ther. Practice... 5 | Practice | 6 |
| Spec. Ther. Pract..... 5 | N.Ed. 124. Prin. Gen. Med. | | |
| N.Ed. 129. Prin. Spec. | Surg. Oto. Nurs..... 5 | | |
| Ther. | | | |
| | | | |
| N.Ed. 137. Intro. Public | N.Ed. 100. Prof. Probs.. 2 | N.Ed. 134. Out-Patient | |
| Health Nursing | *Soc. 128. Field of | Nursing Practice | 6 |
| N.Ed. 130. Prevent. Med.. 4 | Social Work | N.Ed. 141. Prin. Obstetrics | |
| N.Ed. 132. Surgical Nurs- | N.Ed. 133. Operating Room | & Obstetrical Nurs..... 5 | |
| ing Practice | Practice | | |
| | | | |
| N.Ed. 139. Principles of | Elective | Elective | 2 |
| Pediatric Nursing | N.Ed. 142. Obstetrical | N.Ed. 145. Tuberculosis | |
| N.Ed. 140. Pediatric | Nursing Practice | Nurs. Pract. | 3 |
| Nursing Practice | | N.Ed. 146. Visiting | |
| | | Nursing Practice | 3 |
| | | | |
| | N.Ed. 147. Prin. Psychiatry | | |
| | and Psych. Nurs..... 5 | | |
| | N.Ed. 148. Psych. Nurs. | | |
| | Practice | | |

*Preferred elective.

Twenty elective credits must be taken in Group I or II.

CURRICULUM B

A selected course not meeting the complete curriculum requirements for the degree of bachelor of science in nursing is offered for students of hospital schools wishing the cooperation of the University in a one-year preliminary nursing course. On completion of this preliminary course and the hospital course, which grants

lump credits, the student receives junior standing in the University toward the degree of bachelor of science in nursing under curriculum A in group II.

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|------------------------------|----------------|------------------------------|----------------|
| English 4. Composition . . . | 3 | English 5. Composition . . | 3 | Chem. 2 or 22. General . . . | 5 |
| N.Ed. 1. History | 3 | Chem. 1 or 21. General . . . | 5 | Home Econ. 9. Nutrition . . | 6 |
| Psychology 1. General . . . | 5 | Anat. 100. Lectures | 3 | Physiol. 53. Human | 5 |
| Elective | 5 | Soc. 1. Survey | 5 | Physical Education | 1 |
| Physical Education | 1 | Physical Education | 1 | | |
| | | <i>Summer Quarter</i> | <i>Credits</i> | | |
| | | Physiol. 54. Human | 5 | | |
| | | Anat. 101. General Human . . | 3 | | |
| | | Bact. 101. General | 5 | | |
| | | Elective | 2 | | |

Group II. Curricula for Graduate Nurses

CURRICULUM A

The University offers this course to enable the graduate nurse to broaden her scientific and cultural background and prepare for advanced professional work. It allows the student a choice of her electives in the fields of public health nursing, nursing administration, or nursing education, and grants the degree of bachelor of science in nursing.

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-------------------------------|----------------|------------------------------|----------------|------------------------------|----------------|
| English 1. Composition . . . | 5 | Chem. 1 or 21. General . . . | 5 | Chem. 2 or 22. General . . . | 5 |
| Psychol. 1. General | 5 | English 2. Composition . . . | 5 | E.B. 4. Survey | 5 |
| Elective | 5 | Elective | 5 | Elective | 5 |

SECOND YEAR

| | | | | | |
|------------------------------|----|------------------------------|---|-----------------------------|----|
| Physiol. 53. Human | 5 | Physiol. 54. Human | 5 | Home Econ. 105 or 106 . . . | 5 |
| Elective | 10 | N.Ed. 150 | 5 | Elective | 10 |
| | | Soc. 1. Survey | 5 | | |

THIRD YEAR

| | | | | | |
|-------------------------------|---|---|---|-------------------------------|----|
| Bact. 101. General | 5 | Bact. 102. Sanitary and Clinical Methods | 5 | Bact. 103. Public Hygiene . . | 5 |
| N.Ed. 167. Prin. P.H.N. . . . | 3 | N.Ed. 168. Spec. Flds. P.H.N. . | 5 | Elective | 10 |
| N.Ed. 169. Pub. Health . . . | 3 | | | | |
| or | | | | | |
| N.Ed. 151. Administration . . | 5 | N.Ed. 104. Epidemiology . . . | 2 | | |
| Elective | 5 | or | | | |
| | | N.Ed. 152. Supervision | 5 | | |
| | | Elective | 5 | | |

CURRICULUM B

Leading to Certificate in Public Health Nursing

This course includes five quarters of academic work at the University and one quarter of field work, or four quarters of academic work and two quarters of field work, depending upon the experience the individual student has had in the public health nursing field.

| <i>Credits</i> | <i>Credits</i> |
|---|----------------|
| N.Ed. 167. Prin. Public Health Nursing..... | 3 |
| N.Ed. 169. Public Health..... | 3 |
| N.Ed. 104. Epidemiology..... | 2 |
| N.Ed. 168. Spec. Fields of P.H.N..... | 5 |
| N.Ed. 150. Prin. Teach. Nurs. & Health..... | 5 |
| Home Econ. 106. Nutr. for Pub. Hlth. Nrs..... | 5 |
| Soc. 1. Survey..... | 5 |
| Soc. 128. Field of Social Work..... | 3 |
| Soc. Work 175. Social Case Work..... | 5 |
| Psych. 1. General..... | 5 |
| Bact. 103. Public Hygiene..... | 5 |
| N.Ed. 162, 163, 164. Field Work..... | 16 |
| *N.Ed. 166. Advanced Field Work..... | 12 |
| *N.Ed. 165. Survey of Current Literature in Public Health Nursing..... | 2 |
| *English 1. Composition..... | 5 |
| *English 2. Composition..... | 5 |
| *Speech 40. Essentials of Speaking..... | 5 |
| *Psych. 131. Child Psychology..... | 5 |
| *Chem. 1 or 21. General..... | 5 |
| *Chem. 2 or 22. General..... | 5 |

*Electives.

Total credits required 90

CURRICULUM C

Leading to a Certificate in Institutional Nursing Supervision

The University offers the course leading to a certificate in nursing supervision for graduate nurses who wish preparation as head nurses or supervisors. This program combines four to seven credits of academic work each quarter with a year's professional practice in one major and two minor nursing services elected from the obstetric, pediatric, medical, surgical, operating room, psychiatric, emergency and neuro-surgery, out-patient nursing, tuberculosis, and diet therapy specialties.

Prerequisite Courses

| | Credits | | Credits |
|----------------------|---------|--------------------------------|---------|
| E.B. 4. Survey | 5 | Psych. 1. General..... | 5 |
| Soc. 1. Survey | 5 | Home Econ. 105. Nutrition..... | 5 |
| | | or | |
| | | Home Econ. 106. Nutrition..... | 5 |

Advanced Supervisory Program

| Academic Courses | Credits | Professional Practice | |
|--|---------|---|------------|
| Phar. 101E. Advanced Pharmacy | 2 | Review, supervision, and advanced administration in classes and practice of major and 1st and 2nd minor nursing specialties selected. | |
| N.Ed. 150. Principles of Teaching | 5 | 1st Minor Service..... | 1 quarter |
| N.Ed. 152. Supervision of Hospital Depts..... | 5 | 2nd Minor Service..... | 1 quarter |
| N.Ed. 153. Adm. of Nursing Service..... | 5 | Major Service..... | 1 quarter |
| N.Ed. 151. Adm. Nursing Schools..... | 5 | Advanced Administration and Teaching | 1 quarter |
| N.Ed. 154. Cadet Teaching and Ward Administration..... | 10 | Total practice required..... | 4 quarters |
| Total credits required..... | 47 | | |

Group III. Graduate Curricula

Graduate work in Nursing Education is offered with a major in the fields of (1) Administration in Schools of Nursing, (2) Teaching and Supervision, (3) Public Health Nursing. The minor must be chosen from the allied fields.

If the Master of Science is desired the minor should be in the fields of biological or physical sciences such as physiology, anatomy, bacteriology, or chemistry. If the Master of Nursing is desired the minor should be in the fields of social sciences, education or home economics.

OCEANOGRAPHIC LABORATORIES

See bulletin of the Oceanographic Laboratories, available upon request. For courses, see page 299.

PHILOSOPHY

William Savery, Executive Officer, 264 Philosophy Hall

DEGREE: Bachelor of Arts

Major Requirements

| | Credits |
|---|---------|
| 2. Introduction to Social Ethics or | |
| 3. Introduction to Ethics..... | 5 |
| 5. Introduction to Logic..... | 5 |
| 101-102-103. History of Philosophy..... | 9 |
| Electives..... | 17 |
| Minimum total credits..... | 36 |

Fifty per cent of the credits in the major must be in upper division courses. Psychology 1 is required, and major students are urged to elect courses in psychology.

PHYSICAL AND HEALTH EDUCATION FOR MEN AND WOMEN

*Mary Gross Hutchinson, Executive Officer,
105 Women's Physical Education Building*

Henry M. Foster, Executive Officer, 210 Men's Pavilion

DEGREE: Bachelor of Arts

The School of Physical and Health Education includes four main divisions: (1) Physical Education Activity Program, (2) Health Instruction, (3) Intramural Sports and Recreation, (4) Professional Teacher Education.

An extensive program in intramural sports and recreational activities is conducted for both men and women. The program provides for organized competition, clubs, and the use of facilities for recreational purposes.

Professional education is offered in the fields of physical education, recreational leadership, and health education. Application for admission to professional curricula is required after completion of 75 credits. The required foundation courses and professional courses are listed below. For additional requirements for the three-year normal diploma, requisite for high school teaching in the State of Washington, see College of Education, page 144.

Group A. Major in Physical Education (For the non-professional student)

Required foundation and related courses:

| Credits | Credits |
|--|-----------|
| Zool. 1. Animal Biology..... | 5 |
| Zool. 2. General Zoology..... | 5 |
| Zool. 16. Evolution..... | 2 |
| Zool. 17. Eugenics..... | 2 |
| Chem. 1-2. General Chemistry..... | 10 |
| (Unless taken in high school) | |
| Anat. 100. Anatomy Lectures..... | 3 |
| Physiol. 50. Physiology..... | 6 |
| H.E. 104. Nutrition for Non-majors..... | 2 |
| *Lib. Arts 1..... | 5 |
| †P.E. 4, 6..... | 4 |
| English 1-2..... | 10 |
| *Mil. or Nav. Sci..... | †12-18 |
| Soc. 1. Survey of Sociology..... | 5 |
| Psych. 1. General Psychology..... | 5 |
| Speech 40. Essentials of Speaking..... | 5 |
| †P.E. 11, 12, 13. Physical Education Activities for Freshman Majors..... | +6 |
| †P.E. 51, 52, 53. Physical Education Activities for Sophomore Majors..... | +6 |
| *P.E. 5, 7, 8; 9, 10, 11. Phys. Educ. Activities for Majors..... | +6 |
| Total credits required..... | *70+12-24 |

* Required of men only.

† Required of women only.

Required professional courses:

| <i>Men</i> | <i>Credits</i> |
|---|----------------|
| 102-103. Problems in P.E..... | 2 |
| 107. Personal and General Hygiene..... | 3 |
| 109. School Dance Program..... | 2 |
| 110. First Aid and Safety..... | 3 |
| 115. Physiology of Muscular Exercise..... | 5 |
| 145. Principles of Physical Education..... | 3 |
| 146. Principles of Health Education..... | 2 |
| 150. School Physical Education Program.. | 5 |
| 153. Meth. & Materials in Health Teaching | 3 |
| 158. Methods in Teaching Apparatus, Tumbling and Stunts..... | 2 |
| 161. Meth. in Teaching Boxing, Wrestling. | 2 |
| 163. Meth. & Material in Teaching Sports. | 2 |
| 165. School Health Education Program.... | 3 |

Total credits required.....37

| <i>Women</i> | <i>Credits</i> |
|--|----------------|
| 102-103. Problems in P.E..... | 2 |
| 111. Rhythmic Activities for Small Child.. | 2 |
| 112. Elem. School Athletic Program..... | 3 |
| 115. Physiology of Muscular Exercise..... | 5 |
| 118. Analysis of Rhythm..... | 3 |
| 128. Admin. & Org. of Camp Programs... | 3 |
| 145. Principles of Physical Education..... | 3 |
| 146. Principles of Health Education..... | 2 |
| 156. Meth. & Materials in Teaching Dance | 2 |
| 162. Meth. & Materials in Teaching Folk, Tap, and Clog Dancing..... | 2 |
| 163. Meth. & Materials in Teaching Sports | 2 |
| 164. Meth. in Teaching Swimming..... | 3 |
| 165. School Health Education Program.... | 3 |

Total credits required.....35

Group B. Major in Recreational Leadership

(For the professional student in the field of recreation)

Required foundation and related courses:

| | <i>Credits</i> |
|---|----------------|
| English 1, 2. | 10 |
| †P.E. 11, 12, 13. P.E. Activities for Freshman Majors | +6 |
| †P.E. 51, 52, 53. P.E. Activities for Sophomore Majors | +6 |
| *P.E. 5, 7, 8, 9, 10, 11. P.E. Activities for Majors | +6 |
| †P.E. 4, 6. Health Education..... | 4 |
| *P.E. 107. Personal & General Hygiene... | 3 |
| Zool. 1. Animal Biology..... | 5 |
| Zool. 2. General Zoology..... | 5 |
| Zool. 16. Evolution..... | 2 |
| Zool. 17. Eugenics..... | 2 |
| Physiol. 50. Physiology..... | 6 |
| H.E. 104. Nutrition for Non-Majors..... | 2 |
| Anat. 100. Anatomy Lectures..... | 3 |

| | <i>Credits</i> |
|--|----------------|
| Psych. 1. General Psychology..... | 5 |
| Speech 40. Essentials of Speaking..... | 5 |
| Chem. 1-2. General Chemistry..... | 10 |
| (Unless taken in high school) | |
| Sociology Elective | 10 |

Total credits required.....†69+12
*68+ 6

Elective Related:

| | |
|--|---|
| Forestry 6. General Forestry..... | 2 |
| Forestry 65. Forest Recreation..... | 3 |
| Librarianship 180. Story Telling..... | 3 |
| Music 22, 23, 24. Music Appreciation.... | 2 |
| Psych. 118. Social Psychology..... | 5 |

Required professional courses:

| <i>Men</i> | <i>Credits</i> |
|--|----------------|
| 102-103. Problems in P.E..... | 2 |
| 109. School Dance Program..... | 2 |
| 110. First Aid and Safety..... | 3 |
| 115. Physiology of Muscular Exercise..... | 5 |
| 124. Activities and Recreational Methods.. | 3 |
| 125. Administration of Play & Recreation. | 3 |
| 126. Observation and Practice Teaching... | 2 |
| 145. Principles of Physical Education..... | 3 |
| 146. Principles of Health Education..... | 2 |
| 158. Meth. in Tch. Appar., Tumbl., Stunts. | 2 |
| 161. Meth. in Tch. Boxing & Wrestling... | 2 |
| 163. Meth. & Materials in Teaching Sports | 2 |
| 164. Meth. in Teaching Swimming..... | 2 |
| 165. School Health Education Program.... | 3 |
| 170 or 171 or 172 or 173. Athletic Coach.. | 6 |

Total credits required.....42

| <i>Women</i> | <i>Credits</i> |
|--|----------------|
| 101. Meth. & Mat. in Gym., Stunts, Tumbl. | 3 |
| 102-103. Problems in P.E. | 2 |
| 110. First Aid and Safety..... | 2 |
| 111. Rhythmic Activities for Small Child.. | 2 |
| 112. Elementary School Athletic Program. | 3 |
| 115. Physiology of Muscular Exercise..... | 5 |
| 118. Analysis of Rhythm..... | 3 |
| 124. Activities and Recreational Methods.. | 3 |
| 125. Administration of Play & Recreation. | 3 |
| 126. Observation and Practice Teaching... | 4 |
| 128. Admin. & Organ. of Camp Programs. | 3 |
| 145. Principles of Physical Education..... | 3 |
| 146. Principles of Health Education..... | 2 |
| 156. Meth. & Materials in Teaching Dance | 2 |
| 162. Meth. & Materials in Teaching Folk, Tap, Clog Dancing..... | 2 |
| 163. Meth. & Material in Teaching Sports. | 3 |
| 164. Meth. in Teaching Swimming..... | 3 |
| 165. School Health Education Program.... | 3 |

Total credits required.....51

*Required of men only.

†Required of women only.

Group C. Professional Teacher Training
(For the professional student in health and physical education)

**TEACHING MAJOR IN PHYSICAL EDUCATION
IN THE COLLEGE OF EDUCATION**

Required foundation and related courses:

| | <i>Credits</i> | | <i>Credits</i> |
|---|----------------|--|----------------|
| Zool. 1. Animal Biology..... | 5 | Soc. 1. Survey of Sociology..... | 5 |
| Zool. 2. General Zoology..... | 5 | Psych. 1. General Psychology..... | 5 |
| Zool. 16. Evolution..... | 2 | Speech 40. Essentials of Speaking..... | 5 |
| Zool. 17. Eugenics..... | 2 | Nurs.Ed. 104..... | 2 |
| Chem. 1-2. General Chemistry..... | 10 | †P.E. 11, 12, 13. Physical Education Activities for Freshman Majors..... | +6 |
| (Unless taken in high school) | | †P.E. 51, 52, 53. Physical Education Activities for Sophomore Majors..... | +6 |
| Anat. 100. Anatomy Lectures..... | 3 | *P.E. 5, 7, 8, 9, 10, 11. Physical Education Activities for Majors..... | +6 |
| Physiol. 50. Physiology..... | 6 | | |
| H.E. 104. Nutrition for Non-Majors..... | 2 | Total credits required..... | *65+ 6 |
| *Lib. Arts 1..... | 5 | | †68+12 |
| †P.E. 4-6..... | 4 | | |
| English 1-2..... | 10 | | |

Required professional courses:

| <i>Men</i> | <i>Credits</i> | <i>Women</i> | <i>Credits</i> |
|---|----------------|---|----------------|
| 102-103. Problems in Physical Education..... | 2 | 102-103. Problems in Physical Education..... | 2 |
| 107. Personal and General Hygiene..... | 3 | 101. Meth. & Mat. in Gym., Stunts, Tumb.... | 3 |
| 109. School Dance Program..... | 2 | 110. First Aid and Safety..... | 2 |
| 110. First Aid and Safety..... | 3 | 111. Rhythmic Activities for Small Children.. | 2 |
| 115. Physiology of Muscular Exercise..... | 5 | 112. Elementary School Athletic Program.... | 3 |
| 122. Kinesiology..... | 3 | 113. Principles of Recreation..... | 3 |
| 127. Tests and Measurements..... | 3 | 115. Physiology of Muscular Exercise..... | 5 |
| 135. Adapted Activities..... | 3 | 118. Analysis of Rhythm..... | 3 |
| 145. Principles of Physical Education..... | 3 | 122. Kinesiology..... | 3 |
| 146. Principles of Health Education..... | 2 | 128. Admin. & Organization of Camp Prog.... | 3 |
| 150. School Physical Education Program..... | 5 | 145. Prin. of Health and Physical Education.. | 5 |
| 153. Meth. & Materials in Health Teaching.... | 3 | 150. School Physical Education Program..... | 2 |
| 158. Meth. in Tch. Appar., Tumb., Stunts.. | 2 | 153. Meth. & Materials in Health Teaching.... | 3 |
| 161. Meth. in Teach. Boxing, Wrestling..... | 2 | 156. Meth. & Materials in Teaching Dance.... | 2 |
| 163. Meth. & Materials in Teaching Sports.... | 2 | 162. Meth. & Materials in Teaching Folk, Tap and Clog Dancing..... | 2 |
| 164. Methods in Teaching Swimming..... | 2 | 163. Meth. & Materials in Teaching Sports.... | 3 |
| 165. School Health Education Program..... | 3 | 164. Methods in Teaching Swimming..... | 3 |
| Athletic Coaching..... | 6 | 165. School Health Education Program..... | 3 |
| Total credits required..... | 54 | Coaching..... | 0 |
| | | Total credits required..... | 52 |

*Required of men only.

†Required of women only.

**TEACHING MINOR IN PHYSICAL EDUCATION IN THE
COLLEGE OF EDUCATION**

Required foundation course:

| | |
|--------------------------------|---|
| Physiology 50. Physiology..... | 6 |
|--------------------------------|---|

Required professional courses:

| <i>Men</i> | <i>Credits</i> | <i>Women</i> | <i>Credits</i> |
|---|----------------|---|----------------|
| 107. Personal and General Hygiene..... | 3 | 51. P.E. Activities for Sophomore Majors.. | +2 |
| 109. School Dance Program..... | 2 | 52. P.E. Activities for Sophomore Majors.. | +2 |
| 110. First Aid and Safety..... | 3 | 112. Elementary School Athletic Program.... | 3 |
| 145. Principles of Physical Education..... | 3 | 145. Prin. of Health and Physical Education.. | 5 |
| 146. Principles of Health Education..... | 2 | 150. School Physical Education Program..... | 2 |
| 158. Meth. in Tch. Appar., Tumb., Stunts.. | 2 | 153. Meth. & Materials in Health Teaching.... | 3 |
| 161. Meth. in Teach. Boxing, Wrestling..... | 2 | 162. Meth. & Mat. in Teaching Folk, Tap, and Clog Dancing..... | 2 |
| 163. Meth. & Materials in Teaching Sports.... | 2 | 163. Meth. & Mat. in Teaching Sports..... | 3 |
| 165. School Health Education Program..... | 3 | 165. School Health Education Program..... | 3 |
| Athletic Coaching..... | 4 | Electives..... | 3 |
| Total credits required..... | 26 | Total credits required..... | 24+4 |

Electives to be selected from:

| | <i>Credits</i> |
|--|----------------|
| 101. Methods and Materials in Gymnastics, Stunts and Tumbling..... | 3 |
| 118. Analysis of Rhythm..... | 3 |
| 128. Organization and Administration of Camp Program..... | 3 |
| 156. Methods and Materials in Teaching Dance..... | 2 |
| 164. Methods in Teaching Swimming..... | 3 |

Substitutions subject to approval of head of department.

TEACHING MAJOR IN HEALTH EDUCATION IN THE COLLEGE OF EDUCATION

| <i>Required foundation and related courses:</i> | <i>Credits</i> | <i>Required professional courses:</i> | <i>Credits</i> |
|---|----------------|--|------------------------|
| Zool. 1. Animal Biology..... | 5 | Soc. Work 218, 219. Psych. Inf. for Soc. Wkrs. 4 | 4 |
| Zool. 2. General Zoology..... | 5 | or | |
| Zool. 17. Eugenics..... | 2 | Psych. 2. Psychology of Adjustment..... | 5 |
| Chem. 1-2 or 21-22..... | 10 | Home Econ. 104. Nutrition for Hlth. Educ.... | 2 |
| Anat. 100. Lectures..... | 3 | N.Ed. 104. Pub. Hlth. Admin. & Epidemiol.... | 2 |
| Physiol. 50 and 53 or 54..... | 6-10 | N.Ed. 169. Public Health..... | 3 |
| Bact. 103. Public Hygiene..... | 5 | Psych. 131. Child Psychology..... | 5 |
| Psych. 1. General..... | 5 | †P.E. 4. Health Education | 7 |
| Sociol. 1. Survey..... | 5 | P.E. 6. Health Education | 2 |
| Speech 40. Essentials of Speaking..... | 5 | *P.E. 107. Personal and General Hygiene..... | 3 |
| Total credits required..... | 51 or 55 | P.E. 110. First Aid and Safety..... | †2 *3 |
| | | P.E. 115. Physiology of Muscular Exercise.... | 5 |
| | | P.E. 145. Principles of Physical Education.... | 3 |
| | | P.E. 146. Principles of Health Education..... | 2 |
| | | P.E. 153. Meth. and Mat. in Health Teaching | 3 |
| | | P.E. 165. School Health Program..... | 3 |
| | | Total credits required..... | *40 or 41 †38 or 39 |

*Required of men only.

†Required of women only.

TEACHING MINOR IN HEALTH EDUCATION IN THE COLLEGE OF EDUCATION

Required foundation and related courses:

| | <i>Credits</i> |
|------------------------------|----------------|
| Zool. 1. Animal Biology..... | 5 |
| Zool. 17. Eugenics..... | 2 |
| Physiol. 50. Physiology..... | 6 |
| | 13 |

Required professional courses:

| | <i>Credits</i> | | <i>Credits</i> |
|--|----------------|--|----------------|
| †P.E. 10. Health Education..... | 5 | N.Ed. 104. Public Health Administration.... | 2 |
| H.E. 104. Nutrition..... | 2 | N.Ed. 169. Public Health..... | 3 |
| *P.E. 107. Personal and General Hygiene.... | 3 | P.E. 110. First Aid and Safety..... | 2 or 3* |
| or | | P.E. 145. Principles of Physical Education.... | 3 |
| Psych. 2. Psychology of Adjustment..... | 5 | P.E. 146. Principles of Health Education.... | 2 |
| Soc. Wk. 218, 219. Psychiatric Information for | | P.E. 153. Meth. & Mat. in Health Teaching.. | 3 |
| Social Workers..... | 4 | P.E. 165. School Health Education Program.. | 3 |

†Required of women only.

*Required of men only.

Advanced Degrees

For requirements for advanced degrees, see Graduate School section, page 174.

PHYSICS

Henry L. Brakel, Executive Officer, 206 Physics Hall

DEGREE: Bachelor of Science—elective course

DEGREE: Bachelor of Science in Physics

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|---|----------------|
| English 1. Composition..... | 5 | English 2. Composition..... | 5 | Speech 40. Essentials of Speaking..... | 5 |
| Math. 4. Plane Trig..... | 5 | Math. 5. College Algebra..... | 5 | Math. 6. Analytic Geom..... | 5 |
| Physics 1. Mechanics and Sound..... | 5 | Physics 2. Electricity and Magnetism..... | 5 | Physics 3. Heat & Light..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

SECOND YEAR

| | | | | | |
|---|---|---|---|---|---|
| Chem. 1 or 21. General..... | 5 | Chem. 2 or 22. General..... | 5 | Chem. 23. General..... | 5 |
| Math. 107. Calculus..... | 5 | Math. 108. Calculus..... | 5 | Math. 109. Calculus..... | 5 |
| Physics 101. Introduction to Modern Physics..... | 3 | Physics 102. Introduction to Modern Physics..... | 3 | Physics 150. Heat and Intro- duction to Thermodynam- ics and Kinetic Theory.... | 3 |
| Physics 105. Electricity and Magnetism..... | 3 | Physics 106. Electricity and Magnetism..... | 3 | Elective..... | 2 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

THIRD YEAR

| | | | | | |
|---|---|--|---|---|---|
| Math. 114. Differential Equations..... | 3 | Math. 115. Differential Equations..... | 3 | Math. 116. Differential Equations..... | 2 |
| Chem. 111. Quantitative Analysis..... | 5 | Chem. 131. Organic..... | 5 | Chem. 132. Organic..... | 5 |
| Physics 160. Optics..... | 3 | Physics 161. Optics..... | 3 | Physics 154. Low and High Frequency Measurem'ts. | 4 |
| *Advisory Elective..... | 4 | Physics 140. Sound..... | 3 | *Advisory Elective..... | 4 |
| | | Mech. Eng. 55. Manufac- turing Methods..... | 1 | | |

FOURTH YEAR

| | | | | | |
|---|---|---|---|--|---|
| Physics 191. Theoretical Mechanics..... | 4 | Physics 192. Theoretical Mechanics..... | 4 | Physics 196. Experimental Atomic Physics..... | 3 |
| Chem. 181. Physical and Theoretical Chemistry... | 5 | Physics 195. Experimental Atomic Physics..... | 3 | Chem. 183. Physical and Theoretical Chemistry . | 5 |
| Physics 180. History of Physics..... | 2 | Chem. 182. Physical and Theoretical Chemistry .. | 5 | Elective..... | 7 |
| Elective..... | 3 | Elective..... | 2 | | |

*Foreign Language, French or German.

The total number of credits must include Physical Education 15 for men, and Physical Education 4, 6, 8, or 10 for women.

Teaching Major or Minor in the College of Education

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credits</i> |
|---|----------------|---|----------------|
| Physics 1-2, 3. General Physics or Physics 4, 5, 6. General Physics | 15 | Physics 1-2, 3. General Physics or Physics 4, 5, 6. General Physics | 15 |
| Physics 101-102. Intro. to Modern Theories... | | Physics 101-102. Intro. to Modern Theories... | |
| Physics 105-106. Electricity & Magnetism.... | | Physics 105-106. Electricity & Magnetism.... | |
| Physics 160-161. Optics..... | | Physics 160-161. Optics..... | |
| Physics electives..... | | | |
| Minimum total..... | 41 | Minimum total..... | 33 |

A teaching major or minor in physics should be supported by 15 credits of college mathematics.

For recommendations for a normal diploma a major or a minor is required with an average grade better than "C."

POLITICAL SCIENCE

Charles E. Martin, Executive Officer, Social Sciences Hall

DEGREE: Bachelor of Arts

A major requires 45 credits, which must include 30 upper division credits, 20 credits in one group and 10 in each of the other two. Each candidate for the major must include in his schedule Political Science 1, and an additional five-credit lower division course, to be selected on the recommendation of the student's adviser.

- I. Political Theory and Jurisprudence.
- II. International Relations.
- III. Politics and Administration.

Teaching Major or Minor in the College of Education

| Major | Credits | Minor | Credits |
|---|---------|---|---------|
| Pol. Sci. 1. Survey of Political Science.. | 5 | Pol. Sci. 1. Survey of Political Science.. | 5 |
| Pol. Sci. 60. The American Government.. | 5 | Pol. Sci. 101. Constitutional Government .. | 2 |
| Pol. Sci. 61. Municipal Government | 5 | Electives in Political Science..... | 18 |
| Pol. Sci. 101. Constitutional Government .. | 2 | | |
| Pol. Sci. 112. American Political Theory.. | 3 | Minimum total | 25 |
| Pol. Sci. 127. International Organization and Administration | 5 | | |
| Electives in U.D. Political Science..... | 15 | | |
| Minimum total | 40 | | |

PRE-EDUCATION

Francis F. Powers, Executive Officer, 114 Education Hall

(See College of Education, page 144, for detailed information.)

Pre-education Students. During the freshman year, students who expect to teach register as pre-education freshmen in the College of Arts and Sciences and pursue the regular courses of this college. They must confer in this year with an adviser in the College of Education. This conference is for two purposes: (1) to obtain admission to the College of Education; and (2) to select suitable combinations of teaching subjects and orientation courses for the proposed preparation for teaching.

PRE-LAW

David Thomson, Adviser, 203 Denny Hall

General. For admission to the School of Law, students in the College of Arts and Sciences must present a minimum of 90 academic credits with a scholarship average of 2.50 grade points, together with the required work in military or naval science, and physical education. Of the 90 academic credits, 60 are required, viz., English 1, 2, 3; Economics 1-2; Political Science 1, 52; History 5, 6, 106; Philosophy 1, 5. The School of Law regards some work in Sociology as desirable and recommends that, in choosing electives, the student should include courses in the biological and physical sciences.

Combined Seven-Year Arts-Law Curriculum. It is possible to obtain the degrees of bachelor of arts and bachelor of laws in seven years. To have the benefit of this combined course, students must, in the first three years, earn 138 credits in the College of Arts and Sciences together with the required credits in military or naval science and physical education. In the 138 credits must be included the specific credits needed to satisfy the regular requirements of the College, viz., English composition, health and hygiene, and the Arts and Sciences group requirements. To acquire the 138 credits in three years the student should carry an average of 16 credits each for three quarters during the junior and sophomore years, exclusive of military or naval science and physical education. As one can normally enter the Law School to advantage only at the beginning of the autumn quarter, the entire 138 credits should be completed within the customary three years, with work during an intervening summer quarter if necessary. At the beginning of the fourth year, if a student has earned 138 credits with an average of 2.50 grade points, and the re-

quired credits in military or naval science and physical education (see above), he may enter the School of Law and there earn 42 credits which will be counted toward his bachelor of arts degree. He will be granted the bachelor of arts degree at the end of the fourth year, or as soon as he completes the required work above specified and 42 credits in the School of Law. The degree of bachelor of laws will be conferred upon completion of his work in the Law School.

This combined arts-law curriculum, in lieu of a major, requires at least 25 credits in a special field, together with at least 20 credits in a related secondary field and 70 upper division credits in place of the 60 credits required of students offering a major. As the 42 credits of law, counted toward the bachelor of arts degree, are in upper division courses, it follows that at least 28 of the 138 credits referred to above must also be in upper division courses.

In exceptional cases where the student has at least 135 credits, the dean of the Law School may, upon written petition, permit registration in the Law School and allow the student to satisfy the remaining three credits necessary for the combined degrees at some subsequent time.

A Seven-Year Curriculum in Science and Law. This is a combination curriculum whereby a student may obtain the degrees of bachelor of science and bachelor of laws in seven years. At the end of his third year, after he has earned 138 academic credits with a grade point average of at least 2.50 and completed the required six quarters in military or naval science and physical education, and all required work with a major in some department, he may register in the School of Law for the first year's work in law. He will be granted the bachelor of science degree at the end of the fourth year, or as soon as he completes the required work above specified and 42 credits in the School of Law, making a total of 180 credits for graduation. The fifth, sixth and seventh years of the curriculum are devoted to completing the remainder of the required work for graduation from the School of Law.

Transfer Pre-Law Students. Students from other institutions entering this University with advanced standing may take advantage of this combined seven-year curriculum, provided they are registered in the College of Arts and Sciences for at least one full year of work, and earn at least 45 credits in the University before entering the School of Law. This privilege will not be extended to normal school graduates attempting to graduate in two years, nor to undergraduates of other colleges who enter this University with the rank of senior.

PRE-LIBRARY

Ruth Worden, Director, 111 Library

(See School of Librarianship bulletin for detailed information.)

Admission. Admission to the general course in librarianship is granted as follows:

To graduate students holding the baccalaureate degree from any college or university of good standing, with an average grade of "B" in their undergraduate work and at least 20 college credits of one modern foreign language. Students desiring to enter college or university library work or work in a large public library are required to have a reading knowledge of both French and German.

Initial admission to classes in the School of Librarianship is permitted only at the beginning of the college year in October.

Students planning to enter the School of Librarianship should consult the director of the school at least once a year.

Scholarship. Students not making an average of "B" in librarianship courses may, at the discretion of the faculty of the school, be dropped.

Graduation. The degree of bachelor of arts in librarianship is granted upon satisfactory completion of 45 credits in the school.

PRE-MEDICINE

or

PRE-DENTISTRY

John L. Worcester, Executive Officer, Anatomy Building

Two- and Four-Year Curricula Preparatory to Medicine

One- or Two-Year Curriculum Preparatory to Dentistry

The University offers two curricula preparatory to the study of medicine. One of these is for two years and will meet the requirements of medical schools which require only two years of college work for admission to their professional study. The second is for four years and leads to a bachelor of science degree. It is accepted by most schools that require more than two years of preparation, but the student is urged to consult with the pre-med adviser for the subjects for the last two years of the four-year curriculum.

This curriculum will not reduce the amount of work to be done by the student in medical school, but it is designed to increase its efficiency. These courses are also well-adapted for pre-dental students, as the best dental schools require the same foundation work as the medical schools.

Below is the outline of the four-year curriculum. The first and second years constitute the two-year curriculum. Courses in the other years are optional, as indicated above.

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-----------------------------|----------------|-----------------------------|----------------|-----------------------------|----------------|
| Chem. 1 or 21. General..... | 5 | Chem. 2 or 22. General..... | 5 | Chem. 23. Qualitative Anal. | 5 |
| Zool. 3. Pre-medical..... | 5 | Zool. 4. Pre-medical..... | 5 | Physiol. 7. Elementary..... | 5 |
| English 1. Composition..... | 5 | English 2. Composition..... | 5 | Psych. 1. General..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

SECOND YEAR

| | | | | | |
|-------------------------------|---|-----------------------------|---|-----------------------------|---|
| Physics 1. General..... | 5 | Scientific French or German | 5 | Physics 3. General..... | 5 |
| Lit. 73. Intro. to Mod. Lit.. | 5 | Physics 2. General..... | 5 | Chem. 132. Organic..... | 5 |
| Electives..... | 5 | Chem. 131. Organic..... | 5 | E.B. 4. Survey of Econ..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | or | |
| | | | | Pol. Sci. 1. Survey..... | 5 |
| | | | | M.S. and P.E. or N.S..... | + |

THIRD YEAR

| | | | | | |
|--------------------------|---|----------------------------|---|----------------------------|---|
| Anat. 100. Lecture..... | 3 | Anat. 102. General Human.. | 6 | Anat. 103. General Human.. | 6 |
| Anat. 101. General Human | 3 | Anat. 106. Histology and | | Anat. 107. Neurology..... | 6 |
| Anat. 105. Histology and | | Embryology..... | 6 | †Bact. 104. Serology..... | 5 |
| Embryology..... | 6 | Bact. 102. Sanitary and | | | |
| †Bact. 101. General..... | 5 | Clinical Methods..... | 5 | | |

FOURTH YEAR

| | | | | | |
|------------------------------|---|-----------------------------|---|-----------------------------|---|
| Physiol. 151. Advanced..... | 5 | Physiol. 152. Advanced..... | 5 | Physiol. 153. Advanced..... | 5 |
| †Chem. 161. Physiological.. | 5 | †Chem. 162. Physiological.. | 5 | Bact. 112. Pathology..... | 5 |
| Bact. 105. Infec. Diseases.. | 5 | Electives..... | 6 | Anat. 104. Topographic..... | 4 |
| | | | | Electives..... | 2 |

†Approved electives may be substituted.

The total number of credits must include Physical Education 15 for men, or Physical Education 4, 6, 8, or 10 for women

PRE-SOCIAL WORK

Mrs. Helen Dorman, Pre-Social Work Adviser, 300-F Commerce Hall

For detailed information, see page 203; see also *Education for Social Work* bulletin.

For admission to the Graduate School of Social Work, students must have completed their bachelor of arts degree (or its equivalent) with an average grade of *B* or above.

Students wishing to prepare for professional study in social work should elect a major in Economics, Political Science, Psychology, Sociology, or General Studies in the field of social science. The departmental requirements for these majors are found under their respective subjects in this section of the catalogue.

Regardless of their major, pre-social work students should take the basic courses in all four of the major social sciences specified and in biology and should be certain to include:

Economics: 1-2, *Principles*; 105, *Labor*; 161, *Labor Legislation*; 171-2, *Public Finance and Taxation*.

Political Science: 1, *Survey*; 60, *American Government*; 154, *Public Service*; 155, *Public Administration*; 165, *Legislative Process*.

Psychology: 1, *General*; 2, *Adjustment*; 108, *Mental Measurement*; 118, *Social*.

Sociology: 1, *Survey*; 31, *Statistics*; 112, *Family*; 128, *Field of Social Work*; 132, *Social Research*.

Zoology and Physiology: 8, *Survey*; 16, *Evolution*; 17, *Eugenics*; 7, *Elementary Physiology*.

The student is expected to have an adequate background in other subjects, such as English and history. Certain courses in anthropology, home economics (especially courses 104, 109, and 180), nursing education (especially courses 104, 169, and 175), journalism, and physical education are most useful to the social work student and these should be taken, if possible, during the undergraduate period.

Undergraduate students planning to apply for admission to any graduate school of social work should confer with the pre-social work adviser at the time of registration or as soon as they have decided to prepare for this field. Unless the student begins his undergraduate preparation early, he may find it necessary to take additional undergraduate work which will delay his admission or increase the time required for his professional training.

Seniors planning to enter a school of social work should make application early in the *spring* preceding the summer or fall in which they wish to begin their professional training, as many schools limit enrollment.

PSYCHOLOGY

Stevenson Smith, Executive Officer, 338 Philosophy Hall

DEGREE: Bachelor of Science

For a major, 40 credits of psychology approved by the department.

Majors should elect courses in chemistry, mathematics, physics, physiology, philosophy and zoology.

The following courses are required: Psych. 1, 2, 102, 106, 108, 109, 124 and 140. Required courses in other departments: zoology, 10 credits; mathematics, 5 to 15 credits.

ROMANIC LANGUAGES AND LITERATURES

(French, Italian and Spanish)

Howard Lee Nostrand, Executive Officer, 202 Denny Hall

DEGREE: Bachelor of Arts

The Department offers majors in French, Spanish, and Italian, but not in "Romanic Languages." Students may be recommended to teach also upon minoring in any of these three, whatever their major. The requirement in each case is (a) proficiency in the language, and (b) a knowledge of its literature and cultural background, as outlined in a syllabus obtainable from the Department. This requirement may normally be met by passing the following courses:

| <i>French</i> | <i>Major</i> | <i>Minor</i> |
|--|-----------------|-----------------|
| French 4, 5, 6..... | 9 credits | } Same |
| French 41. (Should be taken as early as possible)..... | 3 credits | |
| French 101, 102, 103..... | 6 credits | |
| French 104, 105, 106..... | 9 credits | |
| French 107 or 108 ² | 2 credits | |
| French 158, 159..... | 4 credits | |
| Electives in French Literature ³ | 12 credits | |
| | 45 ¹ | 33 ¹ |
| <i>Spanish</i> | <i>Major</i> | <i>Minor</i> |
| Spanish 4, 5, 6..... | 9 credits | } Same |
| Spanish 101, 102, 103..... | 9 credits | |
| Spanish 104, 105, 106..... | 6 credits | |
| Spanish 158, 159..... | 4 credits | |
| Electives in Spanish Literature ³ | 15 credits | 3 credits |
| | 43 ¹ | 31 ¹ |

¹ Beyond course 3, or two high-school years. A third high-school year replaces courses 4, 5, and 6; a fourth high-school year usually replaces courses 101, 102, and 103.

² In order to be recommended to teach, a student must either earn a grade of B in 107 or 108, or take the other of these courses in addition.

³ Courses numbered above 120 and not including more than three credits of 134, 135, 136.

Italian

The Department, through its scheme of alternate courses, offers enough work to satisfy the major requirements. Students who desire to major or minor in Italian are requested, however, to plan their work early with the instructor in charge.

Teaching Major or Minor in the College of Education

The above requirements will satisfy the major and minor requirements in the College of Education.

SCANDINAVIAN LANGUAGES AND LITERATURE

(Swedish, Norwegian, and Danish)

Edwin J. Vickner, Executive Officer, 210 Denny Hall

DEGREE: Bachelor of Arts

| <i>Swedish</i> | <i>Credits</i> | <i>Norwegian or Danish</i> | <i>Credits</i> |
|---|----------------|--|----------------|
| 1, 2, 3. Elementary..... | 9 | 10, 11, 12. Elementary Norwegian or Danish.. | 9 |
| 4, 5, 6. Swedish Reading..... | 6 | 13, 14, 15. Norwegian or Danish Reading..... | 6 |
| 23, 24, 25. Swedish Literature..... | 6 | 20, 21, 22. Norwegian or Danish Literature.... | 6 |
| 103, 104, 105. Recent Swedish Writers..... | 9 | 103, 104, 105. Recent Swedish Writers, or | |
| 106, 107, 108. Recent Norwegian or Danish | | special work in Norwegian or Dan. Lit.... | 6 |
| Writers or spec. work in Swedish Literature 6 | | 106, 107, 108. Recent Norwegian or Dan. Wrt. 9 | |
| | 36 | | 36 |

SLAVIC STUDIES (Russian Language)—See Far Eastern Department

SOCIOLOGY*Jesse F. Steiner, Executive Officer, Social Science Bldg.***DEGREE: Bachelor of Arts**

Students should read the department leaflet and consult staff advisers before selecting courses.

Sociology majors must maintain a general grade point average of 2.0, and a 2.5 average in Sociology courses.

| | <i>Credits</i> |
|--|----------------|
| 1. Survey of Sociology or 150. General Sociology..... | 5 |
| 131. Social Statistics..... | 5 |
| 55. Human Ecology, or 155. Human Ecology..... | 5 |
| 66. Group Behavior..... | 5 |
| Electives from courses offered in the department, chosen after consultation regarding the special field of interest..... | 16 |
| Minimum total..... | 36 |

Teaching Major or Minor in the College of Education

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credit</i> |
|---|----------------|--|---------------|
| Soc. 1. Survey of Sociology, or | | Soc. 1. Survey of Sociology, or | |
| 150. General Sociology..... | 5 | 150. General Sociology..... | |
| Soc. 55. Human Ecology, or | | Soc. 140. Population Problems, or approved | |
| 155. Human Ecology..... | 5 | equivalent, or | |
| Soc. 66. Group Behavior, (5) or | | Soc. 190. Social Attitudes approved | |
| 190. Social Attitudes..... | 3 | equivalent..... | 3 |
| Soc. 131. Social Statistics..... | 5 | Electives from courses offered in the | |
| Electives from courses offered in the department after consultation regarding the special field of interest. 16 or 18 | | department after consultation regarding the special field of interest..... | 17 |
| Minimum total..... | 36 | Minimum total..... | 25 |

SPEECH*Frederick W. Orr, Executive Officer, 201 Parrington Hall***DEGREE: Bachelor of Arts**

Majors and minors in Speech may be earned in accordance with the schedules and the requirements listed below. Variation in the schedules is permitted only on the approval in writing of the department. From 45 to 53 credits are required for a major, of which 50 per cent must be upper division.

Courses in speech fall into five groups:

I. Public Address and Argumentation.

Courses 38, 40, 41, 101, 103, 138, 139, 188, 211, 212.

II. Voice Science and Voice Training.

Courses 43, 44, 187, 214.

III. Oral Interpretation.

Courses 79, 179, 215.

IV. Speech Pathology and Correction.

Courses A, 19, 50, 51, 190, 191, 193, 194, 195, 196, 216.

V. General and Special Courses.

Courses 161, 162, 163, 186, 201, 220, Education 75X.

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credits</i> |
|--|----------------|--|----------------|
| Speech 40. Essentials of Speaking..... | 5 | Speech 40. Essentials of Speaking..... | 5 |
| Speech 43. The Speaking Voice..... | 4 | Speech 43. The Speaking Voice..... | 4 |
| Speech 186. Backgrounds of Speech..... | 5 | Speech 186. Backgrounds of Speech..... | 5 |
| Speech 190. Speech Correction..... | 5 | Speech 190. Speech Correction..... | 5 |
| Approved Speech Electives..... | 26 | Approved Speech Electives..... | 13 |
| Senior Examination..... | 0 | | |
| | 45 | | 32 |

For a normal diploma with a major in Speech, the above 26 speech electives are designated as Speech 41 or 188, 38, 44, 79, 139, and 187. To these are added 191 and 194. Teaching majors should also elect Drama 51, 52, 151, and 153.

The minor electives listed above are designated as Speech 38, 79, and five credits of upper division speech elective.

Speech majors are required to elect the following courses related to speech work as part of the requirements unless substitutes are approved in writing in accordance with a definite educational program.

| | <i>Credits</i> |
|---|----------------|
| English 64, 65, 66. Literary Backgrounds..... | 15 |
| English 117. History of the English Language..... | 5 |
| Psychology 1. General Psychology..... | 5 |
| Philosophy 2. Introduction to Social Ethics..... | 5 |
| Science including Physiology 11..... | 10 |
| Approved studies in a subject other than speech (10 credits upper division).... | 25 |

ZOOLOGY AND PHYSIOLOGY

Trevor Kincaid, Executive Officer, 202 Johnson Hall

DEGREE: Bachelor of Science

(See Biological Sciences, page 93.)

Teaching Major or Minor in Zoology and Physiology in the College of Education

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credits</i> |
|------------------------------------|----------------|------------------------------------|----------------|
| 1, 2. Elements of Zoology | 10 | 1, 2. Elements of Zoology | 10 |
| or | | or | |
| 53-54. Physiology | | 53-54. Physiology | |
| Zoology, Physiology Electives..... | 26 | Zoology, Physiology Electives..... | 10 |
| Minimum total..... | 36 | Minimum total..... | 20 |

DESCRIPTION OF COURSES

For description of courses in the various schools and departments of the College of Arts and Sciences, see Description of Courses section, page 209.

COLLEGE OF ECONOMICS AND BUSINESS

Howard H. Preston, Dean, 210 Commerce Hall

Admission and Expenses

For detailed information concerning University fees, expenses, and admission requirements, see pages 55-66. In addition to the all-University entrance requirements, the College of Economics and Business requires:

| | |
|---|---------|
| U. S. History and Civics..... | 1 unit* |
| Elementary Algebra | 1 unit |
| Plane Geometry or Advanced Algebra..... | 1 unit |

The College of Economics and Business further recommends that the student include in his high school program:

| | |
|---------------------------|---------|
| One foreign language..... | 2 units |
| Senior English | 1 unit |
| Physics or Chemistry..... | 1 unit |
| Social Science | 1 unit |
| Bookkeeping | 1 unit |
| Typewriting | 1 unit |
| Shorthand | 2 units |

Ability in typewriting is not a requirement for graduation, but it is a very useful tool while a student is at the University and a practical necessity in a large proportion of the positions which are available after graduation. Students who have not had this training in high school are urged to get it before they graduate from the University.

Inquiries in regard to the College of Economics and Business should be addressed to the Dean. All correspondence regarding admission should be sent to the Registrar of the University.

Fellowships, Scholarships, Prizes. See page 77.

Requirements for Graduation

Graduates of the College of Economics and Business receive the degree of bachelor of arts in economics and business. The following is a summary of the requirements for this degree:

1. The student must satisfy the entrance requirements of the University and the College of Economics and Business. Students entering from other colleges with junior standing must either present or make up the following courses to meet the minimum lower division requirements of the college: E.B. 1-2, 54, 55, 60, 62, 63.

2. The student must earn 180 credits in subjects required by the University and required or approved by the faculty of the college. In addition, he must meet the general University requirement of six quarters of military or naval science and five quarters of physical education, plus Physical Education 10 or 15.

3. Continuation in the College of Economics and Business will depend upon the student's demonstration of general fitness for work in that college, including the maintenance of satisfactory academic performance. No student will be regularly admitted to the sophomore year in the College of Economics and Business if he has any entrance deficiency or if his grade point average is below 1.80. Failure to obtain a cumulative grade point average of 2.0 by the end of the sophomore year, and to maintain it thereafter, will be regarded as unsatisfactory. Students with records of unsatisfactory performance will be reported to the dean for appropriate action. The same rules apply to a major in economics in the College of Arts and Sciences. A student may transfer from another college to the College of Economics and Business, provided he has no entrance deficiency, and thereafter becomes subject to the above rules.

* A "unit" is applied to work taken in the high school. To count as a unit a subject must be taught five times a week, in periods of not less than forty-five minutes, for a school year of thirty-six weeks.

Lower Division Requirements FIRST YEAR

| | Credits |
|---|---------|
| E.B. 1-2. Principles of Economics..... | 10 |
| Geography 7. Economic Geography..... | 5 |
| *English Composition 1, 2, 3..... | 15 |
| An approved laboratory science (10 credits) or mathematics (10 credits), or foreign language (10 credits)..... | 10 |
| Elective | 5 |
| M.S. and P.E. or N.S..... | + |

SECOND YEAR

| | |
|--|----|
| †E.B. 54, 55. Business Law..... | 10 |
| E.B. 60. Statistical Analysis..... | 5 |
| E.B. 62, 63. Principles of Accounting..... | 10 |
| ‡History 7. Survey of U. S. History..... | 5 |
| §Electives | 15 |
| M.S. and P.E. or N.S..... | + |

*Students who have made good grades in English 1 and 2 (to be determined by the English Department) may substitute an approved English course for English 3.

†The student, upon consultation with his adviser, may substitute 5 credits of approved elective for E.B. 55.

‡With the approval of the student's adviser, E.B. 181, *American Economic History* (to be taken in the junior or senior year) may be substituted for History 7.

§Of the approved electives, 10 credits must be selected from political science, sociology, psychology, and philosophy.

Upper Division Requirements

In the upper division years the student with the approval of his major adviser shall select 6 of the following courses:

| | Credits |
|---|---------|
| E.B. 103. Money and Banking..... | 5 |
| E.B. 104. Principles of Transportation..... | 5 |
| E.B. 105. Economics of Labor..... | 5 |
| E.B. 106. Economics of Marketing and Advertising..... | 5 |
| E.B. 107. World Economic Policies..... | 5 |
| E.B. 121. Corporation Finance | 5 |
| E.B. 171. Public Finance and Taxation I..... | 5 |
| E.B. 175. Business Fluctuations | 5 |
| E.B. 185. Advanced Economic Theory..... | 5 |

Each student in the college must also complete an approved sequence of at least 15 credits of upper division courses in economics and business. These may be in a special field or selected to satisfy the requirements for a general economics major or a general business major.

Suggestions for Planning Courses

During the sophomore year selection of a special field of major interest should be made. This choice will determine the student's faculty adviser. In consultation with this adviser, the student will elect the upper division courses which best meet his needs. This will include not only the courses which meet the special requirements but also the supporting courses chosen as electives. Conference between student and instructor may be held at any time at their mutual convenience and should not be delayed until the registration period.

The programs of students who desire to satisfy the requirements for a general economics or general business major will be designed to meet the needs of the student concerned and must have the approval of an appropriate committee.

At the time of registration, the student's program must be approved by the registration secretary for the College of Economics and Business, who will enforce all requirements, together with the course prerequisites as stated in this bulletin.

In specifying the courses for the major fields, as set forth below, it is assumed that the student's choice of six or more courses from the list of upper division re-

quirements has included the appropriate courses needed as background for his field of specialization.

1. Economics.

Required: E.B. 187, plus 10 additional credits in economics selected in conference with a major adviser to meet the student's special needs and training program in the general field of economics.

2. Labor.

Required: E.B. 161, 163, 164.

Recommended elective: E.B. 177.

3. Public Finance.

Required: E.B. 172, 196 (plus 10 credits to be recommended).

4. Banking and Finance.

Eighteen credits or more to be chosen with the approval of the adviser from the following: E.B. 122, 123, 125, 126, 127.

5. Foreign Trade and Consular Service.

Required: E.B. 127, 131, 132.

Recommended electives: E.B. 197.

Geography 102, 103, 104, 105, 106, 109.

Political Science 121, 122, 124, 127, 129.

History 158, 159.

Far Eastern 90, 91; and Law 122, 141.

Speaking knowledge of some modern foreign language.

6. Marketing.

Required: E.B. 134, 135, 136, 193A, B, C.

Wholesaling: E.B. 131, 132.

Retailing: Home Economics 25.

Advertising: Journalism 130, 131.

Recommended electives: Psych. 21, E.B. 115.

7. Public Utilities.

Required: E.B. 141, 142, 196 (plus 5 credits to be recommended).

8. Transportation.

Required: 20 credits or more chosen from the following: E.B. 143, 144, 145, 146, 147, 148, 149, 194.

9. Management.

Required: E.B. 101, 110, 150, 154, 195. Psych. 2 or 21.

10. Accounting.

Required: E.B. 110, 111, 112, 156, 157, 158.

Recommended electives: E.B. 152, 153, 154, 155.

11. Real Estate.

Required: E.B. 109, 169, 199B, 199C.

Recommended electives:

Architecture 1-2, 3

Law 104, 123

E.B. 129

Sociology 55.

12. Insurance.

Required: E.B. 108, 128, 129.

13. Economic Geography.

Economics and business may be combined with world resources and industries by substituting 28 credits in specified economic geography courses for the "Special Requirement" of 15 credits or more of upper division courses in economics and business.

Required: Geog. 102, 103, 104, 105, 106, 109.

14. Pre-Law Curriculum.

(a) Two-year Pre-legal Requirement. Students enrolled in the College of Economics and Business may satisfy the prescribed 60 credits in the two years of training required for admission to the School of Law by taking the first year requirements as outlined above. In the second year five credits of the history required in the pre-legal curriculum (History 5, 6, 106) may be substituted for History 7. Business Law (E.B. 54, 55) may be omitted. Electives in the two years must include Political Science 1 and 52; Philosophy 1 and 3 or 5.

(b) Seven-year course in Economics and Business combined with Law.

Required: All lower division and upper division courses required for graduation from the College of Economics and Business or substitutions and omissions noted in paragraph (a) above.

The "Special Requirements" will be fulfilled by completing the first-year curriculum required in the Law School.

To have the benefit of this combined course, students must maintain a grade point average of 2.5, and must, in the first three years, earn 138 economics and business credits, together with the six quarters of required military or naval science and five quarters of physical education.

15. Commercial Teaching.

Required:

(a) Satisfaction of the lower division requirements as outlined on page 138.

(b) E.B. 16-17-18. *Secretarial Training*. Nine credits. This requirement may be satisfied in either lower or upper division, or by passing a satisfactory examination. In case of exemption by examination, university credit is not given.

(c) Thirty credits of the upper division general requirements in economics and business, including E.B. 106 and E.B. 185. The remaining fifteen credits of this requirement may be postponed until the fifth year.

(d) The special requirements in the upper division must include E.B. 113, 115, 116, and 117.

(e) Twenty-eight credits of education courses, including Edu. 75E or Edu. 75F. See College of Education section.

(f) A teaching major and two teaching minors in commercial education have been provided also in the College of Education. (See page 150.)

Advanced Degrees

For requirements for advanced degrees, see Graduate School section, page 174.

Curriculum for Government Service

The College of Economics and Business, in cooperation with the Department of Political Science, the School of Law, and the Graduate School of Social Work, has outlined a curriculum to meet the growing need for trained men and women in governmental service.

Basic courses are provided in the social sciences during the first three years of undergraduate work to equip selected students possessing a high order of scholarship with a sound philosophy of government and a scientific attitude and method of approaching social and economic problems. Not later than the end of the third year the student will select a field of interest for specialization in the fourth and graduate years.

Special Features

The curriculum for Government Service differs from an ordinary major in economics and business, political science, or sociology in the following respects:

- (1) Students may elect this major in their first quarter of the freshman year by adhering to the requirements of the Government Service curriculum.
- (2) Students are expected to maintain a grade standard of not less than 3.0 ("B"). A student in the lower division who is unable to maintain this standard should shift his course work to other objectives.
- (3) A student may be registered in either the College of Economics and Business or in the College of Arts and Sciences with a major in the field of Government Service.
- (4) The curriculum for the first two years closely parallels the requirements of the College of Economics and Business and the College of Arts and Sciences. Should a student desire to change his major either to or from Government Service within the first two years, the change may be effected without his having to make up very many requirements.
- (5) Admission to the public service curriculum as a recognized major will occur at the beginning of the junior year upon application by the student and acceptance by an inter-departmental committee. Candidates must meet the requirements of scholarship and the lower division prerequisites set forth herewith. Thereafter, failure to maintain a grade standard of 3.0 will result in dropping the student from this major.
- (6) When the student selects his field of major interest he will be assigned to an adviser, or advisers, who will aid him in planning his program for the fourth and graduate years. The junior year curriculum permits some latitude in the selection of courses.
- (7) The senior and graduate years are under the direction of the department selected by the student, in accordance with his major interest.
- (8) Seminars jointly conducted by two or more departments and in some instances field experience under the supervision of an appropriate instructor may be arranged in accordance with the interests and vocational expectations of students.
- (9) The degree of bachelor of arts in economics and business will be awarded, or a degree in economics, political science, or sociology if the student is registered in the College of Arts and Sciences, at the end of the fourth year. The work done in the fifth year may be applied toward a master's degree and those who have met all of the requirements of that degree by the end of the fifth year will receive it at that time.

First and Second Year Curriculum in Public Service

ENGLISH

Credits

| | |
|---|---|
| English 1. | 5 |
| English 2. | 5 |
| Choice of 10 credits from: | |
| a. English 3. | 5 |
| b. Speech 40. Essentials of Speaking. | 5 |
| c. English 73. Introduction to Modern Lit. or English Lit. elective | 5 |

SOCIOLOGY

| | |
|------------------------------|---|
| 1. Survey of Sociology. | 5 |
| 66. Group Behavior. | 5 |

POLITICAL SCIENCE

| | |
|--------------------------------------|---|
| 1. Survey of Political Science. | 5 |
| 52. Introduction to Public Law. | 5 |
| 61. Municipal Government. | 5 |

HISTORY

| | |
|---|---|
| 7. American History. | 5 |
| or 5 credits of other approved History. | |

PSYCHOLOGY

| | |
|-----------------------------|---|
| 1. General Psychology. | 5 |
|-----------------------------|---|

ECONOMICS AND BUSINESS

| | |
|---|----|
| 1-2. Economics and Business. | 10 |
| 62. Principles of Accounting. | 5 |
| Choice of five credits from: | |
| a. E.B. 60. Statistical Analysis. | 5 |
| b. Math. 13. Elements of Statistical Analysis. | 5 |
| c. Soc. 131. Social Statistics. | 5 |
| d. Psych. 108. Essentials of Mental Measurement. | 5 |

Electives. Of the ninety credits normally earned during the freshman and sophomore years fifteen credits remain at the disposal of the student. By using these credits for a physical science, a language or mathematics, greater flexibility is assured the student in case of a shift in objectives.

Third Year Curriculum in Public Service

ECONOMICS AND BUSINESS

Credits

| | |
|--|---|
| 103. Money and Banking. | 5 |
| 105. Economics of Labor. | 5 |
| 171. Public Finance and Taxation. | 5 |
| Choice of five credits from: | |
| a. E.B. 170. Advanced Statistical Analysis. | 5 |
| b. Math. 113. Mathematical Statistics. | 5 |
| c. Soc. 132. Methods of Social Research. | 5 |
| d. Psych. 109. Advanced Mental Measurement. | 5 |

POLITICAL SCIENCE

| | |
|---|---|
| 155. Public Administration or Pol. Sci. 154. The Public Service. | 5 |
| 163. State Government and Administration. | 5 |
| Choice of five credits from: | |
| a. Pol. Sci. 153. Introduction to Constitutional Law. | 5 |
| b. Pol. Sci. 167. Introduction to Administrative Law. | 5 |
| * Pol. Sci. 151. Problems in American Federal Government. | 5 |
| d. Pol. Sci. 112. American Political Theory. | 5 |

* Not offered in 1942-1943.

PSYCHOLOGY

| | |
|------------------------------|---|
| 118. Social Psychology. | 5 |
|------------------------------|---|

SOCIOLOGY

| | |
|---------------------------|---|
| 194. Public Opinion. | 3 |
|---------------------------|---|

Fourth and Fifth Year Curricula in Public Service

The function of the adviser in the fourth and fifth years is to plan with the individual student a program suited to the objectives of the student. The adviser will in effect be the major professor in whose field the student will concentrate, such as taxation, labor, accounting, economics, political theory and jurisprudence, international relations, politics and administration, social work, or law. The entire curriculum for these two years will therefore be drawn up by the adviser in collaboration with the student. The courses selected will then become the requirements for graduation. The following courses, however, are required in the fourth or fifth year:

| | <i>Credits</i> |
|-----------------------------------|----------------|
| Law 119. Constitutional Law | 8 |

Fifth year students who have satisfactorily completed Law 119 and Law 120 may, with the approval of the Dean of the Law School in each case, be admitted to the following additional law courses:

| | <i>Credits</i> |
|-----------------------------------|----------------|
| Law 121. Administrative Law | 4 |
| *Law 125. Trade Regulation | 3 |
| Law 133. Public Utilities | 4 |
| Law 146. Taxation | 4 |

* Not offered in 1942-1943.

The degrees to be awarded for graduate work will rest with the departments, colleges, or schools in which the student has majored during his fourth and graduate years. Opportunities for field experience or apprenticeship training during the student's period of graduate study, likewise will depend upon the requirements of the major field. Opportunities for practical experience in government positions, with or without compensation, sometimes present themselves prior to the student's graduation. Under appropriate circumstances such employment is to be encouraged, and, if undertaken with the advice and consent of the instructor, University credit may be given therefor on the basis of such evidence of achievement as the instructor may determine.

Mr. Stephen D. Brown will be the students' adviser for the Government Service curriculum until the student has definitely selected his field of major interest. Should the student be working with a departmental adviser prior to a selection of a major interest in Government Service such contact should be preferred and maintained if possible.

DESCRIPTION OF COURSES

For description of courses offered by the College of Economics and Business, see page 233.

COLLEGE OF EDUCATION

Francis F. Powers, Dean, 114 Education Hall

General Plan. During the freshman year, students who have decided to enter the teaching profession register as pre-education freshmen in the College of Arts and Sciences. They must confer with the advisory officers in the College of Education for admission to this college as sophomores.

The degrees granted by the College of Education are the bachelor of arts when the major subject is in group I or II, and the bachelor of science when the major subject is in group III. After earning a total of 225 credits, including the requirements stated below, students may be granted a three-year secondary certificate. Thirty-three of the 45 credits required for the fifth year must be earned in residence, and the entire fifth year must be approved in advance by the College of Education.

Professional work in education begins in either the freshman or sophomore year with Education 1. Later courses in education are open to students who have completed satisfactorily two years of college work, and who have an all-University grade-point average of 2.2 or better.

Fellowships, Scholarships, Prizes. See page 77.

GENERAL REQUIREMENTS

In addition to the all-University requirements for graduation, the College of Education requires English 1-2; 10 credits after passing Preliminary Freshman English test.

Elective Departmental Curricula

Minimum requirements for the first two years:

- 30 credits in one Arts and Sciences group
- 20 credits in a second group
- 10 credits in the remaining group

See College of Arts and Sciences, page 86, for groupings of schools and colleges.

General Academic Work. Owing to the variety of work that every beginning teacher is likely to be required to do, and to fulfill the requirements for the normal diploma, each teacher must have thorough preparation in at least two or more additional fields. The following combinations are most frequently demanded: English, history, civics—a foreign language is often included in this combination; English, French; English, French, Latin; English, Latin, history; French, German, Spanish; chemistry, mathematics, physics; biology—a combination of botany and zoology is frequently joined with the physical sciences—and mathematics; home economics in connection with one or two other subjects; commercial subjects with other subjects; athletics, drawing, or music in combination with other work. Public speaking, dramatics, and journalism are desirable as part of the preparation for teaching English. Library science is needed also by many teachers.

Saturday and Evening Classes. To accommodate teachers of Seattle and vicinity, classes in education are scheduled on Saturday and during the late afternoon and evening.

The Bureau of Appointments. This Bureau is maintained to assist qualified students and graduates in obtaining educational positions. Calls are received for college instructors, administrators, supervisors, and teachers in elementary and secondary schools. Students who wish to avail themselves of this service should have recommendations collected before leaving this University while their work and personal qualities are clear in the minds of their instructors. These records will then be available for use when needed. The Bureau is located in 263 Education Hall, on the mezzanine floor.

Admission to Professional Courses and the Fifth Year

The requirement for admission to undergraduate professional courses beyond Education 1 is the completion of 90 academic credits of college work earned in the University of Washington or in an accredited institution of equal rank, including the usual undergraduate requirements in physical education and military or naval science, and a grade-point average of 2.5.

Students admitted from the undergraduate curricula of other colleges of the University must have satisfied the requirements of their respective colleges except in foreign language up to the time of the transfer to the College of Education.

Admission of Teachers' College Graduates to Advanced Standing

Advanced credit for work taken in approved teachers' colleges or normal schools by students previously graduated from an accredited four-year secondary school will be allowed at the rate of 45 credits for each full year's work completed in such schools, the minimum amount accepted as a year's work being 36 weeks of attendance with at least 45 quarter credits, not more than 19 of which shall have been earned in one quarter. Claims for exemption from specific requirements, based on work in such schools, are passed on by the Registrar and the dean of the college.

Fifth-year standing cannot be attained until after the completion of Education 1, 9 and 70. Education 1 cannot be taken for credit after the beginning of the junior year. Students without teaching experience are accepted in the fifth year as candidates for the master's degree only if they have been graduated with merit (average of 3.5). Senior standing is attained when 135 academic credits have been earned.

Graduation

College of Education candidates for the bachelor's degree must satisfy the graduation requirements of the College of Arts and Sciences except in foreign language. If foreign language is omitted, 20 credits selected from general literature and English must be substituted. Such substitutions must be in addition to the regular requirements of the College of Arts and Sciences in English. In the total credits required of students in the College of Education for graduation, the following must be included:

Academic major—36 or more credits (see departmental requirements).

The education courses required for graduation shall include the following:

| | <i>Credits</i> |
|---|----------------|
| 1. Orientation in Education..... | 2 |
| 9. Psychology of Secondary Education..... | 3 |
| 70. General Methods..... | 5 |

The degrees awarded are bachelor of arts or, at the student's option, bachelor of science, according to the character of the academic work. Applicants selecting majors from Group I or II will receive the bachelor of arts degree while those selecting majors from Group III may receive the bachelor of science degree.

Students who transfer from other institutions must earn at least nine approved credits in education at the University of Washington, and maintain a grade-point average of at least 2.2.

Certification

A. THREE-YEAR CERTIFICATES

The University three-year secondary certificate, based on a degree from the University of Washington, will be valid for three calendar years from date of issue. Applicants for this certificate must fulfill the following requirements:

1. Earn 225 university academic credits in approved courses.
2. Show evidence of such general scholarship and personal and moral qualities as give promise of success and credit in the teaching profession.
3. Pass a speech test.
4. Take oath of allegiance.
5. Earn a minimum of 15 credits in courses dealing with contemporary social problems. These courses must be approved by the College of Education.
6. Satisfactorily complete a course in the History of the State of Washington.
7. Present (a) as a teaching major a subject now included in the curriculum of at least two of the larger public high schools of the State, and (b) two teaching minors, one of which may be in the same field as the major when major is art, English, home economics, or music. The list of acceptable teaching majors and minors follows:

| | | |
|---------------------|------------------------|-------------------|
| Art Education | Health Education | Physics |
| Botany | History | Physiology |
| Chemistry | Home Economics | Political Science |
| Civics | Industrial Arts | Psychology |
| Commercial Teaching | Journalism | Sociology |
| Drama | Latin | Spanish |
| Economics | Mathematics | Speech |
| English | Music | Zoology |
| French | Physical Education for | |
| Geography | Men | |
| Geology | Physical Education for | |
| German | Women | |

Eighteen credits in library science will be accepted in lieu of a second academic minor.

For departmental requirements for teaching majors and minors, see the schools and departments listed alphabetically under the College of Arts and Sciences, pages 87 to 136.

8. Earn a minimum of 28 credits (26 for students who take Education 1 for no credit) in the following courses in education (not more than two credits for Education 75 may be counted toward this requirement):

| | Credits |
|---|---------|
| 1. Orientation in Education..... | 2 |
| 9. Psychology of Secondary Education..... | 3 |
| 30. Washington State Manual..... | 0 |
| 70. General Methods..... | 5 |
| 90. Measurement in Secondary Education..... | 2 |
| 60. Principles of Secondary Education..... | 3 |
| 75. Special Methods..... | 2 |
| 71-72. Cadet Teaching..... | 8 |
| 120. *Educational Sociology..... | 3 |

* A substitute may be selected from the following: Educ. 101, 104, 105, 122, 146, 147, 180, 181, 182, 183, 184, 188, 191.

9. Education 71 and 72, *Cadet Teaching*, should not be taken until the requirements are fulfilled for Education 1, 9, 70 and 75. Cadeting is taken either during the senior or fifth year with Education 30 and 60. The actual teaching takes place in the Seattle High Schools and is done by semesters rather than by quarters. As-

signments are made in Education Hall 113 in September and January at which time the semesters in the high schools begin. A student who elects to cadet fall semester will register for Education 71 for 5 hours in the fall and for Education 72 for 3 hours in the winter quarter. Students electing to cadet spring semester will register for Ed. 72 for 3 hours in the winter quarter and for Education 71 for 5 hours in the spring quarter. Cadets must take Education 30, State Manual, which is required for the Normal Diploma, while taking Education 71. The Tuesday meeting of all cadets continues as long as the cadet is teaching. A fee of one dollar per credit hour is charged which makes a total of \$8.00 for the complete course.

10. Graduates of normal schools or teachers colleges who subsequently graduate from the University and become candidates for the University three-year secondary certificate must earn at least nine credits in courses dealing specifically with secondary education and such graduates must complete all the above required education courses not previously taken.

11. Students who transfer from other institutions must earn a degree from the University of Washington.

12. Students who transfer from other institutions are normally required to earn ten credits in the academic major and five credits in each academic minor at the University of Washington.

13. Persons who have received the master's or doctor's degree from this University are eligible for the University three-year secondary certificate, provided they have fulfilled the specified certification requirements.

B. GRADES REQUIRED FOR THE THREE-YEAR SECONDARY CERTIFICATE AND SIX-YEAR STANDARD CERTIFICATE

- (a) An all-University grade-point average of 2.2 or better.
- (b) "C" average or better in all education courses, with "C" or better in Education 71-72, *Cadet Teaching*.
- (c) "C" average or better in the major and minor teaching subjects.
- (d) "C" average or better in contemporary social problems courses.

C. SIX-YEAR STANDARD SECONDARY CERTIFICATES

Holders of the University three-year secondary certificate who desire further certification must comply with the following requirements:

- 1. Give evidence of successful teaching experience for two years (eighteen months).
- 2. Pass a medical examination within six months of the granting of the certificate.

D. ADMINISTRATIVE REQUIREMENTS IN ACCREDITED DISTRICTS

Administrators. All persons interested in administrative positions should note carefully the basic State requirements given below. Further details concerning administrators' credentials may be secured from the State Department of Education at Olympia.

All courses taken at the University of Washington to be applied on administrators' credentials must be acceptable for graduate credit.

Elementary School Principal's Credential

- (a) Certification at the elementary level;
- (b) At least two years of successful teaching experience in the elementary school or the junior high school;
- (c) After September 1, 1940, no one may qualify for an elementary principal's credential who has not met the minimum requirements for the three-year elementary certificate (this is interpreted to mean a three-year course of training) at the time the application is made plus twelve quarter credits in courses relating to elementary organization, supervision, and administration. This regulation shall not be applicable to elementary principals who had the necessary experience prior to September 1, 1936.
- (d) The twelve quarter credits of professional training for the principal's credential must be taken subsequent to at least one year of teaching experience.

Junior High School Principal's Credential

- (a) Certification at the junior high school level;
- (b) Completion of not less than four years of professional preparation;
- (c) At least two years of successful teaching experience in the common schools;
- (d) Twelve quarter credits of training in professional courses relating to junior high school organization, supervision and administration in addition to the requirements for standard junior high school certification;
- (e) The twelve quarter credits of professional training for the principal's credential must be taken subsequent to at least one year of teaching experience.

High School Principal's Credential

- (a) At least two years of thoroughly successful teaching experience on the secondary level;
- (b) A minimum of twelve quarter credits of work in professional courses relating to secondary organization, supervision, and administration, in addition to the minimum hours in education required for original certification;
- (c) The professional training for the credential must be taken subsequent to at least one year of teaching experience.

Superintendent's Credential

- (1) After September 1, 1939, no one may qualify for a superintendent's credential on the basis of experience in this state unless he has continued in the same position since September 1, 1934, and devoted at least two periods per day to his administrative duties.
- (2) The superintendent of a school district having an accredited high school and also an elementary school, or schools, shall be the holder of a secondary certificate and qualify under the following provisions:
 - (a) At least two years of successful experience as a superintendent. (This provision is applicable only to candidates who served successfully as superintendents prior to September 1, 1934, the time at which the State Board of Education ruling became effective.)

- (b) At least four years of successful administrative experience. Two years as principal of an elementary school of six or more teachers and two years as principal of a high school, head of a high school department with six or more teachers, or supervisor. While serving as a high school principal, department head, or supervisor, at least two hours per day must have been devoted to the administrative duties.

(In order to qualify for a superintendent's credential on the basis of the requirements under (b) it is necessary to be in possession of both the elementary and the high school principals' credentials. It is also necessary to submit proof of having served in an elementary school of six or more teachers, and in the case of high school experience, proof of having devoted at least two hours per day to the administrative duties. Only candidates who gained their experience prior to September 1, 1934, may qualify under (b) without being in possession of both the elementary and senior high school principals' credentials.)

- (c) At least two years of successful experience as a principal of an elementary school of six or more teachers plus twelve quarter credits of professional courses relating to organization, administration, and supervision in secondary schools taken subsequent to at least one year of teaching experience. These educational requirements are in addition to the minimum required for initial secondary certification.
- (d) At least two years of successful experience as a high school principal, head of a high school department, or supervisor, plus twenty-four quarter credits of professional courses relating to organization, administration, and supervision of elementary education taken subsequent to at least one year of teaching experience. While serving as a high school administrator, at least two hours per day must have been devoted to the administrative duties. These educational requirements are in addition to the minimum required for initial secondary certification.

It should be carefully noted that training may be substituted in lieu of administrative experience on one level or the other but not in lieu of both. In other words, a candidate for a superintendent's credential must have had at least two years of successful experience as a teacher plus two years of successful experience as a principal, supervisor, or head of a department, upon one level or the other.

Courses that are not acceptable as graduate credit for the master's degree or doctor's degree at the University of Washington or the State College of Washington or at other institutions authorized to grant such degrees and accredited by the State Board of Education shall not be acceptable for a superintendent's credential, except that, in case of those trained in a secondary teacher-training institution, one-half of the twenty-four credits in elementary education required for superintendents' credentials in lieu of elementary administrative experience may be secured on the undergraduate level at an elementary teacher-training institution maintaining a laboratory school, and courses completed more than ten years prior to application are not acceptable.

The superintendent's credential shall be valid for a principalship in any field of service for which the holder of the credential is properly qualified with a teacher's certificate.

Courses in the Department of Education

Before registering for their first course in education, students must consult a departmental adviser.

Courses in education required for certification by the University of Washington are divided into three classes, excepting Education 1, which is required of freshmen

and sophomores. Courses numbered from 9 to 99 are open to juniors and seniors. Courses numbered from 100 to 199 are open only to juniors, seniors, and graduate students. Courses numbered from 200 to 300 are open only to graduate students.

The courses in education are divided also as to content and function into eleven divisions as follows:

- A. Educational psychology
- B. Educational sociology
- C. Educational administration and supervision
- D. Elementary education
- E. Secondary education
- F. Classroom techniques
- G. History and philosophy of education and comparative education
- H. Higher education
- I. Curriculum
- J. Guidance and extra-curricular activities
- K. Remedial and special education.

Candidates for a master's degree must specialize in at least two of these divisions, while students who are working toward the doctorate must prepare themselves thoroughly in at least three divisions. They should elect courses from these divisions according to their interests, abilities, and the activities in which they expect to be engaged. For requirements for advanced degrees, see Graduate School section, page 174.

Graduate students should plan a generous sampling of courses numbered above 200.

Before completing their registration, graduate students must consult either the executive officer in education or a designated adviser in selecting proper divisions of education and necessary courses in these divisions.

The following teaching majors and minors are also offered by the College of Education:

Civics

| <i>Major</i> | <i>Credits</i> | <i>Minor</i> | <i>Credits</i> |
|---|----------------|--|----------------|
| Pol. Sci. 1. Comparative Government..... | 5 | Pol. Sci. 1. Comparative Government..... | 5 |
| E.B. 4. General Economics..... | 5 | E.B. 4. General Economics..... | 5 |
| Soc. 1. Introductory Sociology..... | 5 | or | |
| Pol. Sci. 101. Constitutional Government..... | 2 | Soc. 1. Introductory Sociology..... | 5 |
| Pol. Sci. 152. Political Parties..... | 5 | Pol. Sci. 101. Constitutional Government.... | 2 |
| Electives in Political Science..... | 13 | Electives in Political Science..... | 13 |
| Electives in Economics or Sociology..... | 5 | Minimum total..... | 25 |
| Minimum total..... | 40 | | |

Commercial Teaching

Students desiring to prepare for teaching positions in commercial departments in secondary schools may do so by enrolling in the College of Economics and Business and satisfying all requirements of that College, together with the minimum of 28 credits in Education (see page 140), or by following the program of the College of Education as given below.

Students majoring or taking their first minor in commercial education in the College of Education are required to take E.B. 1-2, or 4 in partial fulfillment of the requirement of 15 credits in courses dealing with contemporary social problems (see

5. on page 146. In satisfaction of the requirements of the College of Education for a methods course they must elect 75E or 75F. In addition the following Economics and Business courses are required:

| <i>Major</i> | <i>Credits</i> | <i>First Minor</i> | <i>Credits</i> |
|-----------------------------------|----------------|--------------------------------|----------------|
| 16, 17, 18. Sec. Training..... | 9 | 16, 17, 18. Sec. Training..... | 9 |
| 54-55. Business Law..... | 10 | 62, 63. Accounting..... | 10 |
| 62, 63, 113. Accounting..... | 15 | 106. Marketing | 5 |
| 106. Marketing | 5 | | 24 |
| 115. Business Letter Writing..... | 5 | | |
| 116. Office Appliances..... | 5 | <i>Second Minor</i> | <i>Credits</i> |
| 117. Adv. Sec. Training..... | 5 | 16, 17, 18. Sec. Training..... | 9 |
| | 54 | 62, 63. Accounting..... | 10 |
| | | | 19 |

Industrial Arts

Students who wish to major or minor in industrial arts should supplement such specialized training as they can receive at the University of Washington by courses which can be taken at the normal schools or at other institutions. Such courses are offered also at the University of Washington during the summer session. Twenty credits are required for a minor and 36 for a major.

Requirements for Teacher-Librarians

(For curricula in the School of Librarianship, see School of Librarianship Bulletin, available on request.)

State standards for library work in accredited high schools divide the schools into five classes: Class 1 covering schools with enrollment of 100 or less; Class 2, 100 to 200; Class 3, 200 to 500; and Classes 4 and 5, over 500.

Applicants for the normal diploma desiring to qualify for library work in accredited high schools of the fourth and fifth classes may take a fifth year in the School of Librarianship. Consult with advisory officers of both departments.

Teacher-librarians in accredited high schools of 100 or less (Class 1) must have at least $7\frac{1}{2}$ credits in librarianship.

Teacher-librarians in accredited high schools of 100 to 200 (Class 2), and of 200 to 500 (Class 3) must have at least 15 credits in librarianship.

Teacher-librarians in accredited high schools in Class 4 (500 to 1000) and Class 5 (over 1000) are recommended to have one year's preparation in an approved library school.

Teaching majors who wish to offer librarianship as a minor must have 18 credits. The following courses are open to teacher-librarians in autumn, winter, and spring quarters: Librarianship 171, 175, 176, 182, 184, 195. See Description of Courses section, page 278, for titles, credits, and descriptions.

Description of Courses

For description of courses offered by the College of Education, see page 239.

COLLEGE OF ENGINEERING

Edgar A. Loew, Dean, 206 Guggenheim Hall

With minor exceptions, all curricula of the College of Engineering have a common freshman year, which is administered by the general engineering department. The work of the college beyond the freshman year comprises the curricula of six professional divisions, namely, aeronautical, chemical, civil, commercial, electrical, and mechanical engineering, and four departmental curricula combined with naval science. Four-year curricula leading to degrees of bachelor of science in the respective professional branches of engineering are offered. In addition there are four special four-year curricula leading to degrees of bachelor of science in aeronautical engineering and naval science, bachelor of science in civil engineering and naval science, bachelor of science in electrical engineering and naval science, and bachelor of science in mechanical engineering and naval science. The four engineering curricula combining a major branch of engineering with naval science are intended to offer opportunities for special training to those who wish to prepare for reserve commissions in the United States Navy. The curricula consist largely of required courses, but a sufficient number of electives is provided in the junior and senior years to give each student the training that will best serve him, and to permit the inclusion of a limited number of cultural courses in his schedule.

Fellowships, Scholarships, Prizes. See page 77.

Entrance Requirements

For detailed information concerning University fees, expenses, and admission requirements, see pages 55-66. In addition to the all-University entrance requirements, the College of Engineering requires the following:

| | |
|--------------------------|---------------|
| Elementary algebra | one unit* |
| Advanced algebra | one-half unit |
| Plane geometry | one unit |
| Solid geometry | one-half unit |
| Physics | one unit |
| Chemistry | one unit |

The additional six units may be chosen from either academic or non-academic subjects. A student who does not present high-school chemistry for entrance will normally be expected to earn 15 credits instead of 12 credits in chemistry during the freshman year.

Students planning to major in chemical engineering should include two units of German in high school. Also, for those taking the structural or hydraulic option of civil engineering, German is very desirable.

A student is advised not to attempt to enter the University until he is able to register in his chosen college without deficiencies. Under certain circumstances and with the approval of the dean of the college concerned, however, certain deficiencies in specific college requirements may be removed after entrance to the University.

Scholarship Requirements

In addition to the all-University scholarship requirements the scholarship rules of the College of Engineering provide:

1. That any freshman student whose grade-point average for any quarter is less than 1.8 and any other undergraduate student whose grade-point average for any quarter is less than 2.0 shall be placed on the low scholarship list and referred to the dean for appropriate action.

*A "unit" is applied to work taken in the high school. To count as a unit a subject must be taught five times a week, in periods of not less than forty-five minutes, for a school year of thirty-six weeks.

2. That as a prerequisite to registration for required junior and senior courses in any engineering curriculum a student must have earned a grade-point average of at least 2.2 in the required subjects of the first two years. (Effective June, 1942.)

3. That a candidate for a bachelor's degree in engineering must have earned a grade-point average of at least 2.4 in the upper-division subjects of his major department. (Effective for graduating seniors in June, 1943.)

Preparation in Algebra

All students entering any department of engineering will be tested in high-school algebra by class work and by examination given shortly after the beginning of the first quarter. It is essential that students in the engineering courses possess a good working knowledge of algebra *at the beginning of their course*. The purpose of the test is to secure this by requiring the student to review the subject shortly before he enters the University. Students failing in the test are not permitted to continue with regular freshman engineering mathematics, but are required to take a review of preparatory algebra (Mathematics 1, College of Arts and Sciences) during the first quarter.

Preparation in English

Proficiency in the mechanics of English should be acquired by the time a student begins university work. To aid him in maintaining a high standard, careful criticism is given of his written papers; unless his rating is satisfactory, he must pass a test in spelling, punctuation, and grammar before being admitted to the course in technical writing (English 100) required of all students in the College of Engineering. For those who fail in this test, which is given on the second Saturday of the spring quarter, a non-credit course (English B) is provided, but is likely to result in irregularity of schedule. To avoid such difficulty, the student will do well to master the fundamentals of correct English while still in high school, and to make automatic their proper applications in both speech and writing.

Curricula and Degrees

The College of Engineering offers four-year curricula in the departments of aeronautical, chemical, civil, commercial, electrical, and mechanical engineering, leading to the degree of bachelor of science in the respective department. It offers in addition four special four-year curricula combining naval science with aeronautical, civil, electrical, or mechanical engineering, leading to bachelor of science degrees in the corresponding branch of engineering and naval science.

Degree with Honors. A degree with honors in engineering may be conferred upon any student of the College of Engineering who, upon vote of the engineering faculty and of the honors committee, may be declared worthy of unusual distinction.

Thesis. The graduating thesis, when required, will consist of research or design in some branch of engineering, or review of some existing construction. The subject must be approved by the professor in charge of the department under which it is classified.

Normal Diploma. Engineering students who plan to prepare for high-school teaching should consult with the department of Education as soon as possible.

Advanced Degrees. For requirements for advanced degrees, see Graduate School section, page 174.

The professional degrees, aeronautical engineer (A.E.), chemical engineer (Ch.E.), civil engineer (C.E.), electrical engineer (E.E.), and mechanical engineer (M.E.), will be conferred on graduates of this college holding the degree of bachelor of science or master of science in their respective departments, who give satisfactory evidence of having been engaged continuously in responsible engineering work for not

less than four years, are not under 30 years of age, and who present satisfactory theses.

In general, responsible engineering work shall be interpreted to mean work equivalent to that required for associate membership in the national founder engineering societies. In case the applicant has rendered special services to the profession by accomplishments of undisputed merit, the thesis may be waived upon presentation of articles describing such work in publications of recognized standing. Teaching experience shall count in lieu of professional experience in the same ratio as now recognized by the engineering societies, provided that a minimum of two years of acceptable engineering work, other than teaching, be included.

CURRICULA OF THE DEPARTMENTS OF ENGINEERING

(For the Freshman Year in all Departments)

FRESHMAN

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-----------------------------|----------------|-----------------------------|----------------|------------------------------|----------------|
| †Chem. 24. General..... | 4 | Chem. 25. General..... | 4 | Chem. 26. General..... | 4 |
| G.E. 1. Drawing..... | 3 | G.E. 2. Drawing..... | 3 | G.E. 3. Drafting Problems... | 3 |
| G.E. 11. Engineering Probs. | 3 | G.E. 12. Engineering Probs. | 3 | †G.E. 21. Surveying..... | 3 |
| Math. 31. Engin. Fr..... | 5 | Math. 32. Engin. Fr..... | 5 | Math. 33. Engin. Fr..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

†Students who expect to take chemical engineering should register for Chemistry 21, 22, 23.
 †Chemical engineering students may substitute 3 hours of electives for G.E. 21.

Aeronautical Engineering

Leading to the Degree of Bachelor of Science in Aeronautical Engineering

FRESHMAN

(The same for all curricula. See above.)

SOPHOMORE

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-------------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|
| Physics 97. Engin. Physics... | 5 | Physics 98. Engin. Physics... | 5 | Physics 99. Engin. Physics... | 5 |
| Math. 41. Engin. Calculus... | 3 | Math. 42. Engin. Calculus... | 3 | Engr. 100. Technical Comp... | 3 |
| M.E. 81. Mechanism..... | 3 | C.E. 91. Mechanics..... | 3 | C.E. 92. Mechanics..... | 3 |
| M.E. 82. Steam Engineering | 3 | E.B. 3. General Economics... | 3 | Math. 43. Engin. Calculus... | 3 |
| M.E. 53. Mfg. Methods.... | 1 | M.E. 54. Mfg. Methods.... | 1 | M.E. 55. Mfg. Methods.... | 1 |
| P.E. 15. Hygiene..... | 2 | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |
| M.S. and P.E. or N.S..... | + | | | | |

JUNIOR

| | | | | | |
|-----------------------------------|---|---|---|---|---|
| A.E. 84. Aerodynamics... | 3 | A.E. 101. Aerodynamics... | 3 | A.E. 102. Adv. Aerodyn... | 3 |
| A.E. 100. Aircraft Engines | 3 | A.E. 171. Aircraft Structural Mechanics | 3 | A.E. 104. Laboratory Meth. and Instruments..... | 3 |
| C.E. 141. Hydraulics.... | 4 | M.E. 112. Machine Design | 3 | A.E. 172. Aircraft Structural Mechanics | 3 |
| M.E. 111. Machine Design | 3 | E.E. 101. Direct Currents. | 4 | E.E. 121. Alt. Currents... | 4 |
| †English 102. Comp. for Engineers | 3 | E.E. 102. D.C. Laboratory | 2 | E.E. 122. A.C. Laboratory | 2 |
| | | | | M.E. 104. Mfg. Methods.. | 1 |

SENIOR

| | | | | | |
|---|---|---------------------------|---|---|---|
| A.E. 103. Airpl. Perform.. | 3 | A.E. 111. Airplane Design | 3 | A.E. 112. Airplane Design | 3 |
| A.E. 105. Wind Tun'l Lab. | 2 | A.E. 189. Seminar..... | 1 | A.E. 190. Seminar..... | 1 |
| A.E. 141. Aerial Propuls'n | 3 | M.E. 167. Engr. Materials | 3 | M.E. 183. Thermodynamics and Refrigeration..... | 5 |
| A.E. 173. Aircraft Structural Mechanics | 3 | Electives* | 9 | E.B. 57. Business Law... | 3 |
| A.E. 188. Seminar..... | 1 | | | Electives* | 4 |
| Electives* | 4 | | | | |

The total number of credits for graduation must include Physical Education 15 for men, or Physical Education 4, 6, 8, or 10 for women.

†English 101 (see electives) may be substituted.

*Not less than 9 elective credits shall be obtained from the following list of recommended aeronautical electives.

Electives in all cases must be approved in advance by the head of the department.

For non-technical electives, see page 160.

RECOMMENDED ELECTIVES

| | <i>Credits</i> |
|---|----------------|
| A.E. 106. Advanced Wind Tunnel Laboratory..... | 2 |
| A.E. 121. Airships | 3 |
| A.E. 142. Advanced Aerial Propulsion..... | 3 |
| A.E. 161. Advanced Aeronautical Problems..... | 3 |
| A.E. 181. Advanced Airplane Structures..... | 3 |
| A.E. 191, 192, 193. Research..... | 2-5 |
| A.E. 211, 212, 213. Research..... | 2-5 |
| M.E. 198. Gas Engineering..... | 3 |
| Geography 122. Meteorology..... | 3 |
| Math. 114. Ordinary and Partial Differential Equations..... | 3 |
| Math. 115. Ordinary and Partial Differential Equations..... | 3 |
| M.E. 182. Heating and Ventilation..... | 3 |
| M.E. 185. Naval Architecture | 3 |
| M.E. 108. Production Management | 3 |
| M.E. 109. Factory Cost Analysis..... | 3 |

Leading to the Degree of Bachelor of Science in Aeronautical Engineering
and Naval Science

FRESHMAN

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|----------------------------|----------------|----------------------------|----------------|----------------------------|----------------|
| Math. 31. Engin. Fr. ... 5 | | Math. 32. Engin. Fr. ... 5 | | Math. 33. Engin. Fr. ... 5 | |
| G.E. 1. Drawing 3 | | G.E. 2. Drawing..... 3 | | G.E. 12. Engin. Probs... 3 | |
| Chem. 24. General 4 | | G.E. 11. Engin. Probs... 3 | | G.E. 3. Drafting Probs.. 3 | |
| N.S. 1.+3 | | Chem. 25. General 4 | | Chem. 26. General..... 4 | |
| | | N.S. 2+3 | | N.S. 3+3 | |
| | 12+3 | | 15+3 | | 15+3 |

SOPHOMORE

| | | |
|-----------------------------|-----------------------------|-----------------------------|
| Math. 41. Engin. Calculus 3 | Math. 42. Engin. Calculus 3 | Math. 43. Engin. Calculus 3 |
| M.E. 81. Mechanism.... 3 | C.E. 91. Mechanics 3 | C.E. 92. Mechanics 3 |
| Phys. 97. Engin. Physics. 5 | M.E. 82. Steam Engin'g. 3 | Phys. 99. Engin. Physics 5 |
| M.E. 53. Mfg. Methods. 1 | Phys. 98. Engin. Physics 5 | Engl. 100. Tech. Comp... 3 |
| P.E. 15. Hygiene 2 | M.E. 54. Mfg. Methods. 1 | M.E. 55. Mfg. Methods. 1 |
| N.S. 51+3 | N.S. 52+3 | N.S. 53+3 |
| | 14+3 | 15+3 |
| | | 15+3 |

JUNIOR

| | | |
|-----------------------------|-----------------------------|------------------------------|
| N.S. 101 3 | N.S. 102. 3 | N.S. 103. 3 |
| A.E. 84. Aerodynamics .. 3 | A.E. 101. Aerodynamics .. 3 | A.E. 102. Adv. Aerodyn.. 3 |
| A.E. 100. Aircraft Eng's. 3 | A.E. 171. Aircraft Struct. | A.E. 172. Aircraft Struct. |
| C.E. 141. Hydraulics 4 | Mechanics 3 | Mechanics 3 |
| M.E. 111. Machine Design 3 | M.E. 112. Mach. Design. 3 | A.E. 104. Lab. Methods |
| | E.E. 101. Direct Currents 4 | and Instruments... 3 |
| | E.E. 102. D.C. Lab..... 2 | E.E. 121. Alt. Currents... 4 |
| | | E.E. 122. A.C. Lab..... 2 |
| | 18 | 18 |

SENIOR

| | | |
|-----------------------------|-----------------------------|-----------------------------|
| N.S. 151 3 | N.S. 152 3 | N.S. 153. 3 |
| A.E. 103. Airpl. Perform. 3 | A.E. 111. Airplane Design 3 | A.E. 112. Airplane Design 3 |
| A.E. 105. Wind Tun. Lab. 2 | M.E. 167. Engr. Materials 3 | M.E. 183. Thermodynamics |
| A.E. 173. Aircraft Struct. | Speech 40 5 | and Refrigeration ... 5 |
| Mechanics 3 | M.E. 104. Mfg. Methods. 1 | M.E. 185. Naval Archit... 3 |
| A.E. 141. Aerial Propul.. 3 | A.E. 189. Seminar..... 1 | A.E. 190. Seminar 1 |
| A.E. 188. Seminar 1 | | |
| | 16 | 15 |

Chemical Engineering

Leading to the Degree of Bachelor of Science in Chemical Engineering

FRESHMAN

(The same for all curricula. See above.)

SOPHOMORE

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|--|----------------|
| Chem. 51. Industrial Chemical Calculations.... | 2 | Chem. 52. Industrial Chemical Calculations.... | 2 | Chem. 53. Industrial Chemical Calculations.... | 2 |
| Physics 97. Engineering.... | 5 | Physics 98. Engineering.... | 5 | Physics 99. Engineering.... | 5 |
| Math. 41. Engin. Calculus.. | 3 | Chem. 110. Quant. Analysis.. | 5 | Chem. 101. Adv. Qual. Anal.. | 5 |
| Chem. 109. Quant. Analysis | 5 | M.E. 82. Steam Engin..... | 3 | M.E. 83. Steam Engin. Lab.. | 3 |
| M.S. and P.E. or N.S..... | + | Phys. Educ. 15. Hygiene.... | 2 | M.S. and P.E. or N.S..... | + |
| | | M.S. and P.E. or N.S..... | + | | |

JUNIOR

| | | | | | |
|---|---|--|---|---|---|
| Chem. 121. Chemistry of Engineering Materials.... | 5 | Chem. 122. Inorganic Chemical Industries..... | 5 | Chem. 123. Organic Chemical Industries..... | 5 |
| Chem. 131. Organic Chem.. | 5 | Chem. 132. Organic Chem.... | 5 | C.E. 92. Mechanics..... | 3 |
| E.E. 101. Direct Currents.. | 4 | E.E. 121. Alt. Currents..... | 4 | English 100. Tech. Comp.... | 3 |
| E.E. 102. Direct Currents Laboratory..... | 2 | E.E. 122. Alternating Currents Laboratory..... | 2 | M.E. 55. Mfg. Methods.... | 1 |
| | | | | M.E. 54. Mfg. Methods.... | 1 |
| | | | | Electives..... | 3 |

SENIOR

| | | |
|--|--|--------------------------------|
| Chem. 181. Physical and Theoretical Chemistry... 5 | Chem. 182. Physical and Theoretical Chemistry... 5 | Chem. 173. Unit Operations.. 3 |
| Chem. 171. Unit Operations 5 | Chem. 172. Unit Operations 5 | Chem. 178. Thesis..... 1 |
| Chem. 176. Thesis..... 2 | Chem. 177. Thesis..... 2 | Chem. 174 or Chem. 183... 3 |
| M.E. 111. Machine Design 3 | Electives..... 4 | Electives..... 8 |

The total number of credits for graduation must include Physical Education 15 for men, or Physical Education 4, 6, 8, or 10 for women.

Electives must in all cases be approved in advance by the head of the department.

For non-technical electives, see page 160.

Civil Engineering

Leading to the Degree of Bachelor of Science in Civil Engineering

FRESHMAN

(The same for all curricula. See above.)

SOPHOMORE

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|-------------------------------|----------------|------------------------------|----------------|
| Physics 97. Engin. Physics.. | 5 | Physics 98. Engin. Physics.. | 5 | Physics 99. Engin. Physics.. | 5 |
| Math. 41. Engin. Calculus.. | 3 | M.E. 82. Steam Engin..... | 3 | C.E. 59. Adv. Surveying.... | 4 |
| C.E. 95. Mechanics..... | 3 | C.E. 58. Transportat. Engin.. | 4 | English 100. Tech. Comp.... | 3 |
| C.E. 57. Transport. Surv.... | 4 | E.B. 3. Gen. Economics..... | 3 | C.E. 96. Mechanics..... | 3 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | Phys. Educ. 15. Hygiene.... | 2 |
| | | | | M.S. and P.E. or N.S..... | + |

JUNIOR

| | | | | |
|---|--|---|---|---|
| C.E. 142. Hydraulics..... | 5 | C.E. 143. Hydraulic Engin... 5 | E.B. 57. Business Law..... | 3 |
| C.E. 171. Structural Anal... 3 | C.E. 172. Structural Anal... 3 | C.E. 121. Rds., Pavements... 3 | C.E. 121. Rds., Pavements... 3 | |
| E.E. 103. Direct Currents.. 3 | C.E. 162. Materials of Construction..... | C.E. 150. Sanitary Engin... 3 | C.E. 150. Sanitary Engin... 3 | |
| E.E. 104. Dir. Cur. Lab.... 1 | E.E. 123. Alt. Currents..... 3 | C.E. 173. Structural Anal... 3 | C.E. 173. Structural Anal... 3 | |
| Geol. 105. Petrology as Applied to Engineering... 5 | E.E. 124. Alt. Cur. Lab.... 1 | C.E. 163. Materials—Timber and Steel..... | C.E. 163. Materials—Timber and Steel..... | 3 |

SENIOR

| | | |
|---|--|---------------------------------|
| C.E. 175. Structural Design.. 4 | C.E. 176. Structural Design.. 4 | C.E. 177. Structural Design.. 3 |
| C.E. 158. Sewage Disposal or C.E. 123. Highway and Railway Economics..... | C.E. 123. Highway and Railway Economics, or C.E. 158. Sewage Disposal... 3 | C.E. Group Requirements... 3 |
| C.E. 145. Hydraulic Mach., or C.E. 157. Reclamation..... 3 | C.E. 157. Reclamation or C.E. 145. Hydraulic Mach... 3 | Non-technical electives*..... 9 |
| C.E. Group Requirements... 3 | C.E. Group Requirements... 3 | |
| Non-technical electives*.... 3 | Non-technical electives*.... 3 | |

* Non-technical electives (12 credits) must include English 101 or 102 or Speech 40 or 103.

C.E. group requirements must be satisfied by *approved* elections from the following advanced courses offered by the department of civil engineering:

| | Credits |
|--|---------|
| C.E. 109. Engineering Relations | 3 |
| C.E. 124. Highway Design | 3 |
| C.E. 128. Transportation Administration | 3 |
| C.E. 147. Hydraulic Power | 3 |
| C.E. 154. Sanitary Design | 3 |
| C.E. 155. Water Supply Problems | 3 |
| C.E. 166. Soil Mechanics | 3 |
| C.E. 167. Soil Mechanics | 3 |
| C.E. 181. Advanced Structures | 3 |
| C.E. 182. Advanced Structures | 3 |
| C.E. 183. Advanced Structures | 4 |
| C.E. 191, 193, 195. H, M, S, W, or T* Special Senior Courses | 3-5 |

* Hydraulics (H), Materials (M), Structural (S), Sanitary (W), and Transportation (T).
Electives must in all cases be approved in advance by the head of the department.
For non-technical electives, see page 160.

Leading to the Degree of Bachelor of Science in Civil Engineering and Naval Science

FRESHMAN

| Autumn Quarter | Credits | Winter Quarter | Credits | Spring Quarter | Credits |
|--------------------------|---------|--------------------------|---------|----------------------------|---------|
| Chem. 24. General | 4 | Chem. 25. General | 4 | Chem. 26. General | 4 |
| G.E. 1. Drawing | 3 | G.E. 2. Drawing | 3 | G.E. 3. Drafting Probs. .. | 3 |
| Math. 31. Engin. Fr. ... | 5 | Math. 32. Engin. Fr. ... | 5 | G.E. 12. Eng. Problems. 3 | |
| N.S. 1. | +3 | G.E. 11. Eng. Prob. | 3 | Math. 33. Engin. Fr. ... | 5 |
| | | N.S. 2. | +3 | N.S. 3. | +3 |
| | 12+3 | | 15+3 | | 15+3 |

SOPHOMORE

| | | |
|-----------------------------|---------------------------|----------------------------|
| Phys. 97. Engin. Physics. 5 | Phys. 98. Eng. Physics. 5 | Phys. 99. Engin. Physics 5 |
| Math. 41. Calculus | C.E. 58. Transportation | C.E. 59. Adv. Surveying 4 |
| G.E. 21. Surveying | Eng. | C.E. 96. Mechanics |
| M.E. 81 or 82. Mech. or | C.E. 95. Mechanics | P.E. 15. Hygiene |
| Elem. Steam | N.S. 52 | N.S. 53 |
| N.S. 51 | +3 | +3 |
| | 12+3 | 14+3 |
| | 14+3 | |

JUNIOR

| | | | | | |
|------------------------------|----|------------------------------|----|------------------------------|----|
| N.S. 101 | 3 | N.S. 102. | 3 | N.S. 103 | 3 |
| C.E. 171. Struct. Analysis 3 | | C.E. 172. Struct. Analysis 3 | | C.E. 173. Struct. Analysis 3 | |
| C.E. 57. Transport. Surv. 4 | | C.E. 142. Hydraulics | 5 | C.E. 150. Sanitary Engin. 3 | |
| E.E. 103. Direct Currents 3 | | E.E. 123. Alt. Currents .. | 3 | C.E. 121. Roads and | |
| E.E. 104. D.C. Lab. | 1 | E.E. 124. Alt. Cur. Lab. .. | 1 | Pavements | 3 |
| Engl. 100. Technical Comp. 3 | | C.E. 163. Materials | 3 | E.E. 73. Vac. Tubes and | |
| | 17 | | 18 | Radio | 5 |
| | | | | | 17 |

SENIOR

| | | | | | |
|-----------------------------|----|-----------------------------|----|------------------------------|--------|
| N.S. 151 | 3 | N.S. 152. | 3 | N.S. 153. | 3 |
| C.E. 175. Struct. Design. 4 | | C.E. 176. Struct. Design. 4 | | C.E. 177. Struct. Design. 3 | |
| C.E. 158. Sewage Disposal 3 | | C.E. 143. Hydraul. Engin. 5 | | M.E. 185. Naval Architect. 3 | |
| Geog. 11. Weather and | | C.E. 162. Materials of | | Engl. 102 or | |
| Climate | 5 | Construction | 3 | Speech 103 or 40 | 3 or 5 |
| C.E. 145. Hydraul. Mach. 3 | | E.B. 3. Economics | 3 | Elective | 3 |
| | 18 | | 18 | | 15 |

Commercial Engineering

Leading to the Degree of Bachelor of Science in Commercial Engineering

FRESHMAN

(The same for all curricula. See above.)

SOPHOMORE

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|------------------------------|----------------|------------------------------|----------------|
| Physics 97. Engin. Physics.. | 5 | Physics 98. Engin. Physics.. | 5 | Physics 99. Engin. Physics.. | 5 |
| Math. 41. Engin. Calculus.. | 3 | Math. 42. Engin. Calculus.. | 3 | M.E. 83. Steam Engin. Lab.. | 3 |
| M.E. 81. Mechanism..... | 3 | C.E. 91. Mechanics..... | 3 | English 100. Tech. Comp.... | 3 |
| M.E. 82. Steam Engin..... | 3 | E.B. 3. Gen. Economics..... | 3 | C.E. 92. Mechanics..... | 3 |
| M.E. 53. Mfg. Methods.... | 1 | M.E. 54. Mfg. Methods.... | 1 | M.E. 55. Mfg. Methods.... | 1 |
| M.S. and P.E. or N.S..... | † | Phys. Educ. 15. Hygiene.... | 2 | M.S. and P.E. or N.S..... | † |
| | | M.S. and P.E. or N.S..... | † | | |

JUNIOR

| | | | | | |
|-----------------------------|---|-------------------------------|---|---------------------------|---|
| E.E. 101. Direct Currents.. | 4 | E.E. 121. Altern. Currents.. | 4 | E.B. 110. Accounting | |
| E.E. 102. Dir. Cur. Lab.... | 2 | E.E. 122. Alt. Cur. Lab.... | 2 | Analysis and Control..... | 5 |
| E.B. 54. Business Law..... | 5 | E.B. 63. Prin. of Account.... | 5 | C.E. 142. Hydraulics..... | 5 |
| E.B. 62. Prin. of Account.. | 5 | Electives..... | 6 | Electives..... | 5 |

SENIOR

| | | | | | |
|-----------------------------|---|-------------------------------|---|------------------------------|---|
| M.E. 167. Engin. Materials | 3 | M.E. 111. Machine Design... | 3 | M.E. 112. Machine Design... | 3 |
| E.B. 154. Cost Accounting.. | 5 | E.B. 101. Scientific Mgmt.... | 5 | E.B. 121. Corp. Finance..... | 5 |
| Electives..... | 6 | E.B. 103. Money & Banking | 5 | Speech 103. Extempore..... | 3 |
| | | †English 102. For Engineers. | 3 | Electives..... | 5 |

The total number of credits for graduation must include Physical Education 15 for men, or Physical Education 4, 6, 8, or 10 for women.

Electives must in all cases be approved in advance by the head of the department.

Not less than 17 elective credits shall be technical (engineering).

For non-technical electives, see page 160.

† English 101 (see electives) may be substituted.

Electrical Engineering

Leading to the Degree of Bachelor of Science in Electrical Engineering.

FRESHMAN

(The same for all curricula. See above.)

SOPHOMORE

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|----------------------------|----------------|-----------------------------|----------------|------------------------------|----------------|
| Math. 41. Calculus..... | 3 | Math. 42. Calculus..... | 3 | Physics 99. Light and Heat.. | 5 |
| Physics 97. Mechanics..... | 5 | E.E. 109. Direct Currents.. | 5 | E.E. 111. D.C. Mach..... | 3 |
| M.E. 81. Mechanism..... | 3 | E.E. 110. Dir. Cur. Lab.... | 2 | E.E. 112. Dir. Cur. Lab.... | 4 |
| M.E. 82. Steam..... | 3 | M.E. 83. Steam Laboratory.. | 3 | C.E. 91. Mechanics..... | 3 |
| M.E. 53. Mfg. Methods.... | 1 | M.E. 54. Mfg. Methods.... | 1 | M.E. 55. Mfg. Methods.... | 1 |
| M.S. and P.E. or N.S..... | † | P.E. 15. Hygiene..... | 2 | M.S. and P.E. or N.S..... | † |
| | | Mil. Sci. or Naval Sci..... | † | | |

JUNIOR

| | | | | | |
|-----------------------------|---|------------------------------|---|------------------------------|---|
| C.E. 92. Mechanics..... | 3 | E.E. 161. Alt. Currents..... | 4 | E.E. 163. Alt. Currents..... | 4 |
| E.E. 152. Machine Design.. | 3 | E.E. 162. Alt. Cur. Lab.... | 4 | E.E. 164. Alt. Cur. Lab.... | 5 |
| E.E. 159. Alt. Currents.... | 3 | C.E. 142. Hydraulics..... | 5 | M.E. 167. Engin. Materials.. | 3 |
| M.E. 111. Machine Design | 3 | M.E. 112. Machine Design.. | 3 | †English 102. For Engineers. | 3 |
| English 100. Tech. Comp.. | 3 | | | | |

SENIOR

| | | | | | |
|-----------------------------|---|----------------------------|---|----------------------------|----|
| E.E. 181. Vacuum Tubes... | 4 | E.E. Group Electives*..... | 7 | E.E. Group Electives*..... | 15 |
| E.E. 182. V.T. Laboratory.. | 2 | Physics. Atomic, or | | | |
| E.E. 195. El. Trans..... | 4 | E.E. Group Electives..... | 5 | | |
| E.E. 196. E.T. Laboratory.. | 2 | E.B. 3. Economics..... | 3 | | |
| E.E. Group Electives*..... | 3 | | | | |

Electives must in all cases be approved in advance by the head of the department.

Twelve credit hours of group requirements must be satisfied by electives from advanced E.E. courses.

† English 101 may be substituted.

* See list below.

ELECTRICAL ENGINEERING GROUP OF RECOMMENDED ELECTIVES

| | Credits | | Credits |
|--|---------|--|---------|
| E.E. 141. Illumination..... | 3 | E.B. 57. Business Law..... | 3 |
| E.E. 154. Design of Electrical Apparatus..... | 4 | E.B. 62. Accounting..... | 5 |
| E.E. 171. Electric Railways..... | 4 | English Comp. 101, 103 (each)..... | 3 |
| E.E. 173. Central Stations..... | 4 | Speech 103..... | 3 |
| E.E. 175. Power Transmission..... | 5 | French 4, 7, 37 (each)..... | 3 |
| E.E. 183. Radio..... | 4 | G.E. 151. Patents..... | 1 |
| E.E. 184. Radio Lab..... | 2 | German 5, 60 (each)..... | 3 |
| E.E. 186. Radio-Tel. Trans. Practice..... | 2 | History 149, 150 (each)..... | 5 |
| E.E. 185. Telephone Transmission..... | 5 | Math. 43. Engr. Calculus..... | 3 |
| E.E. 188, 190, 192. Research (each)..... | 2 to 5 | Math. 114, 115. Differential Equations (each)..... | 3 |
| E.E. 191, 193. Adv. Circuit Theory (each)..... | 3 | M.E. 108. Production Management..... | 3 |
| E.E. 194, 197. Seminar (each)..... | 5 | M.E. 109. Factory Cost Accounting..... | 3 |
| E.E. 198. Adv. Electric Transients..... | 2 to 5 | M.E. 183. Thermodynamics..... | 5 |
| A.E. 83, 101. Aerodynamics (each)..... | 3 | M.E. 200. Vibrations..... | 3 |
| Chem. 111. Quant. Analysis..... | 5 | Physics 54 or 115. Photography..... | 4 |
| Chem. 121, 122. Engin. Materials (each)..... | 5 | Physics 101, 102. Atomic (each)..... | 3 |
| Chem. 131, 132. Organic (each)..... | 5 | Physics 195, 196. Laboratory (each)..... | 4 |
| C.E. 145. Hyd. Machinery..... | 3 | Pol. Sci. 111, 113 (each)..... | 5 |
| C.E. 171, 172. Structural Analysis (each)..... | 3 | Psychology 2, 21 (each)..... | 5 |
| | | Adv. Mil. Sci. (Coast Artillery)..... | 9 |
| | | Adv. Naval Science..... | 9 |

Leading to the Degree of Bachelor of Science in Electrical Engineering and Naval Science

FRESHMAN

| Autumn Quarter | Credits | Winter Quarter | Credits | Spring Quarter | Credits |
|--------------------------|---------|--------------------------|---------|--------------------------|---------|
| Chem. 24. General..... | 4 | Chem. 25. General..... | 4 | Chem. 26. General..... | 4 |
| G.E. 1. Drawing..... | 3 | G.E. 2. Drawing..... | 3 | G.E. 3. Drafting Probs.. | 3 |
| Math. 31. Engin. Fr..... | 5 | Math. 32. Engin. Fr. ... | 5 | G.E. 12. Engin. Probs. . | 3 |
| N.S. 1. | +3 | G.E. 11. Eng. Probs..... | 3 | Math. 33. Engin. Fr. ... | 5 |
| | | N.S. 3. | +3 | N.S. 3. | +3 |
| | 12+3 | | 15+3 | | 15+3 |

SOPHOMORE

| | | | | | |
|--------------------------|------|----------------------------|------|----------------------------|------|
| Math. 41. Calculus..... | 3 | Math. 42. Calculus..... | 3 | Phys. 99. Light and Heat.5 | |
| Phys. 97. Mechanics.... | 5 | E.E. 109. Dir. Currents. 5 | | E.E. 111. D. C. Mach. .. | 3 |
| M.E. 81. Mechanism ... | 3 | E.E. 110. Dir. Cur. Lab. 2 | | E.E. 112. Dir. Cur. Lab. 4 | |
| M.E. 82. Steam..... | 3 | M.E. 83. Steam Lab. ... | 3 | C.E. 91. Mechanics | 3 |
| M.E. 53. Mfg. Methods. 1 | | M.E. 54. Mfg. Methods . 1 | | M.E. 55. Mfg. Methods. 1 | |
| N.S. 51. | +3 | P.E. 15. Hygiene..... | 2 | N.S. 53. | +3 |
| | | N.S. 52. | +3 | | |
| | 15+3 | | 16+3 | | 16+3 |

JUNIOR

| | | | | | |
|------------------------------|----|------------------------------|----|----------------------------|----|
| N.S. 101..... | 3 | N.S. 102..... | 3 | N.S. 103..... | 3 |
| E.E. 159. Alt. Currents... 3 | | E.E. 161. Alt. Currents... 4 | | E.E. 181. Vacuum Tubes. 4 | |
| C.E. 92. Mechanics..... | 3 | E.E. 162. Alt. Cur. Lab... 4 | | E.E. 182. V. T. Lab..... | 2 |
| M.E. 111. Mach. Design... 3 | | M.E. 112. Mach. Design... 3 | | C.E. 142. Hydraulics ... | 5 |
| Engl. 100. Tech. Comp. .. | 3 | M.E. 167. Engr. Materials 3 | | Speech 103. Ex. Speaking 3 | |
| | 15 | | 17 | | 17 |

SENIOR

| | | | | | |
|-----------------------------|----|----------------------------|----|--------------------------|----|
| N.S. 151..... | 3 | N.S. 152..... | 3 | N.S. 153..... | 3 |
| E.E. 183. Radio..... | 4 | E.E. 185. Tel. Transmis. 5 | | Geog. 11. Weather and | |
| E.E. 184. R.T. Trans. Pr. 2 | | Engl. 101 or 102. For | | Climate..... | 5 |
| E.E. 195. El. Trans. | 4 | Engineers..... | 3 | M.E. 185. Naval Arch.... | 3 |
| E.E. 196. E.T. Laboratory 2 | | Elective..... | 4 | Elective..... | 4 |
| | 15 | | 15 | | 15 |

Mechanical Engineering

Leading to the Degree of Bachelor of Science in Mechanical Engineering

FRESHMAN

(The same for all curricula. See above.)

SOPHOMORE

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|------------------------------|----------------|------------------------------|----------------|
| Physics 97. Engin. Physics.. | 5 | Physics 98. Engin. Physics.. | 5 | Physics 99. Engin. Physics.. | 5 |
| Math. 41. Engin. Calculus.. | 3 | Math. 42. Engin. Calculus.. | 3 | M.E. 83. Steam Engin. Lab.. | 3 |
| M.E. 81. Mechanism..... | 3 | C.E. 91. Mechanics..... | 3 | English 100. Tech. Comp.... | 3 |
| M.E. 82. Steam Engin..... | 3 | E.B. 3. Gen. Economics.... | 3 | C.E. 92. Mechanics..... | 3 |
| M.E. 53. Mfg. Methods.... | 1 | M.E. 54. Mfg. Methods.... | 1 | M.E. 55. Mfg. Methods.... | 1 |
| M.S. and P.E. or N.S..... | + | Phys. Educ. 15. Hygiene.... | 2 | M.S. and P.E. or N.S..... | + |
| | | M.S. and P.E. or N.S..... | + | | |

JUNIOR

| | | | | | |
|-------------------------------|---|-------------------------------|---|-------------------------------|---|
| E.E. 101. Direct Currents.. | 4 | E.E. 121. Alternating Cur.... | 4 | C.E. 142. Hydraulics..... | 5 |
| E.E. 102. Dir. Cur. Lab.... | 2 | E.E. 122. Alt. Cur. Lab..... | 2 | †English 102. For Engineers.. | 3 |
| M.E. 123. Engines & Boilers.. | 2 | M.E. 111. Machine Design... | 3 | M.E. 112. Machine Design... | 3 |
| M.E. 151. Experim. Engin... | 3 | M.E. 124. Engines & Boilers.. | 3 | M.E. 153. Experim. Engin... | 3 |
| M.E. 105. Adv. Mfg. Meth... | 1 | M.E. 152. Experim. Engin... | 3 | M.E. 107. Production | |
| Electives..... | 3 | M.E. 106. Adv. Mfg. Meth... | 1 | Planning..... | 1 |

SENIOR

| | | |
|----------------------------|------------------------------|----------------------------|
| E.B. 57. Business Law... 3 | M.E. 114. Machine Design 2 | M.E. 115 or 199. Steam or |
| M.E. 113. Machine Design 2 | M.E. 167. Engin. Materials 3 | Internal Combustion |
| M.E. 183. Thermodynamics | M.E. 182. Heat & Ventil. 3 | Engine Design |
| and Refrigeration 5 | M.E. 198. Internal Com- | M.E. 184. Power Plants.. 5 |
| Electives | bustion Engines | M.E. 195. Thesis |
| 5 | Electives | Electives |
| | 4 | 5 |

The total number of credits for graduation must include Physical Education 15 for men, or Physical Education 4, 6, 8, or 10 for women.

Electives must in all cases be approved in advance by the head of the department.

For non-technical electives, see below.

When practicable, it is recommended that thesis be taken in the winter quarter.

†English 101 (see electives) may be substituted.

SUGGESTED ELECTIVES

Each student is expected to take at least twelve credits of electives from the following list, unless excused by the head of his department.

| | |
|--|---|
| <i>Anthropology.</i> 51, 52, 53, 101. | <i>History.</i> 5, 10, 144, 145, 149, 150. |
| <i>Astronomy.</i> 1. | <i>Liberal Arts.</i> 1, 11. |
| <i>Bacteriology.</i> 101, 102. | <i>Mathematics.</i> 114, 115. |
| <i>Economics and Business.</i> 54, 55; 62, 63; 121, 122. | <i>Oceanography.</i> 101. |
| <i>English.</i> Composition: 101, 102, 103; | <i>Philosophy.</i> 1, 2, 3, 101-102-103. |
| <i>Literature:</i> 64, 65, 73, 97, 98, 99, 104, 106, 141, 142, 143, 164, 165, 166. | <i>Physics.</i> 54, 101-102, 115. |
| <i>Far Eastern.</i> 90, 91; 50. | <i>Physiology.</i> 53, 54. |
| <i>French.</i> 4, 5, 6, 137, 138, 139. | <i>Political Science.</i> 111, 113, 121, 127, 155, 156. |
| <i>Geography.</i> 102, 170. | <i>Psychology.</i> 1, 21. |
| <i>Geology.</i> 105, 107. | <i>Sociology.</i> 1, 140, 150. |
| <i>German.</i> 5, 60. | <i>Speech.</i> 40, 43, 103. |
| | <i>Zoology.</i> 16, 17. |

Leading to the Degree of Bachelor of Science in Mechanical Engineering and Naval Science

FRESHMAN

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--------------------------|----------------|----------------------------|----------------|----------------------------|----------------|
| Chem. 24. General | 4 | Chem. 25. General | 4 | Chem. 26. General..... | 4 |
| G.E. 1. Drawing | 3 | G.E. 2. Drawing | 3 | G.E. 3. Draft. Probs.... | 3 |
| Math. 31. Engin. Fr. ... | 5 | Math. 32. Engin. Fr. ... | 5 | G.E. 12. Engin. Probs... 3 | |
| N.S. 1 | +3 | G.E. 11. Engin. Probs... 3 | | Math. 33. Engin. Fr..... | 5 |
| | | N.S. 2. | +3 | N.S. 3 | +3 |
| | 12+3 | | 15+3 | | 15+3 |

SOPHOMORE

| | | | | | |
|--------------------------|------|---------------------------|------|--------------------------|------|
| Phys. 97. Mechanics.... | 5 | Phys. 98. Engin. Physics | 5 | Phys. 99. Engin. Physics | 5 |
| Math. 41. Calculus | 3 | Math. 24. Eng. Calculus.. | 3 | M.E. 83. Steam Eng. Lab. | 3 |
| M.E. 81. Mechanism.... | 3 | C.E. 91. Mechanics | 3 | Engl. 100. Tech. Comp.. | 3 |
| M.E. 82. Steam | 3 | M.E. 54. Mfg. Methods. 1 | | M.E. 55. Mfg. Methods. 1 | |
| M.E. 53. Mfg. Methods. 1 | | P.E. 15. Hygiene | 2 | C.E. 92. Mechanics | 3 |
| N.S. 51. | +3 | N.S. 52. | +3 | N.S. 53 | +3 |
| | 15+3 | | 14+3 | | 15+3 |

JUNIOR

| | | | | | |
|---------------------------|----|----------------------------|----|---------------------------|----|
| N.S. 101. | 3 | N.S. 102 | 3 | N.S. 103 | 3 |
| E.E. 101. Dir. Currents.. | 4 | E.E. 121. Alternat. Cur. . | 4 | C.E. 142. Hydraulics ... | 5 |
| E.E. 102. Dir. Cur. Lab.. | 2 | E.E. 122. Alt. Cur. Lab.. | 2 | M.E. 112. Mach. Design. | 3 |
| M.E. 123. Engines and | | M.E. 111. Machine Design | 3 | M.E. 153. Exper. Engin. . | 3 |
| Boilers | 2 | M.E. 124. Engines and | | M.E. 107. Production | |
| M.E. 151. Exper. Engin. . | 3 | Boilers | 3 | Planning | 1 |
| M.E. 105. Adv. Mfg. | | M.E. 152. Exper. Engin. . | 3 | | 15 |
| Methods | 1 | M.E. 106. Adv. Mfg. | | | |
| | 15 | Methods | 1 | | |
| | | | 19 | | |

SENIOR

| | | | | | |
|--------------------------|----|--------------------------|----|---------------------------|----|
| N.S. 151 | 3 | N.S. 152 | 3 | N.S. 153 | 3 |
| Engl. 101 or 102. For | | M.E. 114. Mach. Design.. | 2 | M.E. 199. Steam or Inter- | |
| Engineers | 3 | M.E. 167. Engin. | | nal Comb. Engine | |
| M.E. 113. Machine Design | 2 | Materials | 3 | Design | 3 |
| M.E. 183. Thermodynam.. | 5 | M.E. 198. Internal Comb. | | M.E. 184. Power Plants.. | 5 |
| M.E. 185. Naval Arch. .. | 3 | Engines | 3 | Speech 103. Ex. Speaking. | 3 |
| | 16 | Geog. 11. Weather and | | M.E. 195. Thesis | 3 |
| | | Climate | 5 | | 17 |
| | | | 16 | | |

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

(See also pages 67, 68.)

Military training has been given at the University of Washington since 1875 with the exception of a brief interval in the present century.

The Department of Military Science and Tactics has been established not only for the purpose of teaching the fundamentals of military science but also certain essentials of organization and leadership which are indispensable to a young man's industrial or professional career.

Uniforms and Allowances

As the University has adopted a distinctive uniform for all students in the department of Military Science and Tactics, each one who has been accepted for enrollment in it (see pages 67 and 68) will be required to purchase a uniform which becomes his personal property.

For the school year 1942-1943, the cost of this uniform will be \$27.50. This will be paid to the University cashier on registration in the same manner as other fees. (See Note, page 62.)

In case the student is excused from these courses for reasons stated on pages 67 and 68, the money deposited will be returned to him on presentation to the University cashier of properly authenticated refund slip.

The Federal government currently makes an allowance of \$3.00 for each complete quarter this uniform is worn by the student up to a maximum of six quarters, a total of \$18.00. Due to the date of government payments of these allowances, all allowances are paid near or shortly after the end of the spring quarter of each school year at the rate of \$3.00 for each quarter completed by the student. This applies to withdrawals during the school year as well as to those students who have completed the three school quarters. No allowance is earned for incomplete quarters of the school year.

As this uniform may be worn daily it provides a considerable saving in civilian clothes. With slight alterations it can be converted for wear as a blue civilian suit when no longer needed as a uniform.

Unless otherwise directed the uniform must be worn at all R.O.T.C. classes.

The uniform prescribed for advanced course students is the regulation army officer's uniform with appropriate R.O.T.C. insignia. The Federal government advances currently \$29.00 at the beginning of the first advanced course school year towards the initial cost of the uniform and \$7.00 during the second year, currently a total of \$36.00 for both years. In addition, the government made the following allowances to advanced course students for the year 1941-1942: commutation of rations, 25 cents daily for two school years plus the intervening summer (less time spent in summer camp where the allowance is 70c per day). This total approximates \$175.00 for the two-year course.

No summer camp will be held this year.

Awards and Honors

Honor Graduates. At the close of the academic year, the University may designate a limited number of R.O.T.C. Honor Graduates. Students so designated will have completed the prescribed R.O.T.C. four-year course and will be selected from the academic graduates of the current year. (Graduates of the R.O.T.C. Advanced Course in previous years are eligible for the designation.) Only those who have been selected by the President of the University for their scholastic excellence, and recommended by the Professor of Military Science and Tactics as possessing outstanding qualities of leadership, character, and aptitude for military service will be designated as Honor Graduates.

Applications from prospective Honor Graduates who are candidates for Commissions in the Regular Army will be submitted annually to a Board of Regular Army Officers who will visit the University during the month of February each year.

Army Active Duty Appointments. Based upon needs as determined by the War Department, students who have completed their courses in the Reserve Officers' Training Corps may be selected for active duty with the Army and during such period will receive the pay and allowances of a second lieutenant. Opportunity is afforded a percentage of these officers to compete for a permanent commission in the Regular Army.

Scabbard and Blade. This is a national military honor society with local chapters, called companies, located at 78 leading colleges and universities. Their purpose is primarily to raise the standard of military education. Membership is limited to cadet officers with honor grades in military or naval science.

Washington Rifles. This is a local drill team organization. Membership is limited to Basic Course Cadets who are highly proficient in close order drills and ceremonies. Drill is pursued as a recreational exercise, and to attain higher individual proficiency, for which suitable awards are made.

Cadet Officers' Association. An organization intended to foster acquaintance and friendship and a consciousness of fellowship among Cadet Officers and to establish and maintain liaison with the Reserve Officers' Association, which is the national organization of Reserve Officers.

Military Training Certificate. A military training certificate will be issued upon request to each student completing his instruction in the Basic Course, R.O.T.C. This certificate will show the course pursued and the military qualification attained.

Medals of Merit. Not to be awarded 1942-1943.

Colonel Mears' Award. The Seattle Post, Society of the American Military Engineers, presents annually a set of Second Lieutenant's insignia to the graduating senior in the Coast Artillery Unit who has received outstanding grades in engineering subjects during his last two academic years, who has stood high in tactical subjects, and has worked loyally and effectively in promoting interest in Army R.O.T.C. affairs.

Leadership Prizes. (a) The Seattle Chapter, Reserve Officers' Association of the United States, presents annually an officer's saber to the outstanding cadet captain in command and leadership in the Infantry Unit.

(b) The University Post No. 11, American Legion, presents annually an officer's saber to the outstanding cadet captain in command and leadership in the Coast Artillery Unit.

Junior Military Prize. Members of the Non-commissioned Officers' Training Camp, University of Washington, 1918, established a fund, the income of which shall be utilized as a prize to be presented to the student completing his junior year with the highest honors in military science in each unit.

Junior Military Medals. (a) The United States Coast Artillery Association presents annually a medal to the student in the Coast Artillery Unit completing his junior year with honors in military science.

(b) The Military Order of the Loyal Legion of the United States, Commandery of the State of Washington, presents annually a medal to the student in the Infantry Unit completing his junior year with honors in military science.

Honor Basic Student Prizes. Seattle Post No. 1, American Legion, presents annually a medal to the outstanding basic student in each unit.

Scabbard and Blade Ribbons. Appropriate silk badges are awarded to the outstanding students in Military Science and Tactics by the Scabbard and Blade Society as follows:

(a) First year. On a basis of one to each thirty students. Awards will be made on the completion of the first year Basic Course. Ratings will be on the student's standing in theoretical and practical work, on leadership in Infantry Drill, and on promptness and regularity in attendance.

(b) Second year. On a basis of one to each twenty students. Awards will be made on completion of the fifth quarter Basic Course and will cover the fourth and fifth quarters only, on the same basis as the first-year awards.

DEPARTMENT OF NAVAL SCIENCE AND TACTICS

All male students in the University who are American citizens, and are not physically disqualified, are required to take military training throughout the first two years of residence. The four-year course in Naval Science and Tactics prescribed by the Navy Department for units of the Naval Reserve Officers' Training Corps, may be substituted by the student for military training. Enrollment in this course is limited by the Navy Department and students will be selected for enrollment by the Professor of Naval Science and Tactics from those applying. The course in Naval Science and Tactics leads to a commission as ensign in the United States Naval Reserve, from which officers may have an opportunity, depending upon existing law, to be transferred to the line of the regular navy in a status similar to graduates of the U. S. Naval Academy after they complete a year of active duty at sea.

Graduates Commissioned in Naval Reserve

Students who have successfully completed the course in naval science will be given a certificate showing such completion. Those who have successfully completed the course will, if recommended by the President of the University and the Professor of Naval Science and Tactics, be given a commission in the U. S. Naval Reserve, with the privilege of taking one month or more of active duty on ships of the navy at sea with the same pay as officers of the regular navy.

Summer Cruises

For those students regularly enrolled in the Naval R.O.T.C., a summer cruise without expense to the student is generally, but not always offered. Usually a four-week cruise on a battleship to Hawaiian waters is offered during the summer at the end of the freshman and sophomore years, which approximately one hundred Basic Course students may take each summer if they desire. Practical instruction is given on the cruise in navigation (for sophomores), seamanship and general ship's duty at deck and engineering stations. As this cruise is not required, no university credit is given for it.

Advanced Course students must take the Advanced Course cruise prior to receiving a commission. University credit is given.

Fees and Expenses

Other than the regular University tuition fees there is no extra expense to the students regularly enrolled in the Naval R.O.T.C. On enrollment, an outfit of uniforms is furnished the students by the Navy Department. The uniform must be returned if the four years of naval training are not completed.

The Navy Department has authorized the Professor of Naval Science and Tactics to accept a limited number of students as supernumeraries, or Naval Science Students. As no appropriations are available for these supernumeraries, students taken as Naval Science Students will be required to pay for their own uniforms.

Advanced Course students are paid \$0.25 a day, as subsistence allowance while taking that course. This amounts to about \$90 per year. In addition, Advanced Course students are paid the pay of apprentice seamen (\$21 per month) during the summer cruise. All students are given subsistence while cruising and are allowed transportation and subsistence between the University and the port of embarkation for the cruise.

Obligations Incurred

Entering freshmen making application for enrollment in the course of naval science must agree to fulfill the following obligations and agree to accept a commission in the Naval Reserve at the end of the four years' course in the Naval R.O.T.C.

1. Elect naval science as one of their courses in the University, for four full years.
2. Submit evidence of citizenship.
3. Submit to physical examination prior to enrollment, and yearly thereafter.
4. Agree to be vaccinated for small-pox and given typhoid prophylaxis during freshman year.
5. Devote five hours per week in attendance of the course in naval science and such other times as may be necessary properly to prepare their lessons.

6. Wear uniforms as required for drills and class room work, and to submit to naval discipline while under instruction in naval subjects and during the summer practice cruise.
7. Take the necessary courses in mathematics as part of their regular university program.
8. Make one advanced summer cruise prior to receiving commission in the Naval Reserve.
9. Near the completion of this course, to apply for and accept a commission in the Naval or Marine Corps Reserve, if such be offered, and to consider it a moral obligation to apply for and accept such a commission under the conditions stated.
10. Be unmarried at time of entrance, and agree to remain unmarried for the four-year course.

Description of Courses

For description of courses offered by the College of Engineering, see pages 209 ff.

COLLEGE OF FORESTRY

Hugo Winkenwerder, Dean, 206 Anderson Hall

For detailed information concerning University fees, expenses, and admission requirements, see pages 55-66. In addition to the all-University entrance requirements, the College of Forestry requires the following:

Entrance Requirements

| | |
|--------------------------------------|-----------|
| Elementary and Advanced algebra..... | 1½ units* |
| Plane geometry | 1 unit |

The College of Forestry further recommends that prospective students include a year of physics in their high school course of study.

Qualifying examinations are required in elementary composition. Applicants who fail in this examination must register in English A without credit.

In satisfying entrance requirements with college courses, a minimum of ten credits is counted as the equivalent of the entrance unit.

Fellowships, Scholarships, Prizes. See page 77.

Curricula

Undergraduate Work. For the degree of bachelor of science in forestry the student must complete, in addition to required subjects outlined in the curriculum, enough electives to make a total of 180 credits, exclusive of the basic military or naval science and / or physical education. Electives may be selected from forestry, lumbering, engineering or the botanical, chemical, zoological, geological or economic sciences, the subjects to be approved by the student's class adviser. Ordinarily not more than 25 elective credits in any department other than forestry will be accepted for graduation.

Grades in Military Science and Physical Education are not considered in determining grade point averages in the College of Forestry.

Advanced Degrees. For requirements for advanced degrees, see Graduate School section, page 174.

Choice of Electives. In election of studies students should follow the sequence of subjects as outlined in the curriculum. Deviations from the prescribed order will not be allowed by the class advisers unless such deviation is imperative.

Lower Division

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|------------------------------|----------------|------------------------------|----------------|
| Bot. 10. Foresters'..... | 4 | Bot. 11. Foresters'..... | 4 | For. 1a. Dendrology..... | 3 |
| For. 2. Introduction..... | 2 | For. 3. Introduction..... | 2 | For. 4. Protection..... | 3 |
| English 1. Composition..... | 5 | Math. 21. Trigonometry..... | 5 | For. 5. First Aid..... | 2 |
| Physics 1 or 4. General..... | 5 | Physics 2 or 5. General..... | 5 | For. 7. Forestry Problems... | 3 |
| M.S. and P.E. or N.S.....+ | | M.S. and P.E. or N.S.....+ | | Physics 3 or 6. General..... | 5 |
| | | | | M.S. and P.E. or N.S.....+ | |

SECOND YEAR

| | | | | | |
|------------------------------|---|-----------------------------|---|------------------------------|---|
| For. 1b. Dendrology..... | 3 | For. 60. Mensuration..... | 5 | <i>Sophomore Field Trip</i> | |
| For. 8. Forestry Problems... | 3 | G.E. 7. Engin. Drawing..... | 3 | For. 40. Silviculture..... | 2 |
| For. 15. Gen. Lumbering.... | 4 | Chem. 2 or 22. General..... | 5 | For. 62. Mensuration..... | 6 |
| Chem. 1 or 21. General..... | 5 | For. 121. Silvics..... | 3 | C.E. 56. Forest Surveying... | 8 |
| M.S. and P.E. or N.S.....+ | | M.S. and P.E. or N.S.....+ | | M.S. and P.E. or N.S.....+ | |

The total number of required credits in Physical Education must include P.E. 15.

*A "unit" is applied to work taken in the high school. To count as a unit, a subject must be taught five times a week, in periods of not less than forty-five minutes for a school year of thirty-six weeks.

Upper Division

Beginning with the upper division the student will, with the approval of his faculty adviser, elect to follow one of the specialties in forestry. In registering for upper division courses he must include all electives required as prerequisites for the advanced specialized courses. (See prerequisites under description of courses.)

Forest Management Curriculum**THIRD YEAR**

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--------------------------------|----------------|---------------------------------|----------------|--------------------------------|----------------|
| For. 10. Wood Technology... 3 | | For. 11. Wood Structure.... 3 | | E.B. 3. Gen. Economics.... 3 | |
| For. 122. Silvicultural Mth. 5 | | For. 158. Utilization..... 5 | | For. 105. Wood Preservation 3 | |
| For. 104. Timber Physics... 5 | | For. 140. Forest Construction 4 | | For. 115. Protection..... 3 | |
| Elective..... 3 | | Elective..... 3-5 | | Bot. 111. For. Pathology.... 5 | |
| | | | | Elective..... 2 | |

FOURTH YEAR

| | | |
|---------------------------------|---------------------------------|----------------------------------|
| For. 126. Forest Economics. 4 | For. 119. Forest Admin..... 3 | For. 164. For. M'g't. Surveys 4 |
| For. 151. Forest Finance... 4 | For. 152. Forest Organization 4 | For. 165. For. M'g't. Inv't'y. 4 |
| For. 185. For. Engineering... 5 | For. 171. For. Geography... 4 | For. 166. For. M'g't. Studies. 4 |
| Elective..... 3-5 | Elective..... 4 | For. 167. For. M'g't. Report. 4 |

Logging Engineering Curriculum

Majors in Logging Engineering will elect C.E. 57 preferably autumn quarter senior year, For. 186 winter quarter, and For. 187 spring quarter senior year; the latter in place of For. 164, 165, 166, and 167. In other respects the curriculum is the same as outlined for Forest Management.

Forest Products Curriculum**THIRD YEAR**

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-------------------------------|----------------|----------------------------------|----------------|--------------------------------|----------------|
| For. 10. Wood Technology... 3 | | For. 11. Wood Structure.... 3 | | E.B. 3. Gen. Economics.... 3 | |
| E.B. 62. Accounting Prin... 5 | | For. 158. Forest Utilization.. 5 | | Bot. 111. For. Pathology.... 5 | |
| M.E. 82. Steam Engin..... 3 | | Elective..... 8 | | For. 105. Wood Preservation 3 | |
| For. 104. Timber Physics... 5 | | | | For. 106. Wood Pres. Lab.... 2 | |
| | | | | Elective..... 3 | |

FOURTH YEAR

| | | |
|-------------------------------|--------------------------------|----------------------------|
| For. 126. For. Economics... 4 | For. 171. For. Geography.... 4 | For. 184. Manufacturing |
| For. 183. Milling..... 5 | For. 188. Kiln Drying..... 3 | Problems..... 5 |
| E.B. 57. Business Law..... 3 | Elective..... 9 | For. 189. Wood Pulp..... 5 |
| Elective..... 4 | | Elective..... 6 |

Five-Year Course

Students are advised to look forward to a five-year course in preparation for the degree of bachelor of science in forestry. Progress in forestry is rapid, and competition for the higher places is becoming keen. Practically all of the better forestry colleges are looking forward to a five-year requirement. Five years will allow ample provision for a minor in one of the sciences, in engineering, or in economics, and a broader selection of the more purely cultural subjects. A limited amount of general election is advised, but the student should elect at least 15 credits in a field basic to his specialty so as to fulfill the requirements of a minor in one of the non-forestry groups. Five groups for undergraduate election are advised as follows:

1. Engineering: continuation of mathematics;
E.B. 57; M.E. 82 and 83; G.E. 1 and 2;
C.E. 58.
2. Botany: 140, 141, 142, 143, 144, 145, 151.
3. Entomology: Zool. 1, 2, 111.
4. Economics: E.B. 1-2, 57, 100.
5. Chemistry: 23, 111, 131, 132, 133.
6. Zoology: 1, 2.

Description of Courses

For description of courses offered by the College of Forestry, see page 254.

GRADUATE SCHOOL OF SOCIAL WORK

See Graduate School section, page 203. For description of courses, see page 326.

SCHOOL OF LAW

See Law School Bulletin, available on request. For Pre-law, see College of Arts and Sciences, page 130, and College of Economics and Business, page 140. For courses, see page 275.

SCHOOL OF LIBRARIANSHIP

See School of Librarianship Bulletin, available upon request. For Pre-library, see College of Arts and Sciences, page 131.

COLLEGE OF MINES

Milnor Roberts, Dean, 328 Mines Laboratory

Entrance Requirements

For detailed information concerning University fees, expenses, and admission requirements, see pages 55-66. In addition to the all-University entrance requirements, the College of Mines requires the following:

| | |
|--------------------------|---------------|
| Elementary algebra | one unit* |
| Advanced algebra | one-half unit |
| Plane geometry | one unit |
| Solid geometry | one-half unit |
| Physics | one unit |
| Chemistry | one unit |

A student who does not present high school chemistry for entrance will normally be expected to earn fifteen credits instead of thirteen credits in chemistry during the freshman year.

Preparation in Algebra

All students entering any department of engineering will be tested in high school algebra by class work and by an examination given shortly after the beginning of the first quarter. It is essential that students in the engineering courses shall possess a good working knowledge of algebra *at the beginning of their course*, and it is the purpose of the test to secure this by requiring a review of the subject shortly before entering the University. Students failing in the test are not permitted to continue with regular freshman engineering mathematics but are required to take a review of preparatory algebra (Math. 1, College of Arts and Sciences) during the first quarter.

Admission to Sophomore Year

All students in the College of Mines, other than first- and second-quarter freshmen and new students, will be placed on the low scholarship list and referred to the dean of the college for appropriate action whenever their grade-point average for any quarter is below 2.0

No student whose grade-point average in the subjects regularly required in the freshman year of the College of Mines is below 1.80 will be regularly admitted to the sophomore year. When such student has brought his grades to the required average he may apply to the dean for admission.

Degrees

The College of Mines offers specialized courses in mining, metallurgical, and ceramic engineering. The four-year curricula lead to degrees as follows:

- I. Bachelor of science in mining engineering (B.S. in Min.E.).
- II. Bachelor of science in metallurgical engineering (B.S. in Met.E.).
- III. Bachelor of science in ceramic engineering (B.S. in Cer.E.).

Degree with Honors. A degree with honors may be conferred upon any student of the College of Mines who, upon vote of the faculty and of the honors committee, may be declared worthy of the unusual distinction.

*A "unit" is applied to work taken in the high school. To count as a unit a subject must be taught five times a week, in periods of not less than forty-five minutes, for a school year of thirty-six weeks.

Advanced Degrees. For requirements for advanced degrees, see Graduate School section, page 174.

Fellowships, Scholarships, Prizes. See page 77.

CURRICULA OF THE COLLEGE OF MINES

Mining, Metallurgical, and Ceramic Engineering

For the Freshman and Sophomore Years in all Curricula

FRESHMAN

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-----------------------------|----------------|-----------------------------|----------------|------------------------------|----------------|
| Chem. 24. General..... | 4 | Chem. 25. General..... | 4 | Chem. 23. General..... | 5 |
| G.E. 1. Drawing..... | 3 | G.E. 2. Drawing..... | 3 | G.E. 3. Drafting Problems... | 3 |
| G.E. 11. Engin. Problems... | 3 | G.E. 12. Engin. Problems... | 3 | G.E. 21. Surveying..... | 3 |
| Math. 31. Freshman Engin.. | 5 | Math. 32. Freshman Engin... | 5 | Math. 33. Freshman Engin... | 5 |
| M.S. and P.E. or N.S..... | + | P.E. 15. Personal Health... | 2 | M.S. and P.E. or N.S..... | + |
| | | M.S. and P.E. or N.S..... | + | | |

SOPHOMORE

| | | | | | |
|-----------------------------|---|------------------------------|---|--------------------------------|---|
| Mining 51. Elements..... | 3 | Mining 52. Methods..... | 3 | Met. 53. Elements..... | 3 |
| Geol. 5. Rocks & Minerals.. | 5 | Chem. 111. Quant. Analysis.. | 5 | Cer. 90. Industrial Minerals.. | 3 |
| Math. 41. Calculus..... | 3 | English 100. Tech. Comp.... | 3 | Geol. 121. Mineralogy..... | 5 |
| Physics 97. Engineers'..... | 5 | Physics 98. Engineers'..... | 5 | Physics 99. Engineers'..... | 5 |
| M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + | M.S. and P.E. or N.S..... | + |

Practice in mining or geology or metallurgy or ceramics in summer vacation.

Mining Engineering

Leading to the Degree of Bachelor of Science in Mining Engineering

FRESHMAN AND SOPHOMORE

(The same for all curricula. See above.)

JUNIOR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|------------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|
| Min. 101. Milling..... | 3 | Met. 103. Fuel Technology.. | 4 | Min. 106. Mine Excursion... | 1 |
| Met. 101. Fire Assaying.... | 3 | Geol. 124. Petrography..... | 3 | Met. 102. Met. Lab..... | 2 |
| Met. 104. Non-ferrous..... | 3 | C.E. 92. Mechanics..... | 3 | Met. 154. Wet Assaying..... | 3 |
| Geol. 123. Optical Mineral.. | 3 | E.E. 101-102. Dir. Currents.. | 6 | E.E. 121-122. Alt. Currents.. | 6 |
| C.E. 91. Mechanics..... | 3 | | | Elective..... | 3 |

Mining practice in summer vacation.

SENIOR

| | | | | | |
|-----------------------------|---|-----------------------------|---|-----------------------------|---|
| Min. 161. Mineral Dressing | 4 | Min. 103. Mine Rescue Tr... | 1 | Min. 107. Mine Excursion... | 1 |
| Min. 191. Thesis..... | 2 | Min. 162. Economics..... | 4 | Min. 163. Mining Engin.... | 4 |
| Met. 155. Iron and Steel... | 3 | Min. 192. Thesis..... | 2 | Min. 182. Min. Indus. Mgmt. | 3 |
| Met. 162. Physical Met.... | 3 | Geol. 127. Economic Geol... | 5 | Min. 193. Thesis..... | 1 |
| Elective* | 3 | E.B. 3. Gen. Economics.... | 3 | Elective..... | 3 |
| | | | | C.E. 59. Adv. Surveying... | 3 |

* Electives (9 credits) must include one of the following: English 101, 102; Speech 103, or Speech 40.

Electives must in all cases be approved in advance by the head of the department.

Metallurgical Engineering

Leading to the Degree of Bachelor of Science in Metallurgical Engineering

FRESHMAN AND SOPHOMORE

(The same for all curricula. See above.)

JUNIOR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|-----------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|
| Met. 101. Fire Assaying.... | 3 | Met. 103. Fuel Technology.. | 4 | Met. 102. Met. Lab..... | 2 |
| Met. 104. Non-ferrous..... | 3 | Met. 154. Wet Assaying..... | 3 | Min. 106. Mine Excursion... | 1 |
| Min. 101. Milling..... | 3 | E.E. 101-102. Dir. Currents.. | 6 | E.E. 121-122. Alt. Currents.. | 6 |
| C.E. 91. Mechanics..... | 3 | C.E. 92. Mechanics..... | 3 | E.B. 3. Gen. Economics..... | 3 |
| Elective*..... | 3 | | | Elective..... | 3 |

Metallurgical practice in summer vacation.

SENIOR

| | | |
|-------------------------------|-------------------------------|--------------------------------|
| Met. 155. Iron and Steel... 3 | Met. 163. Metallography... 3 | Met. 166. Adv. Non-ferrous.. 3 |
| Met. 162. Physical Metal'gy 3 | Met. 165. Met. Calculations 3 | Min. 107. Mine Excursion... 1 |
| Min. 161. Mineral Dressing 4 | Min. 103. Mine Rescue Tr.. 1 | Min. 163. Mining Engin.... 4 |
| Min. 191. Thesis..... 2 | Min. 162. Economics..... 4 | Min. 193. Thesis..... 1 |
| Elective..... 4 | Min. 192. Thesis..... 2 | Elective..... 4 |
| | Chem. 140. Elem. Physical.. 3 | |

*Electives (14 credits) must include one of the following: English 102, English 101, Speech 103, or Speech 40.

Electives must in all cases be approved in advance by the head of the department.

Ceramic Engineering

Leading to the Degree of Bachelor of Science in Ceramic Engineering

FRESHMAN AND SOPHOMORE

(The same for all curricula. See above.)

JUNIOR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|---|----------------|--|----------------|---|----------------|
| Cer. 100. Clays, Plasticity, and Suspensions..... | 3 | Cer. 101. Firing and Firing Problems | 3 | Cer. 102. Cer. Decoration. 3 | |
| Cer. 104. Calculations for Bodies and Glazes..... | 3 | Cer. 105. Drying and Drying Problems..... | 3 | Cer. 110. Cer. Phys. Chem. Measurements | 2 |
| Min. 101. Milling..... | 3 | Met. 103. Fuel Technology 4 | | Min. 106. Mine Excursion. 1 | |
| C.E. 91. Mechanics..... | 3 | C.E. 92. Mechanics..... | 3 | Met. 102. Met. Lab..... | 2 |
| Geol. 123. Optical Mineralogy | 3 | Chem. 140. Elem. Physical 3 | | E.B. 3. Gen. Economics... 3 | |
| | | | | Chem. 141. Elem. Physical 3 | |

Ceramics practice in summer vacation.

SENIOR

| | | | | | |
|-----------------------------|---|----------------------------|---|----------------------------|---|
| Cer. 121. Cer. Prod. Lab.. | 5 | Cer. 122. Cer. Prod. Lab.. | 5 | Cer. 123. Cer. Prod. Lab.. | 5 |
| Min. 191. Thesis..... | 3 | Min. 103. Mine Rescue Tr. | 1 | Min. 107. Mine Excursion. | 1 |
| Met. 162. Physic'l Metal'gy | 3 | Min. 192. Thesis..... | 3 | Min. 193. Thesis..... | 2 |
| Elective | 4 | Electives* | 6 | Electives* | 7 |

*Electives (17 credits) must include one of the following: English 102, English 101, Speech 103, or Speech 40.

Suggested electives for students especially interested in
Mining Engineering: Min. 171; M.E. 81, 82, 83; C.E. 142.
Coal Mining: Min. 122, 171, 176; M.E. 81, 82, 83.
Metallurgy: Chem. 141.

Ceramics: Cer. 161, 162, 163; Min. 161, 162; Geol. 124, 125, 128; Physics 109.

General electives: English. 102, Speech 103, modern foreign language, E.B. 57.

Electives must in all cases be approved in advance by the head of the department.

Description of these courses, with all those offered in any school or college of the University, will be found in the section of the catalogue known as Description of Courses.

Description of Courses

For description of courses offered by the College of Mines, see page 286.

COLLEGE OF PHARMACY

Forest J. Goodrich, Dean, 102 Bagley Hall

Entrance Requirements

For detailed information concerning University fees, expenses, and admission requirements, see pages 55-66. In addition to the all-University entrance requirements, the College of Pharmacy requires one unit* of elementary algebra, and one unit of plane geometry or second-year algebra.

The College of Pharmacy further recommends that high school students preparing for Pharmacy should include in their schedules at least one unit of laboratory science.

Admission to Advanced Standing

The American Association of Colleges of Pharmacy requires all member colleges to enforce the following regulation: "No student entering a College of Pharmacy with advanced credit shall be permitted to complete the course in pharmacy in less than three collegiate years."

Advanced Degrees. For requirements for advanced degrees, see Graduate School section, page 174.

Fellowships, Scholarships, Prizes. See page 77.

Curricula Required for Graduation

Three four-year curricula are outlined, each leading to the degree of bachelor of science in pharmacy.

The first two years of all curricula are the same and are outlined as follows:

FIRST YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|---------------------------|----------------|--------------------------|----------------|----------------------------|----------------|
| Pharm. 1. General..... | 3 | Pharm. 2. General..... | 3 | Pharm. 3. General..... | 3 |
| Pharm. 4. Profession..... | 2 | English 9. Pharm. Comp.. | 3 | English 10. Comp..... | 2 |
| Chem. 8. General..... | 5 | Chem. 9. General..... | 5 | Chem. 10. Qualitative..... | 5 |
| Bot. 13. Pharmacy..... | 5 | Bot. 14. Pharmacy..... | 4 | Physiol. 7. Human..... | 5 |
| M.S. and P.E. or N.S.... | + | M.S. and P.E. or N.S.... | + | M.S. and P.E. or N.S.... | + |

SECOND YEAR

| | | | | | |
|---------------------------|---|----------------------------|---|----------------------------|---|
| Ph.Chem. 5. Quantitative | | Ph.Chem. 6. Quantitative | | Ph.Chem. 7. Urinalysis... | 2 |
| Gravimetric | 5 | Volumetric | 5 | Ph.Chem. 8. Pharmacopoeial | |
| Pharm. 9. Prescriptions.. | 3 | Pharm. 10. Prescriptions.. | 3 | Assay | 2 |
| Ph'cog. 12. Pharmacognosy | 3 | Ph'cog. 13. Pharmacognosy | 3 | Pharm. 11. Prescriptions.. | 3 |
| Chem. 37. Organic..... | 5 | Chem. 38. Organic..... | 5 | Ph'cog. 14. Pharmacognosy | 3 |
| M.S. and P.E. or N.S.... | + | M.S. and P.E. or N.S.... | + | Chem. 39. Organic..... | 5 |
| | | | | M.S. and P.E. or N.S.... | + |

Optional Curricula. The student, after completing the first two years, the outline of which is common to all courses, must elect to follow one of the following:

1. PHARMACY COMBINED WITH BUSINESS COURSES. (To prepare graduates for the operation and management of retail pharmacies.)

THIRD YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|----------------------------|----------------|----------------------------|----------------|----------------------------|----------------|
| Ph'col. 101. Pharmacology | | Ph'col. 102. Pharmacology | | Ph'col. 103. Pharmacology | |
| and Toxicology | 3 | and Toxicology | 3 | and Toxicology | 3 |
| Pharm. 113. Adv. Prescrip. | 5 | Pharm. 114. Adv. Prescrip. | 5 | Pharm. 115. Adv. Prescrip. | 5 |
| Bact. 101. General..... | 5 | Ph'cog. 104. Microscopy.. | 3 | Ph'cog. 105. Microscopy.. | 3 |
| | | E.B. 3. General..... | 3 | E.B. 54. Business Law.... | 5 |
| | | Approved elective..... | 2 | Approved elective | 2 |

* A "unit" is applied to work taken in the high school. To count as a unit a subject must be taught five times a week, in periods of not less than forty-five minutes, for a school year of thirty-six weeks.

FOURTH YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|---------------------------------------|----------------|
| Ph'cog. 112. Biologicals... 3 | | Pharm. 183. New Remedies 3 | | Pharm. 184. Laws and Journals 3 | |
| Ph.Chem. 195. Pharmaceutical Chemistry 5 | | Ph.Chem. 196. Pharmaceutical Chemistry 5 | | Ph.Chem. 197. Toxicology. 5 | |
| Approved elective 8 | | Approved elective 8 | | Approved elective 8 | |

Total academic credits required for graduation—180.

2. THE SCIENTIFIC COURSE. (Prepares students for prescription and hospital pharmacy, manufacturing pharmacy and pharmaceutical chemistry.)

THIRD YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|--|----------------|
| Ph'col. 101. Pharmacology and Toxicology 3 | | Ph'col. 102. Pharmacology and Toxicology 3 | | Ph'col. 103. Pharmacology and Toxicology 3 | |
| Bact. 101. General..... 5 | | Ph'cog. 104. Microscopy.. 3 | | Ph'cog. 105. Microscopy.. 3 | |
| Pharm. 113. Adv. Prescrip. 5 | | Pharm. 114. Adv. Prescrip. 5 | | Pharm. 115. Adv. Prescrip. 5 | |
| Approved elective 2 | | Approved elective 4 | | Approved elective 4 | |

FOURTH YEAR

| | | |
|--|--|-----------------------------|
| Ph'cog. 112. Biologicals... 3 | Pharm. 183. New Remedies 3 | Pharm. 184. New Remedies 3 |
| Ph.Chem. 195. Pharmaceutical Chemistry 5 | Ph.Chem. 196. Pharmaceutical Chemistry 5 | Ph.Chem. 197. Toxicology. 5 |
| Physics 1 or 4. General... 5 | Physics 2 or 5. General... 5 | Approved elective 8 |
| Approved elective 3 | Approved elective 3 | |

Total academic credits required for graduation—180.

3. PRE-MEDICAL CURRICULUM. (This curriculum, with proper selection of elective courses, will give qualified entrance to colleges of medicine. The student graduating from this course and obtaining a degree in medicine has the benefit of training in two separate but mutually beneficial professions.)

THIRD YEAR

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|--|----------------|
| Ph'col. 101. Pharmacology and Toxicology 3 | | Ph'col. 102. Pharmacology and Toxicology 3 | | Ph'col. 103. Pharmacology and Toxicology 3 | |
| Mod. Foreign Language... 5 | | Mod. Foreign Language... 5 | | Mod. Foreign Language... 5 | |
| Zoology 1 or 3..... 5 | | Zoology 2 or 4..... 5 | | English 2. Composition... 5 | |
| Approved elective 2 | | Approved elective 2 | | English 37. Argumentation 5 | |
| | | | | Approved elective 2 | |

FOURTH YEAR

| | | |
|------------------------------|------------------------------|------------------------------|
| Physics 1 or 4. General... 5 | Physics 2 or 5. General... 5 | Physics 3 or 6. General... 5 |
| Bact. 101. General..... 5 | Approved elective10 | Approved elective10 |
| Approved elective 5 | | |

Total academic credits required for graduation—180.

Description of Courses

For description of courses offered by the College of Pharmacy, see page 300.

THE GRADUATE SCHOOL

Including the Graduate School of Social Work

ADMINISTRATIVE OFFICERS

Lee Paul Sieg, Ph.D., LL.D.....*President of the University*
 Frederick M. Padelford, Ph.D., LL.D.....*Dean of the Graduate School*

Graduate Council: Dean Padelford, *chairman*; Professors Dille, Eby, Hitchcock, Kerr, Mackin, Mander, Marckworth, Nostrand, Ray, Robinson, Vail, Van Horn; Mrs. Wentworth, *secretary*.
 Graduate School Publications Committee: Dean Padelford, *chairman*; Professors Carpenter, K. Cole, Goodspeed, Griffith, Gundlach, Gunther, Rigg, C. W. Smith, Church; E. I. Rolff, *director of publications (ex officio)*; Mrs. Wentworth, *secretary*.
 Wentworth, Lois J., B.A.....*Assistant to the Dean of the Graduate School*

The Aims of Graduate Study. The principal aims of graduate study are the development of intellectual independence through cultivation of the scientific, critical and appreciative attitude of mind, and promotion of the spirit of research. The graduate student is therefore thrown more largely upon his own resources than the undergraduate, and must measure up to a more severe standard. The University is consistently increasing the emphasis on graduate work in order that it may be a strong center for advanced study.

Organization. The Graduate School was formally organized in May, 1911. The graduate faculty consists of members offering courses primarily designed for graduate students.

Library Facilities

The University general library contains 409,000 volumes (March, 1942), and receives virtually all of the publications of learned societies. The law library contains 92,456 volumes. The Seattle Public Library, containing about 548,765 volumes, is open to students without charge.

Special Facilities

Bailey and Babette Gatzert Foundation for Child Welfare. On December 21, 1910, this foundation was established by a gift to the University of \$30,000. The purpose of the foundation is (1) to conduct a laboratory for the mental and physical examination of children to determine their individual defects and aptitudes and, in accordance with the results of the examination, to suggest the best means of education and treatment; (2) to assist in establishing the child welfare agencies and child study laboratories throughout the state, and (3) to carry on research in child psychology.

The Alice McDermott Memorial Fund. The late Mrs. Josephine P. McDermott made provision in her will for the establishment of the Alice McDermott Memorial Fund at the University of Washington. The amount of this bequest is \$100,000, available for one or both of the following purposes:

1. Research work in or in connection with University of Washington tending to promote the prevention of tuberculosis.
2. The purchase of radium for research work in connection with disease or for actual treatment thereof.

Engineering Experiment Station. The purpose of the station is to aid in the industrial development of the state and nation by scientific research and by furnishing information for the solution of engineering problems.

The scope of the work is two-fold.

1. To investigate and to publish information concerning engineering problems of a more or less general nature that would be helpful in municipal, rural and industrial affairs.

2. To undertake extended research and to publish reports on engineering and scientific problems.

Every effort will be made to co-operate effectively with professional engineers and the industrial organizations in the state. Investigations of primary interest to the individual or corporation proposing them, as well as those of general interest, will be undertaken through the establishment of fellowships.

For administrative purposes, the work of the station is organized into eight divisions: (1) forest products, (2) mining, metallurgy and ceramics, (3) aeronautical engineering, (4) chemical engineering and industrial chemistry, (5) civil engineering, (6) electrical engineering, (7) mechanical engineering, (8) physics standards and tests.

The University of Washington Oceanographic Laboratories. The University of Washington Oceanographic Laboratories are well situated for the study of many of the problems of the sea, biological, physical and chemical. In this region the marine flora and fauna are very extensive and diversified, and extreme physical and chemical conditions may be found over a relatively small area.

Research and seminars conducted by members of the staff are open to properly qualified graduate students.

Admission

Three classes of students are recognized in the Graduate School:

1. Candidates for the master's degree.
2. Candidates for the doctor's degree.
3. Students not candidates for a degree.

Admission. A graduate of the University or any other institution of good standing will be admitted to the Graduate School. Before being recognized as a candidate for a degree, however, a student must be approved by a committee appointed by the dean of the Graduate School, which shall also constitute the advisory committee to oversee the student's subsequent work. Unless the committee is already sufficiently acquainted with the candidate's capacity and attainments, there shall be a conference of the committee and the candidate, the purpose of which is two-fold:

(a) To determine whether the student has the quality of mind and the attitude toward advanced work which would justify his going on for an advanced degree.

(b) To satisfy the major and minor departments and the graduate council that the student has the necessary foundation in his proposed major and minor subjects. If he lacks this foundation, he will be required to establish it through undergraduate courses or supervised reading.

If the student is from a college or university which falls below a satisfactory standard in curriculum, efficiency of instruction, equipment or requirements for graduation, he may be required to take other undergraduate courses in addition to those required as a foundation in the major and minor subjects.

As soon after matriculation as feasible a candidate for an advanced degree must file with the dean of the Graduate School an outline of his proposed work, on a blank provided for that purpose. This blank is submitted to the advisory committee for acceptance or modification. When it has received approval and the student has been notified, he will be regarded as a candidate for a degree.

Scholarship. A student shall be dropped from the Graduate School when, in the opinion of the dean and the departments concerned in his training, his work does not justify his continuance.

Students on the Staff. Assistants, associates, or others in the employ of the University are normally permitted to carry a maximum of six hours of graduate

work if full-time employees, and a maximum of eleven hours of graduate work if half-time employees. The same regulation applies to teachers in the public schools.

Graduate Study in the Summer. Many departments offer graduate courses during the summer quarter, but these are addressed primarily to the candidates for the master's degree. Candidates for the doctorate are in general encouraged to devote the summer to work upon the thesis.

Disqualification of Credits. After a lapse of ten years any course taken for an advanced degree becomes outlawed.

DEGREES

The Doctor's Degree

Doctor of Philosophy. Graduate students will be received as candidates for the degree of doctor of philosophy in such departments as are adequately equipped to furnish the requisite training. This degree is conferred only on those who have attained proficiency in a chosen field and who have demonstrated their mastery by preparing a thesis which is a positive contribution to knowledge.

The requirements for the degree of doctor of philosophy are as follows:

1. At least three years of graduate work, of which not less than one undivided academic year must be spent in residence at the University of Washington. If a candidate is otherwise engaged in any regular employment, a correspondingly longer period of study will be required. Before being recognized as a candidate for the degree, a student must be approved by a committee as provided above.

2. Completion of courses of study in a major and one or two minor subjects. This requirement as to the number of minors, however, may in exceptional cases be modified by action of the Graduate Council, making it possible for the candidate to offer more than two minors, or no minor at all. What subjects may be offered as minors shall be determined by the major department with approval of the Graduate Council. Three times as many grade points as credits must be earned on the program for an advanced degree, the grade of "S" being used to indicate satisfactory work in a hyphenated course so far as the course has progressed, such work not to be counted toward a major or minor until the final examination.

These courses of study cover at least two years of work. The work of the first year is virtually identical with that for the master's degree; the work of the second year is of still more advanced character. Not earlier than the end of the second year and at least a year before the time when the student expects to take the degree the major and minor departments, supplemented by a representative from the Graduate Council, shall submit the student to a careful oral and written examination (see *The Qualifying Examination* below).

3. The preparation of a thesis, as stated above, embodying the results of independent research. The thesis may properly be initiated in the second year, and should occupy the greater part of the third year. If the thesis is of such a character, or falls in such a department, that it requires library or laboratory facilities beyond the resources of the University, the student will be required to carry on his investigation at some other university, at some large library, or in some special laboratory. This thesis must be approved by a committee appointed by the major department of which the instructor in charge of the thesis shall be a member.

4. Examinations as follows:

The Qualifying Examination. An oral, or written, or oral and written examination covering the general fields and the specific courses in the major and minor fields. In so far as the examination is oral, it shall be before a committee appointed by the dean of not less than three representatives of the major department, not

less than one representative of each minor department, and a representative of the Graduate Council. The qualifying examination will normally be taken no less than two quarters before the final examination.

The Final Examination. An oral, or oral and written examination, before the same committee as above. If the qualifying examination was in all respects satisfactory, the final examination shall be on the field of the thesis and such courses as were taken subsequent to the qualifying examination. If the qualifying examination did not meet with the clear approval of the committee, the candidate's entire program, or such parts thereof as may have been designated by the committee, shall be subject to review.

If there is a division of opinion in the committee in charge of either examination, the case shall be decided by the Graduate Council, with right of appeal to the Graduate Faculty.

5. Evidence of a reading knowledge of scientific French and German and of such other languages as individual departments may require. Certificates of proficiency in these languages, based upon examinations given at the University of Washington, must be filed with the dean not less than three months before the qualifying examination. Only in rare cases shall the requirement of a reading knowledge of scientific French and German be waived, and then only when, in the judgment of the Council, the substitution for these languages will be to the advantage of the student's training.

6. Two copies of the thesis in typewritten form (or library hand) shall be deposited with the librarian for permanent preservation in the University archives, at least two weeks before the date on which the candidate expects to take the degree. Printed instructions for the preparation of thesis manuscripts are available at the library. One copy shall be bound at the expense of the candidate. At the same time a digest of the thesis, not to exceed 3,000 words, must be filed in the office of the Graduate School.

The thesis, or such parts thereof, or such a digest as may be designated by the Council, shall be printed. The candidate shall contribute \$25 to the publishing fund for theses, for which he shall receive 50 copies of his thesis if it is printed entire, or 50 copies of a digest of his thesis. From this fund the library is provided with 400 copies.

7. A statement certifying that all courses and examinations have been passed and that the thesis has been accepted and properly filed in the library shall be presented to the dean at least one week before graduation. This statement must bear the signatures of all major and minor instructors in charge of the student's work, and of the committee appointed by the major department to pass on the thesis.

Doctor of Education. This degree as offered by the University of Washington is a professional degree intended primarily for administrators and teachers who wish to attain a specialized but broad training in education. It provides for study in all fields of education, with specialization in four (one major and three minors). It further provides for training in the major academic disciplines necessary both to administration and teaching, with modern emphasis on correlation and integration.

The requirements for the doctor of education are as follows:

1. *Admission.* The candidate must show adequate background training and promise of success in the profession of education. Admission to candidacy and the administration of the requirements for the degree shall be by the Department of Education and the Graduate School, and programs for the degree shall be approved by the Graduate Council.

2. *Residence.* At least three years (nine quarters) of full-time graduate work beyond the bachelor's degree shall be required, and at least three quarters must be spent in continuous residence at the University.

3. *Courses.* The candidate shall offer:

- (a) one major field in education (15-20 cr.)
- (b) three minor fields in education (5-10 cr. in each)
- (c) reasonable representation in each of the eleven fields in education (at least one course in fields other than covered in a and b)
- (d) desirable related work in departments other than education (45 cr.)
 - (1) 10 elective hours—arts and letters
 - (2) 10 elective hours—science and mathematics
 - (3) 10 elective hours—social science and history
 - (4) 15 elective hours—foreign language

4. *Thesis.* A satisfactory thesis representing the equivalent of two full quarters' work (30 cr.) shall be presented.

The requirements for the qualifying examinations and the final examination, for the preparation of the thesis and of the abstract of the thesis, for the final forms for the degree and for the fees are the same as for the degree of doctor of philosophy.

The Master's Degree

Master of Arts. This degree implies advanced liberal training in some humanistic field, gained through intensive study of one of the liberal arts supplemented by study in one or two supporting subjects. Detailed study culminates in a thesis which, if not an actual contribution to knowledge, is concerned with the organization and interpretation of the materials of learning.

Master of Science. This degree implies training similar to the above, in some province of the physical or biological sciences, either pure or applied. The thesis for this degree, however, must be an actual contribution to knowledge.

The requirements for these degrees are as follows:

1. At least three full quarters or their equivalent spent in undivided pursuit of advanced study. If a candidate has done graduate work elsewhere his program may be slightly less exacting, but this work must pass review in the examination, and shall not reduce the residence requirement at this University.

2. Completion of a course of study in a major and one or two minor subjects and of a thesis which lies in the major field. The work in the major and minor subjects shall total not less than 36 course hours of which 24 are usually in the major. The thesis normally counts for 9 hours in addition to the course work and lies in the major field. Three times as many grade points as credits must be earned on the program for an advanced degree, the grade of "S" being used to indicate satisfactory work in a course so far as the course has progressed, such work not to be counted toward a major or a minor until the final examination.

The requirement of a minor or minors may be waived but only on recommendation of the major department and with the consent of the Graduate Council.

A reading knowledge of an acceptable foreign language is required for the degrees of master of arts and master of science. After October 1, 1942, a reading knowledge of an acceptable foreign language other than the major if the major is a foreign language, shall be required for the degree of master of arts. These examinations are given approximately three weeks before the end of the autumn, winter and spring quarters, and about two weeks before the end of each summer term. Students are responsible for acquainting themselves at the Graduate School office with the exact dates.

No work in the major subject may be counted toward the master's degree until the candidate has complied with the departmental requirements as to previous work in that subject.

Elementary or lower division courses and teachers' courses may not count toward either the major or minor requirements.

3. The preparation of a thesis, as defined above.

4. An oral, or written, or oral and written examination in both the major and minor subjects, given by the student's committee, including so far as feasible, all the instructors with whom the student has worked. If division of opinion exists among the examiners, the case shall be decided by the Graduate Council, with right of appeal to the Graduate Faculty.

5. The candidate's thesis shall be in charge of the instructor in whose field the subject falls, and it must be approved by a committee of the major department, of which the instructor in charge shall be a member. If the committee is divided in opinion, the case shall be decided by the Graduate Council, with right of appeal to the Graduate Faculty. At least two weeks before the date on which the candidate expects to take the degree, two copies of the thesis in typewritten form or printed form (or library hand, in case the thesis is of such a character that it cannot be typewritten) shall be deposited with the librarian for permanent preservation in the University archives. At the same time a digest of the thesis, not to exceed 1,000 words, must be filed in the office of the Graduate School. The thesis must meet the approval of the librarian as to form, printed instructions for the preparation of thesis manuscript being available at the library. The cost of binding for one copy must be deposited with the thesis.

6. A statement certifying that all courses and examinations have been passed, and that the thesis has been accepted and properly filed in the library, shall be presented to the dean at least one week before graduation. This statement must bear the signatures of all instructors in charge of the student's work, and of the instructor in charge of the thesis.

Master of Arts and Master of Science in Technical Subjects. The degrees of master of arts and master of science are given in the following technical subjects: chemical engineering, civil engineering, electrical engineering, mechanical engineering, ceramic engineering, ceramics, coal mining engineering, geology and mining, metallurgy, metallurgical engineering, mining engineering, forestry, pharmacy, physical education, home economics and in regional planning. These degrees are designed for students who have taken the corresponding bachelor's degrees in technical subjects. In other respects, the requirements are essentially the same as those for the degree of master of arts and master of science. (See departmental write-ups.)

Master's Degree in Technical Subjects. The master's degree is given in the following technical subjects: economics and business, education, fine arts, forestry, music, and social work. The requirements for these degrees are essentially the same as those for the degrees of master of arts and master of science, with the exception that all the work is in the major. (See departmental write-ups.)

All candidates for advanced degrees must attend the Commencement exercises to receive their degrees in person, unless excused by formal petition to the Dean of the Graduate School.

COURSES OF STUDY

ANATOMY

Courses in anatomy may be offered on the program for an advanced degree if the applicant has preparation satisfactory to the department.

ANTHROPOLOGY

The department of anthropology gives the degree of master of arts with a major in anthropology, as well as a graduate minor with other graduate majors.

ART

A student who has received a bachelor's degree with a major in the School of Art and who has maintained a grade average of "B" or better in art while doing creditable work in other subjects, may become a candidate for the degree of Master of Fine Arts. In lieu of the ordinary thesis, the candidate may undertake problems in painting, sculpture, or design of a professional character.

BACTERIOLOGY

The department possesses an excellent library, including leading journals, and the laboratories are well supplied with apparatus. Local industries furnish practical problems for investigation and local hospitals supply clinical material. Practical routine experience may be obtained in state, city and other laboratories in Seattle.

BOTANY

The Northwest is a most excellent location for botanical work. The rainfall is heavy in winter and freezing is not sufficient to kill the vegetation entirely. Salt water is only four miles from the University, and one can get all the altitude ranges from sea level to 14,000 feet in one hundred miles horizontal travel.

The University has an oceanographic laboratory at Friday Harbor, about ninety miles from the University, where natural conditions are virtually unexcelled for botanical work.

CHEMISTRY AND CHEMICAL ENGINEERING

The department of chemistry is fully equipped with apparatus and chemicals necessary for investigation along conventional lines pursued in the best large universities. A departmental library, ample and convenient for general study and research, special apparatus and machinery for industrial and engineering chemistry, scholarships, and fellowships for students of exceptional aptitude for research, and faculty guidance by productive research workers in special lines, contribute not only to the successful pursuance of problems constituting master's and doctor's theses but lead to the solving of special industrial problems and processes.

CLASSICAL LANGUAGES AND LITERATURE

On beginning his work for the master's degree with Greek or Latin as either a major or a minor, the student should submit for the approval of the department an official record of his previous work in these languages, together with a list of the courses he proposes to take.

1. The requirements for the master's degree with a major in Greek or Latin are as follows:

- (a) A reading knowledge of French or German.
- (b) Satisfaction of the requirements for an undergraduate major in Greek or Latin at the University of Washington or some comparable institution.
- (c) Twenty-four additional credits in Greek or Latin in courses not numbered below 106, a thesis which must be approved by the candidate's committee at least three weeks before the date of his examination, and an acceptable minor.

2. The requirements for a minor in Greek or Latin for the master's degree are:

Greek: at least 36 credits in courses above 1-2, together with at least ten credits in Latin.

Latin: at least 36 credits in courses above 6, together with at least ten credits in Greek.

In both cases, at least eighteen of the thirty-six credits must be in courses not numbered below 103.

ECONOMICS AND BUSINESS

The department of economics and business awards two master's degrees, the master of arts and the master of business administration.

Students who enter upon candidacy for the M.A. degree will be expected to have had a broad preparation in the allied social sciences. Candidates for the M.B.A. degree must include training in accounting, statistics, and business law as a part of the background. Background subjects must be approved by the committee having supervision of the work of the candidate, but the committee may, at its discretion, approve the substitution of courses in history, sociology, political science, or business, as may be deemed necessary to establish a satisfactory background for the graduate work being undertaken. For the degree of master of arts, completion of a course of study in three fields arranged in consultation with the student's advisory committee is required. One of the fields shall be economic theory. If a field is selected outside of the College of Economics and Business, a minimum of 12 credits of approved graduate work in that field is necessary in addition to satisfaction of the background requirements prescribed by the minor department. If all 45 credits of work are taken in the College of Economics and Business, 15 of the credits (exclusive of the thesis) must be in courses listed for graduates only. If a minor in a department outside of the College of Economics and Business is presented, at least 10 credits of the required work in economics and business must be in courses listed for graduates only.

For the degree of master of business administration, the student must meet the following requirements:

- (a) Background subjects must include training in accounting, statistics, and business law. Other background work may be approved by the Graduate Committee.
- (b) All of the graduate work must be taken in the College of Economics and Business, except that the student's committee may permit some course work outside of the College.
- (c) The candidate's examination must cover three fields approved by his advisory committee.
- (d) At least 15 credits must be in advanced work (exclusive of the thesis) listed for graduates only or in research courses numbered 190-199, provided that not more than 10 credits of the 15 may be in research courses. When credit in research courses is given to fulfill these graduate requirements, the amount and quality of the work must be significantly above that of the undergraduate level established in the same courses. Graduate credit for a research course will not be given (1) if the course has been taken by the student as an undergraduate, or (2) if there is a graduate seminar in the same field.

A thesis is required of every candidate for a master's degree. The work is expected to be extended over at least two quarters, and a maximum of 9 credits is given for the work.

The thesis shall be written under the supervision of the advisory committee. One committee member is placed in immediate charge of the work, but examination and approval of the thesis by the other two will be necessary for final acceptance.

Candidates for the master's degree with economics and business as a minor shall present a background equivalent to that possessed by those who have completed at least eighteen approved credits in economics and business. In addition, the candidate must present not less than twelve credits in approved advanced courses in economics and business.

The Doctor of Philosophy (Ph.D.) Degree in Economics and Business

A candidate for the doctor's degree in economics and business must be as well grounded in history, economics, political science, and such other technical, scientific or philosophic subjects as may be necessary for an intelligent pursuit of the studies in which he plans to specialize. He should include, in either undergraduate or graduate work, E.B. 170, *Advanced Statistical Analysis*; E.B. 110, *Accounting Analysis and Control*; and E.B. 181, *Economic Development of the United States*, or their substantial equivalents.

The candidate is expected to concentrate his graduate work in at least four specific fields, to be determined in conference. Economic theory, considered historically and critically, shall always be included. Candidates whose major and minor are both in the College of Economics and Business must select five fields. The following fields are recognized for this purpose: (1) Economic Theory and History of Economic Thought, (2) Money, Banking, and Prices, (3) International Economic Policies, (4) Marketing, (5) Public Finance and Taxation, (6) Public Utilities and Transportation, (7) Labor and Consumption, (8) Accounting and Management. In order to develop a program of work which best meets the needs of the individual student it may be necessary to require the election of courses in other departments, which may be counted in one of the candidate's fields but are not alone of sufficient number to constitute a separate field.

Minor for Doctor of Philosophy Degree

A candidate for the doctor of philosophy degree who presents two minors, one of which is in economics and business, must have a background equivalent to at least 18 approved credits in the field which he has selected. In addition to this, he must present for graduate credit not less than three approved courses in economics and business.

A candidate for the doctor of philosophy degree who presents one minor which is in economics and business shall have a background equivalent to at least 35 approved credits in the field which he has selected. In addition to this, he must present for graduate credit not less than six approved courses in economics and business.

The background subjects and the graduate courses need not necessarily be confined strictly to the specific field which the student has selected, but they should have a bearing upon that field and must be approved by the committee. The background subjects and graduate courses together must be adequate to give a satisfactory knowledge of the field.

EDUCATION

The department of education accepts candidates for the master's degree, the degree of doctor of education, and the degree of doctor of philosophy. The department is well equipped to guide research in the main fields of educational investigation. Especial opportunities are offered to direct research in educational psychology, educational tests and measurements, child study, adolescence, educational sociology, school surveys, administration of education, experimental education, comparative education, vocational guidance, and local history of education.

For the degree of master of arts with a major in education, the requirements are the same as the general requirements for the degree, except that the thesis counts for six credits; the major includes Ed. 291, Ed. 287 or Ed. 290, and ten credits in each of two educational fields.

For admission to candidacy for the technical degree of master of education, a student must have completed at least twenty-four quarter hours in education. For the degree itself the requirements are as follows:

1. The completion of a minimum of forty-five quarter hours including a thesis and of three quarters of residence. If a student has done graduate work elsewhere, his program may be slightly less exacting, but this work must pass review in the final examination and shall not reduce the residence requirement at this University.

2. The completion of a minimum of two quarter hours in six of the following divisions in education:

- | | |
|---|--|
| A. Educational psychology | G. History and philosophy of education and comparative education |
| B. Educational sociology | H. College problems |
| C. Educational administration and supervision | I. Curriculum |
| D. Elementary education | J. Guidance and extra-curricular activities |
| E. Secondary education | K. Remedial and special education |
| F. Classroom techniques | |

3. Specialization in two or more fields in education (in addition to the six fields required in No. 2), totaling at least eighteen quarter hours.

4. The completion of a minimum of eighteen quarter hours of advanced courses outside of the department of education. Of these eighteen credits at least five must be in strictly graduate courses.

5. The completion of a minimum of twenty-four months of successful teaching.

6. Education 291, and Education 287 or 290.

7. The specifications for the thesis and the final examinations and the grade requirements are the same as for the other master's degrees.

A well selected library of books and periodicals in English, French, and German has been assembled. Research involving other languages, like Scandinavian, Spanish, and Italian may be pursued in connection with current problems in education by qualified students.

The public schools of Seattle and adjacent towns afford unexcelled laboratory facilities for various lines of modern research in education.

ENGINEERING

The degree of master of science in aeronautical, chemical, civil, electrical, and mechanical engineering, respectively, will be conferred upon graduates of this college or of other engineering colleges of recognized standing, who complete in residence one year (45 credits) of prescribed graduate work (including a satisfactory thesis) with a grade of "A" or "B." The candidate must comply with the regulations of the Graduate School and must pass a formal examination open to all members of the faculty. The selection of work for this degree must in each case be approved by the head of the department in which the student majors and by the Graduate Council.

A graduate of the College of Engineering of the University of Washington, or of any other engineering college of equal standing, will be permitted to enroll for the degree of master of science in the respective engineering departments provided his grade average for his last year of undergraduate work (not less than 45 quarter credits) be not less than "B" (3.0). Also, at the discretion of an exam-

ining committee, any candidate from another university may be required to take a preliminary qualifying examination.

The several departments of the College of Engineering are empowered to award the degree of master of science to properly qualified candidates, subject to the requirements of the Graduate School for that degree.

The professional degrees, aeronautical engineer (A.E.), chemical engineer (Ch.E.), civil engineer (C.E.), electrical engineer (E.E.), and mechanical engineer (M.E.), will be conferred on graduates of this college holding the degree of bachelor of science or master of science in their respective departments, who give satisfactory evidence of having been engaged continuously in responsible engineering work for not less than four years and who present satisfactory theses.

In general, acceptable engineering work shall be interpreted to mean work equivalent to that required for associate membership in the national founder engineering societies. In case the applicant has rendered special services to the profession by accomplishments of undisputed merit, the thesis may be waived upon presentation of articles describing such work in publications of recognized standing. Teaching experience shall count in lieu of professional experience in the same ratio as now recognized by the engineering societies, provided that a minimum of two years of acceptable engineering work, other than teaching, be included.

Aeronautical Engineering

The Guggenheim Aeronautical Laboratory and the Boeing Aerodynamical Laboratory furnish means for carrying on research in the various phases of aeronautical engineering. These laboratories are equipped with wind tunnels for testing air foils and propellers and with the necessary equipment for testing engines and determining the strength of aeronautical structures.

Field trips to the local airplane factory, one of the largest in the country, visits to local flying fields and lectures by experienced designers and practising aeronautical engineers serve to familiarize the student with the latest developments in this branch of engineering.

Chemical Engineering

See Chemistry and Chemical Engineering

Civil Engineering

Hydraulic Engineering

The hydraulic laboratory, located on the shore of Lake Union, offers the latest facilities for investigation of a large number of problems in experimental hydraulics and water power. A water surface of one acre in extent and 100 feet elevation above the laboratory floor maintains a constant pressure for low and medium head requirements. For high head there is ample supply with pressure corresponding to 400 feet. In addition to the customary apparatus the equipment includes a variety of pumps, motors, impulse wheels, and reaction turbines, aggregating approximately 350 H.P. capacity.

Structural Engineering

The structural materials laboratory contains five Universal testing machines with capacity from 30,000 to 300,000 pounds, and two impact machines with hammers ranging in weight from 550 to 1,500 pounds. New equipment is being added so that the laboratory will be equipped to perform all usual tests.

The structural research laboratory is equipped with apparatus for investigating the stresses and deflections in indeterminate structures.

The cement laboratory has all facilities for tests of cement and concrete with special attention to equipment suitable for research work.

Highway Engineering

The road laboratory is equipped for testing materials used in road construction. Standard machines adopted by the American Society for Testing Materials and by the U. S. Office of Public Roads are available.

Sanitary Engineering

The sanitary engineering laboratory is equipped for carrying on the physical, chemical, bacteriological and microscopical tests required in the investigation and purification or treatment of water supplies and sewage. The laboratory work is supplemented by inspection trips made to the various water purification and sewage treatment plants in the vicinity.

Regional and Resource Planning

Various departments of University instruction are cooperating in giving the courses in Regional and Resource Planning as shown in the following curriculum for the master of science in regional planning and the master of arts in regional planning. Prospective students should note the undergraduate prerequisites for this curriculum and should satisfy these during their undergraduate years. Applications should be made directly to the chairman of the curriculum in Regional and Resource Planning.

Undergraduate Prerequisites. The curriculum has been planned to satisfy the requirements of graduates in civil engineering and the social sciences. Graduates of other departments will be held for such additional prerequisites as may be needed to qualify them to take the scheduled curriculum. Civil Engineering graduates will be held for Math. 13, Political Science 1, Sociology 150. Social science majors should have had Econ. 1, 2; Geog. 7, 102, 160; Math. 13; Political Science 1; Psych. 1; Speech 40 and Sociology 1.

The program for the advanced degree includes Architecture 138, Civil Engineering 125 and 153, Economics and Business 109, 171, and 181, Geography 170 and 220, Political Science 164, Social Work 176, and Sociology 155. The thesis will normally be worked out during a summer period of approved research or practice preferably with an established planning commission.

The foreign language requirement preferably should be satisfied before the graduate year.

NOTE: A limited number of hours selected from the following approved list of courses may be substituted for required courses with the approval of the professor in charge of the curriculum: Sociology 131, 165, 190; Social Work 254; Political Science 61; Law 104; Forestry 65, 126, 158; Economics and Business 143, 144, 145, 172; Civil Engineering 150, 152, and Physical Education 113.

Electrical Engineering

The department of electrical engineering offers excellent opportunities for the pursuit of graduate study. The work is of two-fold nature:

(a) Study of advanced technical courses in electrical engineering subjects, and (b) research or experimental investigation of some approved engineering problem. The electrical laboratories contain equipment for carrying on research in all of the usual phases of electrical engineering and special apparatus for study of problems in electric, magnetic and dielectric circuits, high tension power transmissions, electric transients, radio, etc.

Mechanical Engineering

Steam engineering, gas engines, and machine design offer attractive opportunities for advanced work in this department.

The steam engineering laboratory has been enlarged and is well equipped with experimental machinery. Investigation of fuels, oils, and refrigeration may be undertaken. The installation of a semi-Diesel engine and Sprague dynamometer facilitate research work with reference to internal combustion engines. Power plants of all types are located in the vicinity of the University and are available for study and tests. Special equipment has been provided also for research in vibrations.

The engineering library contains texts, papers and journals covering mechanical engineering subjects.

ENGLISH

The equipment of the department of English for graduate work consists of the main library of the University, with virtually complete runs of all the philological journals and publications of learned societies, the Farrington Branch Library with desks assigned to graduate students, the Garrett-Johanson Library, and the Walker-Ames Library and conference room. Through the courtesy of the librarian, students engaged in special problems of research are enabled within certain limits to borrow books from other libraries in the United States and Canada. The Seattle Public Library is of course always available.

Minimum Requirements for the Master's Degree With a Major or a Minor in English

At the beginning of work for a master's degree with a major or a minor in English, the student should have his proposed course approved by an appointed representative of the department of English. At this time he should be able to submit a record of his previous studies in English and should have familiarized himself with the requirements for the master's degree as explained in the catalogue of the University of Washington.

Preparation. Candidates for the master's degree with a major in English are required to offer the equivalent of an undergraduate major in English at the University of Washington. Candidates for the master's degree with a minor in English must present sufficient undergraduate work in English so that this work plus the graduate minor in English shall be the equivalent of an undergraduate major. Recommendation by the Department of English for a degree or for the normal diploma requires at least ten credits earned in English courses at the University of Washington.

Examinations. (a) Examination known as the English senior examination. This examination is in two parts: (1) testing the general knowledge of the field of the major and (2) testing the student's knowledge of two special fields and his ability to write stylistically effective and well organized papers on these special fields.

(b) Final examination, oral or written, on the courses offered for the master's degree and their related periods.

Specific Requirements for the Degree of Master of Arts. Candidates for the master's degree with a major in English language and literature are required to present a master's thesis, a minor, and thirty credits which shall include English 201, 202, 203 and fifteen credits in one graduate-year course. The graduate minor in English shall include twelve credits in advanced work of which at least five must be in English courses for graduates only.

Candidates for the master's degree with a major in Composition may offer fifteen credits in English 156, 157, 158; or 184, 185, 186; or Journalism 173, 174-175 as the required graduate-year course but may not present creative writing as a thesis. The minor in Composition may offer either English 156, 157, 158, or 184, 185, 186, or Journalism 173, 174-175.

Correlation between Majors and Minors. The major and the minor should be not only in related subjects but in related fields of the subjects chosen. Majors and minors may be taken in each of the divisions of English. All the work presented for the master's degree may be from one division of English if the student's previous training includes a broad selection of courses from other disciplines than English.

Minimum Requirements for the Doctor's Degree

The degree of doctor of philosophy is conferred as a recognition of the candidate's ability to organize the bibliography of his study, to investigate his problem thoroughly, to present his work in written form, and to contribute to the knowledge of his subject with sound scholarship and independence of point of view. The degree is not conferred for courses satisfactorily passed, even though these courses may be many and may represent much valuable study.

Departmental Requirements

Language. (1) Reading knowledge of Latin to be satisfied by previous courses in Latin or by examination during first year of graduate study; (2) Old English to be taken in class; (3) Middle English to be taken in class.

Courses.

a. Major courses in English, 60 credits, not more than nine of which may be offered from courses that number below 200 and of which at least fifteen credits must be Lit. 201, 202, 203. The limitation of nine credits below 200 does not apply to courses in English language or public speaking or to technical courses in drama.

b. One minor, 30 credits, or two minors, 15 credits each.

c. Such other courses as are necessary to support the thesis.

Qualifying Examination for the Doctor's Degree

This examination is to be passed one year before the candidate takes his degree, and is divided into definite parts.

a. Written examination on the period of the thesis and two related or adjacent periods.

b. Oral examinations shall be of three parts: lecture or discussion, the minor, and general questioning.

1. On the day of the oral examination one and one-half hours before the hour set, the candidate is given questions or topics on the periods of English and American literature not treated in the written examination. From these questions or topics he shall choose three and, using one-half hour each without bibliographical aid, prepare a lecture or discussion for each of the three chosen. These discussions are then presented to the graduate faculty of the department at the beginning of the oral examination.

2. Then follows the minor examination in the form desired by the minor department.

3. General questioning on the written examinations, the lectures, or any other period of literature will close the examination.

c. The Old English language requirement may be satisfied by special examination immediately after the courses in the field have been finished or at the time of the preliminary examination either by oral or by written test.

Doctor's Thesis

This thesis is to be a contribution to knowledge in the major subject. Two weeks before the degree is conferred two copies are to be deposited with the librarian of the University in the form prescribed for theses and another copy is to be delivered to the executive officer of the department of English.

FAR EASTERN

The instruction offered by the Far Eastern Department is regional in nature, dealing with eastern Asia, the Southeastern Pacific Ocean and the United States as a Pacific power. Thus, its work can be regarded as a major discipline only by students whose main interests lie in the Chinese, Japanese, or Russian languages. While a master of arts degree may be taken in any part of the general field, the degree of doctor of philosophy is given only to those students wishing to specialize in philology. Candidates for the higher degrees who are interested in some aspect of the Far East are recommended to take their degrees in some one of the major disciplines and by arrangement with the department concerned do their research in the Far Eastern field, under the joint auspices of the Far Eastern Department and the major department concerned. Students contemplating such a program should, if possible, acquire a reading knowledge of Chinese, Japanese, or Russian sufficient for purposes of research. Students wishing to apply the discipline of their choice to the Far Eastern field should consult the executive officer of the Department before arranging their courses. The University library has a collection of more than 20,000 volumes of Chinese books and anticipates building up a comparable Japanese collection, which should furnish adequate research opportunities for those able to read these languages.

FISHERIES

The University of Washington is exceptionally well situated for advanced study in fisheries. The campus is on the shores of Lakes Washington and Union, which are connected with each other and with Puget Sound by canals. Extensive commercial fisheries for fishes, oysters, clams, and crabs are conducted in Puget Sound, while fleets of vessels with headquarters at Seattle and other cities, carry on extensive fisheries in the ocean adjacent to the Washington coast, and on the fishing banks of Alaska. Numerous canneries, smokehouses, cold storage plants, and fertilizer plants are to be found in Seattle and other places on the Sound. A number of fish hatcheries are owned and operated in the state of Washington by the federal and state governments. The School of Fisheries has a hatchery, fish ponds and equipment for experiments on the effect of temperature and other factors on fish. At Friday Harbor the University has an excellent marine biological laboratory. These many advantages present unrivaled opportunities for study of fisheries, aquatic life and fish culture.

All graduate students in the School of Fisheries are required to register for and to attend the graduate seminar courses numbered Fisheries 205, 206, and 207 each quarter they are in residence at the University. Credit for such attendance will be granted to a total of six credits. Additional quarters in residence must show attendance in the course as a registered auditor.

FORESTRY AND LUMBERING

The College of Forestry is unusually well equipped for graduate work. Situated in the center of the largest lumber producing region of the world, and in the heart of the national forests of the Northwest, the advantages of the location should prove particularly attractive to graduate students for advanced studies and research in silviculture, forest management, lumbering, and all the branches of forest utilization. For work in all of these branches, the department is well equipped.

The Charles Lathrop Pack Forest. This is a tract of approximately 2,000 acres located at LaGrande, Washington, adjoining the Rainier National Park High-

way. The tract is used as an experiment station and is a public demonstration forest, the idea being to place forestry on display in show window fashion so that the public may learn of the various methods of scientific forestry. It is admirably adapted for this purpose, having a frontage of about two miles on the highway and presenting a wide range of conditions. The money for the purchase of the forest and for putting it in shape was provided from the Charles Lathrop Pack Forestry Trust and by Doctor Pack himself.

The Lee Field Laboratory. This is a tract of 80 acres containing a second growth stand of approximately 40-year-old timber located at Maltby. The tract was donated to the College of Forestry by Ingie Marie Lee Hodgins, Edna Mae Lee Engle and George O. Lee, in memory of their parents, the late Mr. and Mrs. O. H. Lee. As the tract can be reached by auto in less than one-half hour from the University campus it will be especially valuable in connection with the regular laboratory instruction in the courses in silviculture and mensuration, and will also lend itself to some experimental work.

Graduate Work. Three advanced degrees are offered to students who have received the bachelor's degree at this University or other institutions of equal rank, and have a satisfactory knowledge of the fundamental sciences. The candidate for the degree of master of forestry (M.F.) must earn 225 credits at this University, of which at least 78 are in approved technical forestry subjects. The candidate for the degree of master of science in forestry (M.S.F.) must present a minor in one or two subjects in science. In addition to these requirements, the candidate for either degree must present a thesis embodying results of independent research and pass an oral examination open to all members of the faculty. Only grades of "A" and "B" can be counted in graduate work.

Graduate students will be received as candidates in the College of Forestry for the degree of doctor of philosophy. Subject to the requirements of the Graduate School, advanced courses will be provided and announced as the need arises.

GEOGRAPHY

Degrees conforming to the general requirements of the graduate school are granted by this department.

GEOLOGY

The major portion of the area tributary to the University is a virgin field for study in geology. There is a great opportunity for the graduate student along the lines of petrography, paleontology, and economic geology. Investigations thus far made have tended only to disclose the extraordinary extent of the unknown fields. In paleontology the tertiary formations alone have yielded more than 125 new species of invertebrates, and only a few localities have been studied in detail. Field work can be carried on in close conjunction with residence study by taking advantage of week-ends, vacation periods and the summer months.

GERMANIC LANGUAGES AND LITERATURE

The graduate courses in Germanics offer the student the choice of several approaches to the subject. He may stress philology, literary history, history of culture (*Kulturkunde*), history of thought (*Geistesgeschichte*), social trends, economic backgrounds, or relations with other literatures.

Admission to Graduate Study in Germanics. In addition to compliance with the general requirements of the University regarding admission to graduate study, the student must present a written application to the Department of Germanic Languages and Literature setting forth in detail the nature of his previous study in the field. The department must further be satisfied, by examination or otherwise, that the applicant has a general acquaintance with the classical periods of German literature, with especial reference to the major works of Lessing, Goethe, and Schiller, and

some knowledge of the major literary movements, or writers, of the nineteenth century. The applicant must also demonstrate to the department that he is able to read German with facility, to write it with grammatical correctness, and to understand the spoken language. No candidate will be accepted by the department as a major unless he has fulfilled the requirement of an undergraduate major, or as a minor unless he has fulfilled at least the requirements of an undergraduate minor.

Once accepted by the Department of Germanic Languages and Literature as a graduate major or minor, the candidate will immediately meet with the executive council of the department in order to work out a program leading to an advanced degree.

Requirements for the Degree of Master of Arts

With a Major in Germanics. For the M.A. degree, the graduate student must, in addition to the fulfillment of the above requirements, take a minimum of twenty-four credits in Germanics (see below for courses open to graduate students). If the student minors in some other department, he will distribute the twenty-four credits over both literary and philological courses. If his entire program lies within the field of Germanics, he must elect twenty-four credits in literary, and twelve credits in philological courses, or vice versa. The minor must consist of not less than twelve credits, whether these be in Germanic philology, Germanic literature, or some other field. In addition, the candidate must submit, at least one month prior to his final examination, an acceptable thesis in final form worthy of nine credits. The thesis is to give evidence of the mastery of scholarly procedure. The final comprehensive examination on the thesis and on the major and minor fields will not be confined to courses taken at the University or elsewhere, but will cover an outline knowledge of the history of the German language and literature as a whole, as well as the student's specific fields in philology and literature.

With a Minor in Germanics. A minor in the field of Germanic literature, or Germanic philology, or a combination of the two for the M.A. degree shall consist of a minimum of twelve credits beyond the undergraduate program. In no instance, however, may a minor in Germanics for the master's degree be less than the major for the bachelor's degree. The comprehensive examination in the minor will likewise not be confined to courses taken. The student will be expected to demonstrate an understanding of the entire field in which his planned minor program lies.

Requirements for the Degree of Doctor of Philosophy

With a Major in Germanics. For the Ph.D. degree, the applicant must have pursued his studies for at least three graduate years. In addition to the requirements listed above for the M.A. degree, the candidate should have elected, as a minimum, thirty-five additional credits in his major, and fifteen in his minor field (see below for courses open to graduate students.) Upon completion of these requirements, and the reading knowledge of foreign languages required by the Graduate School, the candidate is to submit himself to the departmental committee which will administer his written and oral comprehensive qualifying examination. This examination will not be confined to courses taken at the University or elsewhere, but will endeavor to show the student's grasp of the entire field of human knowledge of which his subject constitutes a part. The main burden of the examination will, of course, concern itself with the entire range of Germanic philology and literature. The student may, at his option, major in Germanic literature and minor in Germanic philology, or vice versa, or he may major in a combination of these two fields and minor in a different field. Upon the successful completion of the above, the applicant may proceed to his doctoral thesis. The thesis must demonstrate mastery of scholarly procedure and be a contribution to the sum total of human knowledge.

With a minor in Germanics. A minor in the field of Germanic literature, or Germanic philology, or a combination of the two, for the Ph.D. degree shall consist of a minimum of twelve credits beyond the M.A. program. In no instance, however, may a minor in Germanics for the doctor's degree be less than the course requirements for a major for the master's degree. The written and oral comprehensive examination on the minor will likewise not be confined to courses taken but will be expected to demonstrate the student's grasp of the entire field of human knowledge of which his minor field is a part.

Courses Open to Graduate Students

In addition to the courses in Germanics numbered 200 and above, German 129 and any German courses numbered from 139 to 199 may be elected for graduate credit subject to the following conditions: two-thirds of the courses submitted in a graduate program in Germanics must be numbered 200 and above. No student, already the holder of a bachelor's degree with a major or a minor in Germanics, will be permitted to take German 129 or any German course numbered from 139 to 199, on any other than the graduate level. This involves the writing of term papers, extra reading, and such other enrichment of the course content as the instructor may require.

HISTORY

Departmental Requirements for the Degree of Master of Arts

I. *Preliminary Requirements.* Undergraduate major work in history in the University of Washington, or such undergraduate preparation as the department shall deem satisfactory. A reading knowledge of one modern foreign language. A conference or oral examination may be required during the first quarter to satisfy the department of the candidate's fitness to do graduate work.

II. *Substantive Requirements.* Forty-five hours in history (including History 201), no minor being required. A thesis which shall count from four to nine hours. A graduate seminar must be taken in the field of the thesis subject—i.e., in American history, if the thesis subject is in American history, or in European history (ancient, medieval, modern or English) if the thesis subject is in European history. The hours required after the thesis and the graduate seminar have been fulfilled, may be selected from regular upper-division courses, graduate courses, and graduate conference courses. Graduate conference courses are to be arranged with instructors. These selections would be dictated by the three fields chosen for the final examination. Not more than one conference course shall be arranged in any one of the fields presented, except by permission of the department. Two to five credits may be earned a quarter. In case more than one conference course is taken during a quarter, the total number of hours shall not exceed five.

III. *Final Examination.* This shall include one of the four fields from each of the three divisions of history listed below.

A. *Division I*

1. Greek history
2. Roman history
3. Medieval history to 1000 A.D.
4. Medieval history 1000 to 1450

B. *Division II*

1. European history, 1450-1815
2. European history, 1815 to the present
3. English history, 1450 to the present
4. British Empire since 1783

C. *Division III*

1. American history to 1783
2. American history, 1783 to 1861
3. American history, 1861 to the present
4. Pacific and the Northwest

The final examination shall include a defense of the thesis, historiography, and the three fields selected. The final examination shall be given two weeks prior to the end of the quarter in which the candidate expects to receive his degree.

The thesis must be submitted in a form suitable to the department and the library before the candidate may take the final examination.

Requirements for the Minor in History when the Major is in Another Department

I. An undergraduate minor in history at the University of Washington, or such undergraduate preparation as the department shall deem satisfactory.

II. The amount of work required shall total a minimum of fifteen quarter hours of graduate credit. The selection must include History 201 (five hours). The remaining ten hours shall be grouped in one of the following fields: ancient, medieval, English, modern European, or American history.

III. The candidate must pass an examination upon the work presented. Questioning shall cover the general subject of the courses rather than the specific content as given in class.

Departmental Requirements for the Degree of Doctor of Philosophy

I. *Requirements for the Degree when the Major is in History*

1. *Preliminary Requirements.* No work shall be counted toward attainment of the degree until the prospective candidate shall have fulfilled the department's requirements for an undergraduate major in history, viz., from 36 to 60 credits within the department, including normally a survey course in medieval and modern European history, or its equivalent. At least half of these credits shall have been taken in the most advanced undergraduate courses.

Evidence of a reading knowledge of the basic language required for the probable thesis field shall be submitted to the department not less than three months before the candidate is permitted to take the preliminary examination. The facile use of both Latin and Greek is required of all who take the degree in ancient history.

A committee of three, appointed by the chairman of the department, shall have charge of each candidate for the Ph.D. degree in history and shall make recommendations to the department concerning his program of work.

2. *Substantive Requirements.* As soon as possible after announcing his intention to become a candidate for the Ph.D. degree the student shall submit to the department a proposed program of study. He shall at this time state his plans for the writing of a doctoral dissertation, and shall present six fields selected from the four groups enumerated below. At least *one* field shall be chosen from *each* of Groups A, B, and C. From one of these groups, selected for particular concentration, a second field shall be presented. The remaining two fields may be chosen from any of the four groups. If, however, the candidate selects all six fields from Groups A, B, and C, his program must receive the approval of the Graduate Council. Normally one or two fields shall be selected from Group D.

The candidate shall present himself for a qualifying examination, both oral and written, covering historiography and five of the fields selected.

A final examination shall cover the thesis and the field in which the thesis lies. Other fields covered in the general qualifying examination may be included in the final examination at the discretion of the examining committee.

At least two quarters must elapse between the general qualifying examination and the final examination.

The fields are as follows:

Group A

1. Ancient History—Greece and Rome
2. The Middle Ages to 1300
3. History of England from the Anglo-Saxon Invasions to 1485
4. The Renaissance and Reformation: 1300-1600

Group B

1. Modern Europe
2. History of England since 1485
3. The British Empire since 1783

Group C

1. American History to 1789
2. American History since 1789
3. History of the West

Group D

1. Anthropology
2. Economics
3. Education
4. English
5. Geography
6. Oriental Studies
7. Philosophy
8. Political Science
9. Sociology

II. Requirements for a Minor when the Degree is Obtained in Another Department

1. The work done under the direction of the department of history shall comprise at least 24 quarter hours, and shall be distributed through not less than one year of residence. History 201 is required. At least one course shall be a graduate seminar. The remaining courses may be of upper division grade.

2. At the time of his qualifying examination the candidate shall offer himself for questioning upon the following subject matter:

- a. Historiography (History 201 or its equivalent).
- b. The substance of other particular courses elected. Questioning shall cover the general subject of the courses rather than the specific content as given in class.
- c. The substance of the survey course which covers the general field in which the bulk of the minor lies. Such general fields are ancient history, medieval history, modern European history, English history, American history.

HOME ECONOMICS

A master's degree may be earned in the following fields:

Master of Science:

Food and nutrition which may be combined with household economics or home economics education, and a minor in an allied field.

Master of Arts:

Textiles and clothing which may be combined with household economics or home economics education, and a minor in an allied field.

Professional Graduate Degree:

Master of Science in Home Economics or Master of Arts in Home Economics. Major and minor subjects in home economics with undergraduate work in basic fields.

Post Graduate Training

Public Health Nutrition: The requirements are two quarters of academic study and five months of supervised field work. The field work will be obtained in out-patient departments of hospitals and with social service agencies.

The courses recommended in the University will depend upon undergraduate preparation and the experience of the student.

Required of all:

S.W. 175, 231, 232; Soc. 128; H.E. 214, 215; N.E. 102 with addition of courses in public health as facilities are provided.

Preferred electives:

S.W. 176 or 254, 178 or 243, 218, 260; H.E. 109; Soc. 112, 141, 142, 156, 159, 165, 166, 190, 194, 266; Pol. Sci. 113, 155; Psych. 117, 118, 126; E.B. 105; N.E. 175.

It is recommended that students looking toward this post graduate year include in their undergraduate work as many of the above preferred electives as possible.

Students will be enrolled in the Graduate School of the University. Credits in graduate courses may be counted toward a Master's Degree.

Institution Administration: Two fields of post graduate training are offered for graduates in institution administration. One is the dietitian internship which is given in hospitals throughout the country. A limited number of commercial apprenticeships are also available. Both are one year in duration and are endorsed by the American Dietetic Association.

Internship for Administrative Dietitians: A limited number of internships for administrative dietitians is provided at the University of Washington for graduates of institution administration. Students of this and other colleges may apply for appointment after completion of 195 credits. This course has been inspected and approved by the American Dietetic Association and is under the supervision of the Business Director of Dining and Residence Halls. Field work includes six months in the University Commons and Residence Halls; three months in a commercial restaurant in the downtown business district; and three months in an industrial lunch room.

JOURNALISM

Advanced courses in journalism, history, economics, political science, sociology, and English are offered students wishing to take graduate study in preparation for newspaper work or teaching journalism. A wide demand exists in high schools, colleges and universities for instructors adequately trained to teach journalism. The University library contains a large collection of bound newspapers and magazines and furnishes unusual opportunity for an historical study of American journalism. Special provision is made for directing the work of graduate students interested in historical, political, psychological, or language studies in journalism. Although graduate work in journalism may be undertaken by students holding a bachelor of arts degree, or its equivalent, no degree other than that of bachelor of arts in journalism is granted. Qualified students may elect journalism as their minor field, when the major in which they plan to take their advanced degree is in an acceptably related field.

LAW

See special Law School bulletin, available upon request to Director of Publications.

LIBERAL ARTS

Advanced work in the department of liberal arts may be taken for a minor for an advanced degree or as part of a graduate major in English, but it is not possible to make liberal arts a major for an advanced degree.

LIBRARIANSHIP

Courses numbered over 200 are open to graduates of accredited schools of librarianship only, on permission of the director of the school. The work will be a coordination of theory and practice, the theory to be taken at the University and the practice to be taken in half-time positions at the Seattle Public Library. All courses are required and must be taken in prescribed order. The following courses, outside of the School of Librarianship are required: Child Psychology, and Education. It is recommended that they be taken as preparatory courses, but they may be carried along with the advanced work. Courses in the following are also strongly recommended as preparatory courses: Greek literature, Latin literature, early literature of various countries, playground and recreation.

MATHEMATICS

The department of mathematics offers courses of study leading to the degrees of Master of Arts, Master of Science and Doctor of Philosophy. Besides the standard treatises and numerous collected works, the University library contains complete sets of the important mathematical periodicals and publications of learned societies. The department is well equipped with mathematical models. The Mathematical Research and Journal Club meets three times a month to hear presentations of original studies or reports on pertinent literature. Graduate students are expected to participate in the programs. The graduate advisory committee of the department, which passes on the applications of all candidates for higher degrees, is available for consultation in planning courses of study.

Requirements for Advanced Degrees with a Major in Mathematics

Any candidate for an advanced degree with a major in mathematics must present at least the equivalent of an undergraduate major in mathematics.

Doctor of Philosophy. In addition to the requirements of the Graduate School, the department stipulates that the qualifying examination of the candidate shall cover the fundamental aspects of analysis, geometry and algebra, together with a searching review of the field of the student's special interest.

Master of Science. The candidate must present a minimum of 33 approved hours in mathematics, including the thesis. The course work must include at least six hours in each of the fields of algebra, analysis, and geometry.

Master of Arts. The regulations are the same as for the Master of Science degree except that the thesis need not be a contribution to knowledge. Certain courses, intimately related to the elementary field and designed primarily for high school teachers, are open in the summer and may be offered toward this degree.

Requirements for Advanced Degrees with a Minor in Mathematics

Doctor of Philosophy. The candidate must present a minimum total of 33 approved hours, which may include acceptable courses beyond calculus taken as an undergraduate, but which shall include at least six hours in each of the fields of algebra, analysis, and geometry. For a partial minor, fifteen approved hours constitute a minimum.

Master of Science and Master of Arts. The minimum requirements are: twelve credits satisfactory to the department, at least nine of which shall be taken in residence. The candidate's undergraduate preparation in mathematics shall comprise courses at least through the calculus, and in no case shall his total credits fall short of an undergraduate major in mathematics or equivalent.

Courses beginning with Mathematics 111 may be applied on the program for an advanced degree, and all courses numbered above 200 require a full year's work in differential and integral calculus as a prerequisite and the consent of the instructor in charge.

MINING, METALLURGICAL AND CERAMIC ENGINEERING

The department of mining, metallurgy, and ceramics offers graduate courses leading to the master's degree or to a professional degree. In addition, certain courses in this department may be used as the minor for a degree in other departments. The location of the University is favorable for the pursuit of advanced study in these fields owing to the varied natural resources and the important commercial operations taking place in the Northwest. The equipment available for the use of graduate students is extensive.

The Department of the Interior maintains at the College of Mines its Northwest Experiment Station, which serves the Pacific Northwest and the coast regions of Alaska. The headquarters of the Station from which all operations in this territory are directed, are in Mines Laboratory. At present the principal investigations being conducted by the station are in the treatment and uses of coal and of other non-metallic substances. These investigations are conducted by the Station in cooperation with the College of Mines principally through the research fellowships provided by the College. The results of cooperative investigations are published by the Bureau or by the University.

Mining, Metallurgical and Ceramic Research

The purpose of this department is to encourage development in the mining, metallurgical, and ceramic industries of Washington, the Pacific Northwest and Alaska by research in the special problems presented and to solve the problems through the efforts of fellowship holders and others studying in the department.

Graduates from suitable technical courses at institutions of recognized standing, or men who present evidence of technical training that has fitted them to undertake investigations, are eligible to enroll in mining and metallurgical research. The degree of master of science may be granted students holding suitable bachelor of science degrees who complete investigative work in compliance with the University requirements for the master's degree. Although as much latitude as possible will be allowed in the choice of subjects for research, the general topics will be those of special importance to this region.

Investigations of Problems. Under certain conditions, the University will permit mining, metallurgical, and ceramic companies who have special problems for solution, to detail a representative to work on such problems, or to meet the expense of engaging a man to do so. Experiments which can be carried on as readily in commercial laboratories and which do not require direction from experts are not undertaken. The research is done under the direction of the department, and complete records of all the data obtained are filed with the department, which reserves the right to publish this information for the benefit of the mining, metallurgical and ceramics industries.

Courses in mining, metallurgy, and ceramics numbered 100-199 may apply on a minor for an advanced degree, provided the major is in another department of related character.

Masters' Degrees. The degrees of master of science in mining, metallurgical, and ceramic engineering, respectively, will be conferred upon graduates of this college or of other engineering colleges of recognized standing, who comply with the regulations of the Graduate School and pass a formal examination open to all members of the faculty. The selection of work for this degree must in each case be approved by the head of the department and by the dean of the Graduate School.

The degree of master of science in ceramics may be conferred upon a graduate from a college of recognized standing provided his undergraduate preparation includes suitable courses in science and ceramics but does not meet the requirements of the engineering degrees granted in this college.

The College of Mines may award the degree of master of science to properly qualified candidates, subject to the requirements of the Graduate School for that degree.

Professional Degrees. The College of Mines offers the following professional degrees: Engineer of Mines (E.M.); Metallurgical Engineer (Met.E.); Ceramic Engineer (Cer.E.). The requirements are as follows:

1. Five years of professional experience in the proper field after graduation with a good record from a 4-year course in this college; or five years of professional experience after award of a master's degree by this college, if the candidate does not hold a bachelor's degree from it.
2. Four years in positions of professional responsibility, of a character equivalent to those required for membership in the National Founder Engineering Societies. Teaching experience shall count in lieu of professional experience in the same ratio as now recognized by the professional societies, provided that a minimum of two years of acceptable engineering work other than teaching be included.
3. A professional thesis on a subject on which the applicant has been directly engaged. The thesis committee shall be the judge of the suitability of the material presented, which may be a published article or other writing having high professional value.
4. Submission of two complete copies of the thesis.

Application for a professional degree may be made at any time. It shall be accompanied by an exact statement of the applicant's record since graduation. The department of mining, metallurgical, and ceramic engineering will pass upon the application and may then arrange dates on which material is to be submitted for criticism. The candidate must submit his thesis in final form at least one month before the date on which theses for advanced degrees are deposited in the library. Final recommendation for or against the degree will be based upon the finished thesis. Action will be taken by the faculty of the College of Mines upon recommendation of the mines department.

Mining and Metallurgical Research

Class work is directed by members of the instructional staff of the University. Research is under joint direction of the United States Bureau of Mines and the College of Mines. Credit is allowed for research carried on during the summer months. Subjects of research relate to the mining, metallurgical and ceramics industries of the state and adjacent regions.

MUSIC

Candidates for the degree of Master of Music are accepted only upon the recommendation of the graduating committee of the music department. Applicants should be prepared to submit to the committee, at a preliminary conference, a transcript of undergraduate credits. Deficiencies in prerequisites may be made up by special examination, or by registering for the necessary courses without graduate credit.

For the Degree of Master of Music with a Major in Composition

- (a) The equivalent of all music courses now required for the degree of bachelor of arts in music with a major in composition.
- (b) Twenty-five credits in graduate composition. This shall include one composition for a chamber music combination, one for orchestra or symphonic band, one for chorus, and the thesis.
- (c) Twenty credits in approved electives.

For the Degree of Master of Music with a Major in Musicology

- (a) A bachelor's degree with the equivalent of 36 credits in upper division music courses, including twelve credits in music history and literature.
- (b) Ten credits in advanced composition.
- (c) Fifteen credits in approved electives.
- (d) Twenty credits in approved seminars and research, including the thesis.
- (e) A reading knowledge of either French or German.

For the Degree of Master of Arts in Music Education

- (a) The equivalent of all music courses now required for the degree of bachelor of arts in music with a major in music education.
- (b) Two years of approved teaching experience, of which one must precede the graduate courses in music education.
- (c) Eighteen credits in seminars and research in music education, including the thesis.
- (d) Fifteen credits in approved music courses.
- (e) Twelve credits in approved electives.

Requirements for a minor in music when the master's degree is in another department: twelve credits chosen from approved upper division music courses.

NURSING EDUCATION

The degrees of master of nursing and master of science in nursing are granted by this department. The latter degree requires a minor in science and a reading knowledge of one foreign language.

OCEANOGRAPHIC LABORATORIES

Special arrangements may be made for conducting research at the laboratories at Friday Harbor or at the laboratories in Seattle.

PHARMACY, PHARMACEUTICAL CHEMISTRY, PHARMACOLOGY, TOXICOLOGY, MATERIA MEDICA AND FOOD CHEMISTRY

The College of Pharmacy is well supplied with apparatus and library facilities to carry on systematic research work.

Graduate Courses**1. WITH DEGREE OF MASTER OF SCIENCE IN PHARMACY. (Five-year course.)**

Graduates of the four-year science course may continue work for the master's degree as follows:

Not more than 25 credits accepted in courses outside of the College of Pharmacy.

Not less than 20 credits shall be elected in the College of Pharmacy. At least twelve credits of the major work must be earned by a research problem and the preparation of a thesis. Examination and thesis must conform to the regulations of the Graduate School.

2. WITH DEGREE OF DOCTOR OF PHILOSOPHY.

The degree of doctor of philosophy (Ph.D.) with major and thesis in the pharmaceutical field may be taken by meeting all requirements of the Graduate School.

PHILOSOPHY

Requirements for advanced degrees with a major or a minor in philosophy conform to the general requirements of the Graduate School.

PHYSICAL EDUCATION AND HYGIENE

The department of physical education is unusually well equipped for graduate work both because of the facilities for the study of specific problems in the professional field and the opportunity for advanced and research work in allied fields.

Degrees

The degree of master of science in physical education is granted by the University.

The requirements for this degree conform to the requirements of the Graduate School on pages 178-179.

For a minor in physical education for the master's degree, the student must present in preparation a minimum of twenty-six credits in physical education and a course in physiology, and at least twelve credits in advanced courses for the graduate minor.

PHYSICS

The department of physics accepts candidates for the master's degree and the degree of doctor of philosophy. Adequate library facilities are provided in the form of quite complete files of the leading scientific periodicals and the outstanding reference books. The modern four-story Physics Hall contains excellent laboratory and research facilities. A well equipped instrument shop with a mechanic is available for the construction of special apparatus.

The degree of doctor of philosophy is granted in recognition of breadth of scientific attainment and ability to carry on independent scientific research, rather than upon the completion of definite courses of study. The candidate should consult with the chairman of the department or other faculty member designated by him regarding the course of study to be pursued. The general requirements for advanced degrees are stated elsewhere in this bulletin, under the heading Degrees. The French and German examinations should be passed in the first year of graduate study so that these languages may be used in research.

POLITICAL SCIENCE

Graduate Study. Candidates for higher degrees in political science must register in the graduate seminar during every quarter of their residence, and in two research seminars, one of which must be in the field of the special investigation.

Subject Groups. The work of the department is divided into the following groups: I. Political Theory and Jurisprudence; II. International Relations; III. Politics and Administration. A major student must select any one group as his chief interest before proceeding with upper division courses.

PSYCHOLOGY

Students who have shown an aptitude in psychology, and who consider taking extensive work in this subject, are invited to confer with members of the staff in order to plan their work to advantage.

Departmental Requirements for the Master's Degree

1. *Prerequisite Undergraduate Credit*

A minimum of twenty quarter credits in psychology is required as prerequisite to candidacy for an advanced degree.

In these the student must have received a grade average of 3.5.

No credits received more than eight years prior to admission to candidacy for an advanced degree will be accepted in full.

2. *Capacity and Preparation of the Student*

A student whose scores in aptitude and intelligence tests show him to be inferior to eighty per cent of entering freshmen will not be encouraged to take graduate work in psychology.

A student whose score in tests for psychological information is inferior to that of fifty per cent of undergraduate psychology majors will not be admitted to candidacy for a degree upon the basis of twenty prerequisite credits.

3. *Graduate School Requirements*

As thorough training as possible in chemistry, physics, physiology, zoology and mathematics is desirable as preparation for study and research in psychology. Engineering mathematics (31, 32, 33) is recommended.

If a candidate for the master's degree has not had at least the following courses or their equivalent in undergraduate training, he should complete them as early as possible during his graduate work. These courses are:

Supporting Survey Courses

General chemistry
General physics
General physiology
General zoology
General mathematics
(U. of W. Math. 3)

Courses in Psychology

General psychology
Neural basis of behavior
Experimental psychology
Essentials of mental measurement
Modern psychological theory
Animal behavior
Thinking and voluntary action
History of psychology
Psychology of learning
Abnormal psychology
Child psychology

A thesis in the department of psychology must be based upon laboratory research. A candidate must demonstrate his ability as an experimentalist before beginning his thesis research. The question that he proposes to answer experimentally must be crucial and his research plans must be well formulated. A student who does not know specifically the significance of his problem and the experimental means for its solution is not yet prepared to begin his thesis research.

Departmental Requirements for Candidacy for the Degree of Doctor of Philosophy with a Major in Psychology

Ordinarily before being considered for candidacy the applicant must have spent at least one year in the laboratory so that the departmental staff may reliably estimate his qualifications.

An applicant will be given comprehensive examinations in the subject matter of psychology and of the basic sciences. The fitness of the applicant will also be judged upon his scholastic record and upon the merit of his published research. Only students who have shown exceptional ability in laboratory experimentation and constructive insight in psychological theory will be admitted to candidacy for this degree.

The candidate must have completed all the specific courses or their equivalent offered by this department. With few if any exceptions he must have secured in each of these a grade of "A." He must have the master's degree in psychology

or its equivalent in credit and in research. He must have adequate training in the physical and biological sciences and in mathematics. His minor will be in one of the supporting sciences.

ROMANIC LANGUAGES AND LITERATURE

A student who wishes to become a candidate for a degree with a major or minor in this department should consult with the executive officer before submitting the required outline of proposed work to the dean. The student is responsible for submitting this outline before registering for his second quarter of graduate study. Graduate programs in Romanic Languages normally include at least two-thirds of the credits in graduate courses.

Requirements for the M.A. degree are listed on pages 19-20. A syllabus may be obtained from the department, outlining the knowledge of the literature required for the major and minor programs in French, Italian, or Spanish. (For the M.A. minor, the same proficiency in a language and knowledge of its literature will be required as for the B.A. major.) The master's thesis must be submitted to the department *four weeks before the end of the quarter in which the degree program is to be completed*. All students will find a knowledge of Latin particularly helpful.

The requirements for the Ph.D. degree are listed on pages 16-18. For the Ph.D. entirely within the department, the requirements are: (1) the history of two Romanic languages; (2) the history of three Romanic literatures, as outlined in the respective Ph.D., M.A., and B.A. syllabi; and (3) a knowledge of Latin. Acquaintance with some principal masterpieces of other literatures is strongly recommended, as essential for historical and aesthetic perspective. In cases where a minor is added from another department, representative masterpieces of three Romanic literatures must be included in the requirements. In cases where a Romanic language is added to a Ph.D. program in another department, the requirements are at least the same as for the B.A. major in that language.

GRADUATE SCHOOL OF SOCIAL WORK

For information concerning the Graduate School of Social Work, see pages 203 to 206.

SOCIOLOGY

Sociology treats of the development, organization and function of human groups. Its general purpose is to explain the relations of institutions; to stimulate a critical and constructive attitude toward programs of reform and furnish a sound basis of information for intelligent citizenship. It prepares for advanced study, field investigation, teaching and journalism, public health and institutional management, and supplements specialized training along these lines.

Sociology is related to many problems treated in anthropology, biology, psychology, history, economics, politics, education, home economics, and literature. Majors are urged to consult members of the department staff regarding their elections. Work in other departments may be essential for success in this field, and may, when approved, be credited toward advanced requirements.

Graduate students must complete undergraduate requirements before being accepted as candidates for the master's or doctor's degree in sociology.

Sociology 131 or its equivalent and 196 are required of graduate majors and minors, and every graduate major must become a member of the staff seminar for at least one quarter.

Requirements for graduate minors have been increased so that the sum of graduate and undergraduate credits shall be at least 36.

Graduates from other institutions will be accepted as graduate majors and minors only upon examination.

For the degree of master of arts in regional planning, refer to the requirements set forth under the department of civil engineering, page 185.

ZOOLOGY AND PHYSIOLOGY

The department offers facilities for graduate work in most of the well established lines of investigation in the field of zoology. Proximity to the sea gives unusual opportunity for research based upon marine material and the University has an oceanographic laboratory at Friday Harbor. Since the climatic conditions are such that ice rarely forms, field work can be conducted during all seasons of the year. In co-operation with the department of fisheries many problems arising from the application of biological principles to the fishing industries call for solution at the hands of those possessing the requisite training in zoology and allied sciences.

Owing to the topography of the western portion of the state there exists within narrow geographic limits an extraordinary diversity of conditions controlling the distribution and adaptation of animal life. A journey of a few hours' duration by railway or automobile enables one to traverse the entire range of conditions from sea level to the lofty slopes of the Cascade or Olympic mountains. This leads to a remarkable diversity of faunistic elements and offers a rather unique opportunity for the study of the relations between terrestrial organisms and their environment, particularly insects, birds and mammals.

THE GRADUATE SCHOOL OF SOCIAL WORK

Ernest F. Witte, Director, 300F Commerce Hall

For faculty and courses, see page 326; for cooperating staff, see page 14.

COOPERATING AGENCIES

American Red Cross
Catholic Charities
Children's Bureau, U. S. Dept. of
Labor
Children's Orthopedic Hospital
Family Society of Seattle
King County Hospital
King County Juvenile Court
King County Welfare Department
Ryther Child Center

Seattle Public Schools
Seattle Social Service Exchange
Seattle Welfare Council
State Department of Health
State Department of Social Security
State Personnel Board
Washington Children's Home Society
Young Men's Christian Association
Young Women's Christian Association

The Graduate School of Social Work, organized in 1934 to meet the growing demand for professionally trained social workers, maintains a two-year curriculum conformable to the standards of the American Association of Schools of Social Work, of which the School is a member. The training implies completion of a college course with a major in the social sciences, advanced study of fundamental principles and methods common to all forms of social work and of the different procedures employed in connection with special problems, and field work under supervision. This is supplemented by special lectures and field trips.

Among the types of positions to which this training may lead are: family case work, child welfare work, social work in the schools, medical social work, psychiatric social work, group and neighborhood work, community organization, the social insurances, and social research and public welfare administration.

Admission. Students are admitted to the Graduate School of Social Work upon meeting the general requirements of the University of Washington and the specific requirements of the Graduate School of Social Work. Application forms for the latter must be secured from the office of the School, 300-F Commerce Hall, and confirmation of admission must be received from the School.

Since the facilities for field work limit the number of students to be admitted, applications for admission should be submitted by *February 1 and May 1*, on regular forms, with official transcripts of all previous college work completed.

Persons who have had courses in other schools which are members of the American Association of Schools of Social Work may be admitted at the beginning of any quarter if their work has been satisfactory, provided application for admission has been made *at least one month* in advance of the opening date of the quarter. Persons without previous professional training are admitted in the autumn, spring, and summer quarters.

Requirements for admission are: (1) graduation from an academic college or university; (2) well-rounded undergraduate preparation that has included at least 36 quarter credits in the social sciences, such as economics, political science, sociology, anthropology, psychology; (3) a year of biology. Personal qualifications including health, scholarship, and indications of probable success in social work are also considered by the admissions committee.

For admission to the sequence in Medical Social Work, students must have completed the basic first-year curriculum.

Persons under 21 or over 35 are not encouraged to begin preparation for the profession unless, in the case of those over 35, the person has been engaged in a related field of work. References are consulted and a personal interview is usually desirable and required whenever possible.

Curriculum. The curriculum is planned to lead to the degree of master of arts or the master of social work, and no other certificate or diploma is granted. For the student who enters with the minimum requirements in the social and biological sciences, a program is offered for the master's degree covering a minimum of six quarters of work.

A broad first-year curriculum is required for all students. This includes the following: Social Case Work I and II, Introduction to Child Welfare, Advanced Case Work or Child Welfare Case Work, Field Work I, II, and III, Introduction to Personality Development, Psychiatric Information for Social Workers I and II, Medical Information for Social Workers I and II, Community Organization and/or Rural Community Organization, Public Welfare I, II, and III, Statistics for Social Workers, and Social Aspects of the Law.

During the second year of graduate study increasing attention is given to field work experience, and additional courses are required in the social insurances, social legislation, the history of social work, social research, specialized case work, professional ethics, and in the other areas of the student's special field of interest.

While qualified students are urged to complete the work for a master's degree, those who have satisfactory preprofessional preparation but are unable to remain longer than one year can complete in that time the basic curriculum prescribed by the American Association of Schools of Social Work, which is outlined above. Upon securing employment, they are then eligible to apply for admission to the American Association of Social Workers. Students entering upon professional study directly after receiving the baccalaureate degree may find it desirable to complete the basic curriculum and then secure a position, returning at a later date to conclude work for the master's degree.

Medical Social Work Curriculum. Because of the demand for medical social workers in the defense program, as well as in our public and private hospitals and clinics, in state departments of health, and in federal, state, and county welfare agencies, a curriculum in medical social work was inaugurated in the winter quarter, 1942. The course plan (see courses of study) is based on the educational requirements of the American Association of Medical Social Workers. The medical social work sequence begins in the autumn and spring quarters of each year and requires four quarters to complete.

The Master of Arts Degree. The degree of master of arts in social work is especially designed for those students who wish to enter the field of teaching social work.

Candidacy. A graduate student who has satisfactorily completed three quarters of professional work in residence, and who has an acceptable thesis subject and plan of research may, upon approval of the faculty of the Graduate School of Social Work, file an application for admission to candidacy.¹

Requirements. The work for the degree includes:

(1) Preparation for the comprehensive examinations (given quarterly). This requires completion of courses basic to all fields of social work, and specialized courses elected by the student.

The master's degree is awarded, not on the basis of credits for courses completed, but in recognition of the student's competency in both theory and practice in the field of social work. The comprehensive examination, therefore, is intended to test his understanding of:

(a) Principles and methods of social case work as applied to different fields of social work.

(b) The problems and trends in social work under governmental auspices.

¹ Detailed instructions regarding procedures in fulfilling degree requirements may be obtained from the secretary.

(c) Methods of community organization and administration in both public and private social agencies.

(d) The significance of certain economic problems and social relationships.

(e) Application of research methods to social data.

(2) Field work including at least 800 clock hours, taken in conjunction with the appropriate class work.

(3) A satisfactory thesis approved by an especially appointed committee of the faculty and prepared under the direction of the instructor in whose field the subject falls.²

(4) A minimum of three full quarters of work in residence. Unless, however, a person has had professional preparation elsewhere with experience in social work, completion of the requirements in three quarters is not possible. The course requirements ordinarily cover a minimum of ninety quarter credits, nine of which are in thesis research. Electives are permitted in the second year. Emphasis is placed upon an integration of the applicant's knowledge of social work, the social sciences, and law.

(5) The requirements of a reading knowledge of a foreign language, the grade point average, and the final examination for the degree are the same as the general requirements in the Graduate School.

The Degree of Master of Social Work. The master of social work is a professional degree intended primarily for students intending to practice social work. The requirements for this degree are the same as those for the master of arts with the following exceptions:

(1) Reading knowledge of a foreign language is not required.

(2) Course requirements cover a minimum of eighty-five quarter credits.

(3) There are fewer electives during the second year.

Fellowships, Scholarships and Loan Funds. In addition to fellowships, scholarships and loan funds open to graduate students at large (see pages 14, 15), the following fellowships and loan funds are available to students in the Graduate School of Social Work:

The Arlien Johnson Scholarship. A scholarship of \$150 is awarded annually to a beginning student in the Graduate School of Social Work on the basis of scholarship and need. The holder of this scholarship may also arrange to render service to the University for which he may receive the equivalent of tuition charges. Applications should be made directly to the chairman of the Scholarship Committee of the Graduate School of Social Work.

The Family Society of Seattle Fellowships. Three fellowships with the Family Society of Seattle are available to advanced students in the Graduate School of Social Work. The holders of these fellowships devote an equal part of their time to the agency and to their professional studies. These fellowships provide monthly stipends of approximately \$60 per student. Those who render service to the University may receive the equivalent of tuition charges. Applications should be made to the chairman of the Scholarship Committee of the Graduate School of Social Work.

The Washington Children's Home Society Fellowship. One fellowship with the Washington Children's Home Society is available to an advanced student in the Graduate School of Social Work. The holder of this fellowship devotes an equal part of his time to the agency and to his professional studies. This fellowship pro-

² A thesis must be completed within two years (8 quarters) from the date the subject is approved.

vides a monthly stipend of approximately \$60. The holder of this fellowship may also arrange to render service to the University, for which he may receive the equivalent of tuition charges. Application should be made directly to the chairman of the Scholarship Committee of the Graduate School of Social Work.

Ryther Child Center Fellowship. Two work-study fellowships for men and women are available at Ryther Child Center, Seattle. These fellowships are of one or two years' duration and pay \$35 a month and full maintenance. Service is given the Center by the student through work on the House Staff, with the privilege of staff participation. The holder of this fellowship may also arrange to render services to the University, for which he may receive the equivalent of tuition charges. Applications should be made directly to the chairman of the Scholarship Committee of the Graduate School of Social Work.

The Mildred E. Buck Loan Fund. This fund is available for small loans to students. Applications should be made to the Graduate School of Social Work. Loans are determined by scholarship, financial need, and prospective placement in a position. Terms are individual.

The American Association of Social Workers, Puget Sound Group, Washington Chapter, Education Loan Fund is available to members. Applications should be made to the Education Loan Fund Committee, Mrs. Helen Dorman, chairman, Graduate School of Social Work, University of Washington.

DESCRIPTIONS OF COURSES

DESCRIPTIONS OF COURSES

EXPLANATION

This section contains a list of all courses of study offered in the University. The departments are arranged in alphabetical order.

The University reserves the right to withdraw temporarily any course which has not an adequate enrollment at the end of the sixth day of any quarter. For changes in registration, due to withdrawal of a course, no fee will be charged.

The four-quarter plan has been adopted to enable the University to render larger service. It is more flexible than the semester plan and adds 12 weeks' instruction to the regular year. It is impossible, however, to provide that every course be given every quarter.

Courses bearing numbers from 1 to 99, inclusive, are normally offered to freshmen and sophomores; those from 100 to 199, to juniors and seniors, and those from 200 upward, to graduate students.

Two or three course numbers connected by hyphens indicate a series of courses in which credit is given only upon completion of the final course in the series, unless the special permission of the instructor is obtained. Such permission is never granted in beginning foreign languages for less than two quarters' work.

Descriptions of courses in each department include: (1) the number of the course as used in University records; (2) title of the course; (3) quarters in which the course is offered, i.e., A, autumn; W, winter; S, spring; (4) number of credits given, in parentheses; (5) name of instructor; (6) brief description of its subject matter and method.

In the lists of departmental faculties, the first name in each instance is that of the department's executive officer.

AERONAUTICAL ENGINEERING

*Professors Eastwood, Kirsten; Associate Professor F. S. Eastman;
Instructors Hage, Dwinnell.*

83. **General Aeronautics. W. (3)** Dwinnell.
Descriptive outline of the field of aeronautical engineering. Pr., sophomore standing.
84. **Aerodynamics. A. (3)** Dwinnell.
Fundamentals of airflow phenomena. Pr., Phys. 97.
100. **Aircraft Engines. A. (3)** Eastman.
Emphasis on their operating characteristics. Pr., Phys. 99.
101. **Aerodynamics. W. (3)** Dwinnell.
Study of airflow phenomena and of the aerodynamical characteristics of airfoil combinations. Pr., A.E. 84.
102. **Advanced Aerodynamics. S. (3)** Hage.
Pr., 101.
- *103. **Airplane Performance.**
104. **Laboratory Methods and Instruments. S. (3)** Dwinnell.
Familiarization with the wind tunnel laboratories and aircraft instruments. Pr., 101.
105. **Wind Tunnel Laboratory A. (2)** Dwinnell.
Pr., 104.
106. **Advanced Wind Tunnel Laboratory W, S. (2)** Dwinnell.
Pr., 105, special permission.
- *107. **Advanced Wind Tunnel Laboratory.**
111. **Airplane Design. A. (3)** Hage.
Aerodynamics of airplane design. Pr., 103, 172.
112. **Airplane Design. W. (3)** Hage.
Structural design of airplanes. Determination of design loads. Pr., 111.
121. **Airships. S. (3)** Kirsten.
Lighter-than-air craft, aerostatics, airship design. Pr., 102, 172.
141. **Aerial Propulsion. A. (3)** Kirsten.
Methods of screw-propeller design; design of a standard screw-propeller and performance calculations. Pr., 101, 171.
142. **Advanced Aerial Propulsion. W. (3)** Kirsten.
Different types of propellers; coordination of propeller with vessel; standard propeller-test methods. Pr., 141.
- *151. **Special Aeronautical Designs.**
161. **Advanced Aeronautical Problems. A. (3)** Hage.
Pr., 102, 172.
171. **Aircraft Structural Mechanics. W. (3)** Eastman.
Stress analysis of basic aircraft parts. Pr., C.E. 92.
172. **Aircraft Structural Mechanics. S. (3)** Eastman.
Continuation of 171. Pr., 171.
173. **Aircraft Structural Mechanics. A. (3)** Eastman.
A continuation of 172, including indeterminate structures. Pr., 172.

* Not offered in 1942-1943.

181. Advanced Airplane Structures. S. (3) Hage.
Pr., 173.
- 188-189-190. Seminar. A,W,S. (1 each quarter) Kirsten.
Pr., 102, 172. No credit for 188 and 189 until 190 is completed.
- 191, 192, 193. Research. A,W,S. (2 to 5 each quarter) Kirsten.
- 211, 212, 213. Research. A,W,S. (2 to 5 each quarter) Kirsten.

ANATOMY

Professor Worcester; Associate Hansen.

Gross Anatomy

100. Anatomy Lectures. A,W,S. (3) Worcester.
- 101, 102, 103. General Human Anatomy. A,W,S. (3 or 6 each quarter) Worcester and Staff.
For pre-medical, nursing, physical education students; open to others. Pr., Zool. 3 and 4 or equivalent.
104. Topographic Anatomy. A,W,S. (4) Worcester.
Cross and sagittal sections for correlation. Pr., 101, 102, 103.
108. Special Dissections. A,W,S. (†) Worcester and Staff.
For physicians or students who have completed the above courses in gross anatomy.

Microscopic Anatomy

105. Histology. A,S. (3 or 6) Worcester and Staff.
Three credits for Harborview students (normal and abnormal microscopic anatomy).
Pr., Zool. 3 or 4 or equivalent.
106. Embryology. W. (6) Worcester and Staff.
Study of human developmental anatomy. Pr., Zool. 3 and 4, or equivalent.
107. Neurology. S. (6) Worcester and Staff.
Dissection of the human brain, cord, special organs of sense; comparative developmental history of the central nervous system; microscopic study of the nuclei and fibre tracts.
Pr., Zool. 3 and 4, or equivalent. Especially for pre-med students, but open to others.
200. Research. A,W,S. (†) Worcester.
Graduate work and research in anatomy for those qualified.

ANTHROPOLOGY

Professor Gunther; Assistant Professors Jacobs, Ray; Associates Garfield, Hudson.

- ‡51. Principles of Anthropology. A,W,S. (5) Staff.
Evolution and heredity as applied to man. Racial classification and its significance; survey of the anthropological approach to language.
- ‡52. Principles of Anthropology. A,W,S. (5) Staff.
Man's social customs, political institutions, religion, art, and literature.
- ‡53. Principles of Anthropology. A,W,S. (5) Staff.
Prehistoric cultures, prehistory of modern peoples, material cultures of primitive peoples.

† To be arranged.

‡ Courses 51, 52, 53 may be taken in any order.

60. **American Indians.** W. (5) Gunther.
Ethnographic survey of American Indian life, with some consideration of their present condition. Not open to students who have had 110. Upper division credit for upper division students.
65. **Peoples of the World.** S. (5) Hudson.
A systematic ethnographic survey of the native cultures of the major areas of the world. No prerequisite.
91. **Theories of Race.** A,W,S. (2) Ray, Jacobs.
Survey of human heredity, causes for race differences; study of race mixtures; history of race theories. Not open to students who have had 51 or 152.
101. **Basis to Civilization.** W. (3) Jacobs.
Primitive normal mentality and abnormality; individual personalities and variability; tribal and regional culture patterns. Pr., 51, 52, or 53, or junior standing.
105. **Invention and Discovery in the Primitive World.** S. (3) Ray.
Fundamental material inventions in the building of cultures. Pr., 51, 52, or 53, or junior standing.
107. **Methods and Problems of Archaeology.** S. (5) Garfield.
Technique of archaeology with analysis of the problems various areas present, together with field experience in this locality.
111. **Indian Cultures of the Pacific Northwest.** A. (3) Ray.
Ethnographic study of Indians west of the Rockies from Columbia River through southern Alaska, with special emphasis on the tribes of Washington.
112. **Peoples of the Pacific.** S. (3) Gunther.
Ethnographic study of primitive peoples of the Pacific; brief analysis of effects of European contacts.
114. **Peoples of Central and Northern Asia.** W. (3) Hudson.
Racial and linguistic groups, life and customs of the natives of Turkestan, Asiatic Steppes, and Siberia; relations to the historic nations of Europe and southern Asia.
120. **Cultural Problems of Western America.** A. (3) Ray.
A consideration of the historical relationships and cultural problems of native western America, including the Northwest Coast, Plateau, California, Great Basin, and Southwest. Pr., 60 or 111.
141. **Primitive Literature.** A. (3) Gunther.
Forms and functions of oral tradition.
142. **Primitive Religion.** W. (3) Ray.
Descriptive survey of primitive religions.
143. **Primitive Art.** S. (3) Gunther.
Aesthetic theories, artistic achievements of preliterate peoples, with museum material for illustration.
150. **General Linguistics.** W. (3) Jacobs.
Anthropological approach to language; psychological, comparative and historical problems; phonetic and morphologic analysis.
151. **American Indian Languages.** S. (3) Jacobs.
Phonetics and morphology of American Indian languages; methods of field research. Pr., 150.
152. **Introduction to Anthropology.** A,W. (5) Gunther.
Survey of the field as a basis for other social sciences. Pr., junior standing. Not open to students who have had 51, 52, or 53.
160. **History of Anthropological Theory.** W. (2) Ray.
Survey of the field of anthropology conducted through discussion of the various schools of thought and their theories.

170. Primitive Crafts. S. (5) Gunther, Ray.
Pottery, weaving, basketry, wood-carving, and other techniques involved in primitive material culture. Pr., instructor's permission.
185. Primitive Social and Political Institutions. A. (5) Ray.
Pr., 51, 52, or 53, or instructor's permission.
- 190, 191, 192. Research. A,W,S. (†) Gunther, Jacobs.
Independent studies in field or campus with seminars and conferences. Pr., instructor's permission.
- 193, 194, 195. Reading Course. A,W,S. (†) Gunther.

Courses for Graduates Only

- 204, 205. Seminar in Methods and Theories. A,W. (3,3) Gunther.
Pr., instructor's permission.
206. Seminar in Indian Administration. S. (3) Gunther.
Deals with problems of administration of Indian affairs and their history; discussion of present social and economic resources of the Indian.
242. Seminar in Theories of Primitive Religion. S. (3) Ray.
Critical examination of various theoretical approaches to the understanding of primitive religions and philosophies. Pr., 142 or instructor's permission.
252. Seminar in American Indian Languages. A. (3) Jacobs.
Advanced training in recording and analyzing languages. Pr., 150, 151.

ARCHITECTURE

Professors Thomas, Herrman, Gowen; Associate Professor Pries; Assistant Professor Olschewsky; Instructor Hansen; Associate MacLaurin.

- 1-2. Architectural Appreciation. A,W. (2-2) Herrman.
Illustrated lectures giving an historic survey of architecture. General appreciation of architecture.
3. Architectural Appreciation. S. (2) Herrman.
Important periods of the history of domestic architecture.
- 4-5-6. Elements of Architectural Design. A,W,S. (4-4-4) Herrman, Olschewsky, Hansen.
Problems in elementary architectural design. To be taken with 7-8-9.
- 7-8-9. Graphical Representation. A,W,S. (1-1-1) Olschewsky.
Elementary principles of orthographic projections, shades and shadows, and perspective. To be taken with 4-5-6.
- 40, 41, 42. Water Color. A,W,S. (3,3,3) Hill.
Still life studies and outdoor sketching in water color. Pr., major in architecture, Art 32, 33, 34.
- 51-52-53. History of Architecture. A,W,S. (2-2-2) Thomas.
Technical study of the architecture of Egypt, Western Asia, Greece, Rome, Byzantium, and the Romanesque and Gothic periods. Pr., 3.
- 54, 55, 56. Architectural Design, Grade I. A,W,S. (5,5,5) Gowen, Pries.¹
Problems in design under individual criticism; order problems and simple problems of buildings. Pr., 6.

†To be arranged.

¹ General criticism and supervision of all courses in Design, Grades I, II, III and Advanced Design, are given by Professor Harlan Thomas, director emeritus of the school.

- 61-62-63. *History of Architectural Ornament.* A,W,S. (2-2-2) Pries.
Pr., sophomore standing. Not open to students who have had 140-141, 142.
- 101-102-103. *History of Architecture.* A,W,S. (2-2-2) Herrman.
The Renaissance; comparative study of the period in European architecture. Pr., 53.
- 104, 105, 106, 107. *Architectural Design, Grade II.* A,W,S. (5,5,5,5) Herrman, Olschewsky.¹
Advanced problems in design done under individual criticism. Pr., Arch. Design, Grade I.
- 120-121-122-123. *Working Drawings.* A,W,S,A. (2-2-2-2) Hansen.
Lectures on simple building construction. Drafting room practice in working drawings. Pr., junior standing in architectural design.
- 125, 126. *Pencil Sketching.* W,S. (1,1) Thomas.
Pencil sketches of architectural subjects—the first quarter from photographs, the second from actual subjects. Pr., sophomore standing, architecture major or permission.
135. *Introduction to City Planning.* W. (3) MacLaurin.
Lectures on history and theory, including circulation system, recreation and open areas, public buildings, control of private development, new towns and garden cities. Pr., majors in Regional Planning or junior in Architecture.
151. *History of Architecture* A. (2) Gowen.
Modern architecture in America and Europe from the middle of the eighteenth century to the present time. Pr., 103.
- 152-153. *Theory of Architecture.* W,S. (2-2) Gowen.
Theory of architectural design, relation of composition and scale, planning. Pr., Arch. Design, Grade II.
- 154, 155, 156, 157, 158. *Architectural Design, Grade III.* A,W,S. (5,5,5,5,5) Gowen, Pries.¹
Advanced design under individual criticism. Pr., Arch. Design, Grade II.
- 160, 161, 162. *Architectural Problems.* A,W,S. (3 to 7 each quarter) Gowen, Thomas.
Pr., 158.
- 167-168. *Materials and Their Uses.* W,S. (2-2) Hansen.
Properties and design possibilities of materials of construction. Pr., 167.
169. *Specifications and Office Practice.* A. (2) Hansen.
Specifications and all contract forms used by the profession; office organization and methods; ethics. Pr., 123 and senior standing.
- 180, 181, 182, 183. *Principles of City Planning.* A,W,S. (1 to 2 ea.) MacLaurin.
Lectures and seminars on history, theory, objects, and scope of city planning; planning technique, development of a comprehensive plan, zoning, sub-division control, site planning, administration, and legislation. To supplement work in City Planning Design courses. Pr., major in City Planning.
- 190, 191, 192, 193, 194. *City Planning Design.* A,W,S. (5,5,5,5,7) MacLaurin.
Problems in practical application of theory of city planning to design of towns, cities, and elements in community pattern, including housing groups, shopping centers, and recreational areas. Last quarter includes preparation of thesis material. Pr., major in City Planning.

¹ General criticism and supervision of all courses in Design, Grades I, II, III and Advanced Design, are given by Professor Harlan Thomas, director emeritus of the school.

ART

Professors Isaacs, Patterson; Associate Professors Benson, Foote, Hill, Pratt; Assistant Professors Johnson, Penington; Associates Curtis, Hensley, Worman.

The School of Art reserves the right to retain student work for temporary or permanent exhibition.

- 1, 2. **Elementary Painting and Design.** A,W. (5,5) _____.
Introductory studio course for the general student rather than the major in art. Drawing, painting, and general design. Varied exercises with lectures.
- 5, 6, 7. **Drawing.** A,W,S. (3,3,3) Patterson, Hill, Hensley.
Drawing with charcoal from casts and still life; perspective, introduction to painting, supplementary reading, lectures. Prerequisite for any subsequent course in drawing and painting.
- 9, 10, 11. **Design.** A,W,S. (3,3,3) Johnson, Penington, Hensley.
Design developed through original problems, lectures, discussions, and supplementary reading. Prerequisite for any subsequent course in art.
12. **Art History.** W. (5) _____.
Survey of the main developments in painting and sculpture from prehistoric times through the Renaissance; illustrated with slides and colored reproductions.
- 15, 16. **Laboratory Drawing.** A,W,S. (3,3) Curtis.
The technique of representation with pencil, carbon pencil, pen, and wash, for use in science or other work requiring accuracy and detail. Expression of the third dimension; drawing from the microscope.
20. **Modern Sculpture.** S. (2) Pratt.
Illustrated lectures and demonstrations on the history and appreciation of sculpture.
- 32, 33, 34. **Drawing and Sculpture for Architects.** A,W,S. (3,3,3) Hill, Pratt.
One quarter of modeling from casts. Two quarters of drawing from cast ornaments.
- 53, 54, 55. **Design.** A,W,S. (3,3,3) Johnson, Penington, _____.
Design of simple objects stressing the limiting factors of use and manufacture. Discussions, lectures, and supplementary reading on industrial and commercial design. Pr., 5, 6, 7, 9, 10, 11.
- 56, 57, 58. **Drawing and Painting.** A,W,S. (3,3,3) Patterson, Hill, _____.
Oil and water color painting from still life and casts, introduction to life and outdoor sketching, lectures and reading. Pr., 5, 6, 7.
62. **Essentials of Interior Design.** A. (2) Foote.
Lectures on the functional and esthetic treatment of the interior. Illustrated with decorative objects and materials, textiles and lantern slides.
- 65, 66, 67. **Drawing and Painting.** A,W,S. (3,3,3) Patterson, Hill, _____.
Continuation of 56, 57, 58, for majors in painting; outdoor sketching in oil and water color.
- 72, 73, 74. **Sculpture.** A,W,S. (3,3,3) Pratt.
Modeling from casts and from life. Composition; casting, carving, and metal techniques. Special problems in scientific, industrial, and architectural sculpture for qualified students.

- 80, 81, 82. Furniture Design. A,W,S. (3,3,3) Foote.
Design, as it applies to furniture. Study of materials and construction. Working drawings, color-plates, and models executed. Pr., 5, 6, 7, 9, 10, 11. Art 83 to be taken with 82.
83. History of Furniture and Interior Styles. S. (2) Foote.
Lectures illustrated with stereopticon slides on the history and development of furniture and its architectural backgrounds from the Renaissance to the present time. Research and special papers assigned.
100. Elementary Crafts. W. (2) Johnson.
Problems adapted to secondary schools, service groups, and summer camps. Hand puppets, simple block-printing, and plastics. Open to non-majors with sophomore standing. Required for those majoring in public school art.
101. Elementary Interior Design. W. (2) Foote.
Fundamental problems in interior design including floor and wall plans at scale, and color. For the general student and those wishing to teach art in the public schools. No prerequisite.
102. Applied Design. S. (2) Johnson.
Book-making and book-binding. Open to any student having junior standing in art; required for those majoring in public school art.
- 103, 104. Ceramic Art. 103, A,W,S.; 104, W,S. (3,3) Worman.
Fundamental clay processes and their application to form and surface treatment. Study of ceramic art in related industries. Composition of clays and glazes.
105. Lettering. A,S. (3) Benson.
Design in letters and the composition of letters. Exercises in single stroke letters with pen and brush, and problems requiring filled letters. Pr., for art majors, 5, 6, 7, 9, 10, 11; for non-majors, permission.
106. Commercial Design. W. (3) Benson.
Posters and other forms of art for advertising. Pr., 105.
- *107, 108, 109. Portrait Painting.
(Offered in alternate years.)
- 110, 111, 112. Interior Design. A,W,S. (5,5,5) Foote.
Technical study of fundamentals of interior design. Includes scaled drawings of floor and wall plans, perspective, study of color, texture, and research in Early American styles. For the special student, general students by permission. Pr., 5, 6, 7, 9, 10, 11. Art 62 to be taken with 110.
116. Design for Industry. W. (3) _____.
- 122, 123, 124. Sculpture. A,W,S. (3,3,3) Pratt.
Continuation of prerequisite courses, 72, 73, and 74.
126. History of Modern Painting. A. (2) Isaacs.
Painting since the Renaissance. Lectures illustrated with lantern slides and colored reproductions. Research and reports. Pr., sophomore standing.
129. Appreciation of Design. W. (2) Benson.
Illustrated lectures on historic design in the minor arts. Reading and reports.
130. Advanced Ceramic Art. S. (3) Worman.
Advanced problems in form. Clays for ceramic sculpture. Glazes and their application to tile and mosaic. Firing. Study of historic examples and modern tendencies. Pr., 104.

* Not offered in 1942-1943.

- 132, 133, 134. **Advanced Sculpture.** A,W,S. (3,3,3) Pratt.
Continuation of prerequisite courses, 122, 123, and 124.
- 136, 137, 138. **Sculpture Composition.** A,W,S. (3,3,3) Pratt.
Imaginative design; problems met in professional practice. Pr., 72, 73, 74.
- 150, 151. **Illustration.** A,W. (5,5) _____
Principles of composition applied to book illustration and to the making of prints. Pr., senior standing in art.
- 157, 158, 159. **Design in Metal.** A,W,S. (3,3,3) Penington.
Design and construction of objects in copper, pewter, brass, silver, and gold. Emphasis on interrelationships of parts, unity of form and decoration, limitations of materials. Various processes including etching, enameling, stone setting. Supplementary study of old and contemporary examples. Pr., junior standing in art.
- 160, 161, 162. **Life.** A,W,S. (3,3,3) Isaacs, Patterson.
Drawing and painting from the model. Class criticism of original compositions; anatomy. Pr., 56, 57, 58.
- 163, 164. **Composition.** W,S. (5,5) Isaacs.
Development of individuality in painting through creative composition. Reading and reports from works on modern criticism. Pr., *Life*, 3 credits.
166. **Design.** S. (3) Benson.
Experimental work in design with emphasis upon commercial application and techniques. Methods of graphic reproduction. Pr., 55.
- 169, 170, 171. **Costume Design.** A,W,S. (2,2,2) Benson.
Costume design and illustration. Supplementary reading and reports. Pr., 5, 6, 9, 10, 11.
- 172, 173, 174. **Advanced Interior Design.** A,W,S. (5,5,5) Foote.
Advanced problems in perspective, related to contemporary needs. Research in French styles. For the special student. Pr., 110, 111, 112; Arch. 1, 2, 3, 4, 5, 6, 7, 8, 9, or equivalent.
- 175, 176, 177. **Advanced Painting.** A,W,S. (3,3,3) Isaacs.
Pr., 56, 57, 58.
- 179, 180, 181. **Advanced Costume Design.** A,W,S. (2,2,2) Benson.
Pr., 169, 170, 171.
- 182, 183, 184. **Oriental Art.** A,W,S. (2,2,2) Savery.
Historical and critical study of the development of the arts in India, China and Japan. Autumn, India; winter, China; spring, Japan.
- Suggested courses for commercial art: Art 5, 6, 7; 9, 10, 11; 105, 106, 116, 126; 129; 150, 151; 160, 161, 162, 166; 169, 170, 171; Jour. 130, 131.

Courses for Graduates Only

- *207, 208, 209. **Portrait Painting.**
- 250, 251. **Advanced Design.** A,W. (3 or 5 each quarter) _____
Problems of graduate character. Pr., 150, 151.
- 260, 261, 262. **Advanced Life Painting.** A,W,S. (3 or 5 each quarter) Isaacs.
An intensive course in painting from life.
- 263, 264. **Composition.** W,S. (3 or 5 each quarter) Isaacs.

* Not offered in 1942-1943.

ASTRONOMY

Associate Professor Jacobsen.

1. **Astronomy. A, S. (5)** Jacobsen.
Solar system, stars, sidereal universe. Pr., two high school units of mathematics.
51. **Practical Astronomy. S. (4)** Jacobsen.
Methods of determining latitude, longitude, azimuth, time. Pr., trigonometry.
- *101. **Astrophysics and Stellar Astronomy.**
102. **The Solar System. W. (3)** Jacobsen.
Motion of the sun, moon, planets. Kepler's, Newton's laws. Pr., 51, calculus. Offered in alternate years.

BACTERIOLOGY AND PATHOLOGY

*Professors Henry, Hoffstadt; Assistant Professors Ordal, Weiser;
Instructor Douglas; Associate Duchow*

100. **Fundamentals of Bacteriology. A, S. (10)** Henry.
Fundamental factors involved in microbiology. Required of bacteriology majors. Pr., ten credits of botany or zoology and Chem. 132. Bacteriology and food technology majors only.
101. **General Bacteriology. A, W, S. (5)** Weiser, Hoffstadt.
Pr., Chem. 2 or 22.
102. **Sanitary and Clinical Methods. W. (5)** Weiser.
Bacterial analysis of water, food, feces and urine. Examination of clinical material used for the diagnosis of disease. Pr., 100 or 101.
103. **Public Hygiene. A, S. (5)** Hoffstadt.
Lectures only. Pr., junior standing.
104. **Serology. S. (5)** Hoffstadt.
Types of immunity; immunization of animals and man; study of immune products. Pr., 100 or 101, Chem. 132.
105. **Infectious Diseases. A. (5)** Hoffstadt.
Study of pathogenic bacteria, and methods of diagnosis of infectious diseases. Students registering for the course are required to receive such diagnostic and prophylactic treatments for the purpose of avoiding accidental infection as shall be designated by the department of bacteriology from time to time. The department of bacteriology reserves the right, throughout the quarter in which the course is given, to exclude any student who, through gross carelessness or negligence, jeopardizes the health of himself or his fellow students. Any student so excluded shall be required to repeat an elementary course in bacteriology before again being admitted to Bact. 105. Pr., 100 or 101.
107. **Principles of Control of Micro-organisms. W. (5)** Ordal.
Pr., 100 or 101 and permission of instructor.
110. **Fundamentals of Pathology. A. (5)** Weiser.
The study of the principles concerned in the gross and microscopic tissue changes occurring in disease. Pr., 100 or 101, Anat. 105.

* Not offered in 1942-1943.

111. **Special Pathology.** W. (5) Weiser.
Gross and microscopic study of the tissues of various organs following special types of injury due to infectious and physical agents, obstructions, chemicals, and other known and unknown causes. Pr., 110.
112. **Special Pathology.** S. (5) Weiser.
Study of the gross and microscopic pathology of diseases of endocrine, dietary, and neoplastic origin. Pr., 110.
- 120, 121, 122. **Applied Bacteriology.** A,W,S. (5,5,5) Duchow, Henry.
Work in media room, public health, private hospital, or industrial laboratories. Fifteen hours per week. Registration, and letter from director required. For bacteriology majors only. Pr., instructor's permission.
127. **Review of Journals.** W. (1) Hoffstadt.
Pr., 100 or 101 and 105.
- 130, 131, 132. **Industrial Bacteriology.** A,W,S. (5,5,5) Ordal, Douglas.
Microbiology of food preparation, industrial fermentations. Pr., 100 or 101 and permission of instructor.

Courses for Graduates Only

201. **Physiology of Bacteria.** A. (5) Henry.
Environmental factors influencing bacteria; bacterial metabolism and activities. Open to qualified students with permission of instructor.
202. **Filterable Viruses.** W. (5) Hoffstadt.
Study of representative types of ultramicroscopic agents causing disease in man, lower animals, and plants. Open to qualified students with permission of instructor.
203. **Experimental Pathology.** S. (5) Weiser.
Pathology of man and animals with emphasis on the current aspects of experimentation as related to the fundamental pathology of general and specific disease processes.
- 204, 205, 206. **Advanced Bacteriology.** A,W,S. (†) Staff.
209. **Seminar.** S. (No credit) Staff.
- 210, 211, 212. **Research.** A,W,S. (†) Staff.
Open to qualified students after consultation.

BOTANY

Associate Professor Hitchcock; Professors Frye, Hotson, Rigg; Associate Professor Riley; Assistant Professor Hanley; Instructor Stuntz.

For those who expect to take only five credits of botany, courses 1, 3, 4, 8, or 5 are recommended. For those who expect to take only ten credits of botany, courses 1 and 2, 1 and 3, or 1, 4, and 8 are recommended.

Courses 1, 5, 10, 13 and 16 are beginning courses, only one of which should be taken. Courses 2, 11, and 14 presuppose that 1, 5, 10, 13 or 16 has been taken.

1. **Elementary Botany.** A,W. (5) Riley, assistants.
Structure and functions of roots, stems, leaves, seeds. No botany prerequisite.
2. **Elementary Botany.** W. (5) Riley, assistants.
Types of the great groups of plants from the lowest to the highest. Primarily for non-majors. Pr., 1 or one year high school botany.

†To be arranged.

3. **Elementary Botany.** S. (5) Hitchcock, assistants.
Plant analysis; field and laboratory work with local flora. No botany prerequisite.
4. **Plants and Civilization.** W. (3) Riley.
Origin, discovery of important plants used for food and clothing; their cultivation and improvement; their effect on civilization. No prerequisites.
5. **Survey of Botany.** A, S. (5) Rigg, assistants.
Outstanding generalizations concerning plants, especially those relating to human welfare. Students who expect to continue with botany should begin with 1 or 3. Three lectures, one quiz, one 2-hour lab. period or field trip.
8. **Heredity.** A. (3) Riley.
Lectures and demonstrations on the principles of biological inheritance.
- 10, 11. **Forestry Botany.** A, W. (4,4) Hitchcock, Stuntz, assistants.
Structure and physiology of the higher types of plants, types of the great groups from the lowest up. No prerequisites.
- 13, 14. **Pharmacy Botany.** A, W. (5,4) Rigg, assistants.
Gross structure of vegetative and reproductive parts of seed plants, brief study of spore plants.
16. **Economic Botany.** A, S. (5) Stuntz, assistants.
Structure of plants and their use by man for food, clothing, shelter.
23. **Plant Ecology.** A. (5) Hanley.
Consideration of the effects of environment on plant succession and survival; the factors which determine vegetation types throughout the world. Pr., 1 or equivalent.
24. **Plant Propagation.** W. (5) Hanley.
Soils necessary for plants, their care, methods of potting, forcing, and general greenhouse practice. Pr., 1, 3, 8, or equivalent.
25. **Plant Propagation.** S. (5) Hanley.
Germination of seeds; grafting, cuttings, budding, and other forms of propagation; general greenhouse practice. Pr., 1, 3, 8, or equivalent.
101. **Ornamental Plants.** S. (3) Hitchcock.
Recognition of plants used in beautifying yards and parks. Pr., 5 credits in botany.
- 106, 107, 108. **Morphology and Evolution.** A, W, S. (5,5,5) Frye, Hitchcock.
Morphological study of types to show advances in complexity. Required of all majors. Pr., one year high school botany or ten credits of botany, or Zool. 1 and 2.
108. **Genetics.** W. (5) Riley.
Principles of heredity; their physical basis and application to plant breeding. Pr., 10 credits in biological science. Not open to students who have had Bot. 8 before autumn, 1940.
111. **Forest Pathology.** W, S. (5) Stuntz.
Recognition and treatment of common wood-destroying fungi. Pr., 11 or 105.
115. **Yeasts and Molds.** S. (5) Stuntz.
Their classification, recognition, cultivation, and their relation to the industries and to man. Pr., 15 credits in botany, bacteriology, or zoology.
119. **Microtechnique.** W. (5) Riley, assistants.
Preparation of permanent slides for the compound microscope and the study of cells. Pr., 10 credits in botany.
122. **Plant Cyto-Genetics.** S. (3, lectures only, or 5) Riley.
Chromosome structure and mechanics; bearing on genetics, taxonomy and evolution. Pr., 15 credits in botany or zoology, including 108 or equivalent.

129. Plant Anatomy. S. (5) Riley.
The cellular tissues of plants. Origin and development of the stele.
- *131. Mosses.
132. Algae. S. (5) Frye.
- 134, 135. Taxonomy. A,W. (5,5) Hitchcock.
The flowering plants. Pr., 10 credits of botany, including 3 or equivalent.
- 140, 141, 142. General Fungi. A,W,S. (5,5,5) Hotson, Stuntz.
Morphology and classification of fungi as a basis for plant pathology. Pr., 15 credits of botany.
- 143, 144, 145. Plant Physiology. A,W,S. (5,5,5) Rigg, assistant.
Pr., 15 credits of botany and Chem. 22. Desirable prerequisites, Chem. 132, Phys. 2.
151. Range Plants. A,S. (3) Hitchcock.
Their recognition, and the characters which make them important as useful or harmful. Pr., 10 credits in botany.
- 180, 181, 182. Plant Pathology. A,W,S. (5,5,5) Hotson, Stuntz.
Diseases of plants and the fungi which produce them. Pr., 142.
199. Proseminar. A,W,S. (1 to 15 each quarter) Staff.
Semi-independent work by students. Open only on consultation with the head of the department.

Teachers' Course in Botany. (See Educ. 75B.)

Courses for Graduates Only

200. Seminar. A,W,S. (½) Staff.
Review of recent literature. Only graduate students may obtain credit.
- 205, 206. Physiology of Marine Plants. A,W. (3,3) Rigg.
- 210, 211. Phytoplankton. W,S. (3,3) Phifer.
Given at Friday Harbor laboratories by special arrangement with instructor.
220. Advanced Fungi. A,W,S. (2 to 5 each quarter) Hotson, Stuntz.
Pr., 142.
233. Research. A,W,S. (2 to 5 each quarter) Staff.
250. Algae. A,S. (2 to 5 each quarter) Frye.
Pr., 30 credits of botany.
251. Bryophytes. A. (†) Frye.
279. Colloidal Biology. A,W,S. (5) Rigg.
Pr., 143, Chem. 132. Desirable pr., Chem. 141.
280. Micrometabolism. A,W,S. (5) Rigg.
Pr., 107, 145.
281. Physiology of Fungi. A,W,S. (5) Rigg.
Pr., 142, 145, 280.

CERAMIC ENGINEERING—Pottery Techniques. See Mining, Metallurgical, and Ceramic Engineering, page 286.

* Not offered in 1942-1943.

† To be arranged.

CHEMISTRY AND CHEMICAL ENGINEERING

Professors Benson, Beuschlein, Dehn, Norris, Smith, Tartar, Thompson; Associate Professors Powell, Robinson; Assistant Professors Cady, Moulton, Sivertz; Instructors Haendler, Lingafelter, West; Associates Radford, Westfall.

Chemistry

- 1-2. General Inorganic Chemistry. A,W,S. (5-5) Powell, Cady, Haendler.
Open only to students not having had accredited high school chemistry. Three lectures, one recitation, and two 2-hour lab. periods.
- 8-9-10. General Chemistry and Qualitative Analysis. A,W,S. (5-5-5) Kelly.
Pharmacy students only. The work in the spring quarter is qualitative analysis. Three lectures and two lab. periods.
- 21-22. General Inorganic Chemistry. A,W,S. (5-5) Smith, Tartar, Sivertz, Cady, Haendler.
Open only to students having accredited high-school chemistry. Three lectures, one recitation, and two 2-hour lab. periods.
23. Elementary Qualitative Analysis. A,W,S. (5) Smith, Sivertz, Haendler.
Three lectures, one recitation, and two 2-hour lab. periods. Pr., 2 or 22, or equivalent.
- 24-25. General Chemistry. A,W. (4-4) Cady.
For engineering students having accredited high school chemistry. Two lectures, one recitation, and one lab. period.
26. General Chemistry. A,S. (4) Cady.
Continuation of 24-25. Two lectures, one recitation, and one lab. period. Pr., 2 or 22, or 25, or equivalent.
- 37-38-39. Organic Pharmaceutical Chemistry. A,W,S. (5-5-5) Johnson.
Chemistry of the compounds of carbon with special study of organic chemicals used in pharmacy and medicine. Pharmacy students only. Three lectures and two laboratory periods. Pr., 10 or equivalent.
- *55. Forest Products.
- *56. Forest Soils.
101. Advanced Qualitative Analysis. A,S. (5) Thompson, Robinson.
Two lectures and three lab. periods. Pr., 23 or equivalent.
104. Food Chemistry. S. (4) Norris.
Methods of analysis of various foods are studied for detection of adulteration. Pr., 111 and 132, or equivalent.
109. Quantitative Analysis. A,W. (5) Thompson, Robinson.
Gravimetric analysis. Two lectures and three lab. periods. Pr., 23 or equivalent.
110. Quantitative Analysis. W,S. (5) Thompson, Robinson.
Volumetric analysis. Two lectures and three laboratory periods. Pr., 109.
111. Quantitative Analysis. A,W,S. (5) Thompson.
Gravimetric and volumetric methods for students not majoring in chemistry. Two lectures and three lab. periods. Pr., 23.
- 131, 132. Organic Chemistry. A,W,S. (5,5,5) Dehn, Powell.
Three lectures and two laboratory periods. Repeated winter, spring. Pr., 22 or equivalent.
133. Organic Chemistry. S. (5) _____.
Three lectures and two laboratory periods. Pr., 132.

* Not offered in 1942-1943.

134. **Qualitative Organic Analysis.** S. (2) **Powell.**
The identification of pure organic compounds. Two 3-hour laboratory periods. Pr., Chem. 132.
- 135-136. **Organic Chemistry.** A,W. (4-4) **Powell.**
For home economics students. Only women are admitted. Three lectures and one lab. period. Pr., 2 or 22.
137. **Organic Chemistry.** A,S. (5) **Powell.**
For students in nursing. Four lectures and one lab. period.
- 140-141. **Elementary Physical Chemistry.** W,S. (3-3) **Sivertz.**
Fundamental principles and theories of chemistry for pre-medical and science students and chemistry majors in the elective curriculum. Two lectures and one laboratory period. Pr., 111 or equivalent, and 10 credits of physics.
144. **Biological Chemistry.** S. (5) **Norris.**
For home economics students. Three lectures and two lab. periods. Pr., 136 or equivalent.
150. **Undergraduate Thesis.** A,W,S. (2 to 5) **Staff.**
Investigation of special topics suggested by the staff. Pr., senior standing in chemistry.
155. **Oceanographical Chemistry.** S. (3) **Thompson.**
Methods of analysis and the general physical and chemical properties of sea water and sea products. Three lectures. Pr., 111, 132, or equivalent.
156. **Oceanographical Chemistry.** S. (3) **Thompson, Robinson.**
Laboratory methods. Taken simultaneously with 155. Three lab. periods.
- 161-162. **Biological Chemistry.** A,W. (5-5) **Norris.**
For students in medicine, biology, bacteriology, and nutrition. Three lectures and two lab. periods. Pr., 111 and 131, or equivalent.
163. **Biological Chemistry.** S. (3) **Norris.**
Methods of biochemical analysis and of metabolism. One lecture and two lab. periods. Pr., 162.
166. **Biochemical Preparations.** A,W,S. (2 to 3) **Norris.**
Preparations of special substances involving biochemical methods. Pr., 162.
- 181, 182, 183. **Physical and Theoretical Chemistry.** A,W,S. (5,5,5) **Tartar, Sivertz.**
Fundamental principles and theories of chemistry accompanied by physico-chemical measurements. Three lectures and two lab. periods. Pr., 15 credits college physics, Chem. 111, and differential and integral calculus.
- 190, 191. **History of Chemistry.** W,S. (2,2) **Cady.**
Lectures and assigned readings. Pr., 132, 181 (or may be taken concurrently with 140).
- Teachers' Course in Chemistry.** (See Educ. 75C.)

Chemical Engineering

51. **Industrial Chemical Calculations.** A,W. (2) **Moulton.**
Application of chemical units and laws in industrial calculations as applied to combustion processes. Two lectures. Pr., 23 or 26, Math. 33, or equivalents.
52. **Industrial Chemical Calculations.** W,S. (2) **Moulton.**
Material and heat balances over combustion furnaces and gas producers. Two lectures. Pr., 51.
53. **Industrial Chemical Calculations.** A,S. (2) **Moulton.**
Calculations for lime and cement kilns, sulfur compounds, crystallization processes. Two lectures. Pr., 52.

74. **Elementary Electrochemistry. A. (2)** West.
Fundamental principles and theory of electrochemistry. Two lectures. Not open to chemists and chemical engineers. Pr., 26, Phys. 98.
121. **Chemistry of Engineering Materials. A. (5)** Benson, Moulton.
Chemistry and technical analysis of important engineering materials. Three lectures and two laboratory periods. Pr., 111.
122. **Inorganic Chemical Industries. W. (5)** Benson, Moulton.
Development and control of inorganic unit processes. Three lectures and two lab. periods. Pr., 111.
123. **Organic Chemical Industries. S. (5)** Benson, Moulton.
Development and control of organic unit processes. Three lectures and two lab. periods. Pr., 111.
152. **Advanced Chemical Calculations. S. (3)** Moulton.
Mathematical study of chemical operations with solutions of typical engineering problems. Three lectures. Pr., Math. 41 or equivalent.
171. **Unit Operations. A. (5)** Beuschlein, West.
The unit operations of flow of fluids, heat transfer, and drying. Three lectures, two lab. periods. Pr., 53.
172. **Unit Operations. W. (5)** Beuschlein, West.
Unit operations of distillation, adsorption, and extraction. Three lectures, two lab. periods. Pr., 171.
173. **Unit Operations. S. (3)** Beuschlein.
Unit operations of evaporation, mechanical separation, crushing and grinding, and crystallization. Three lectures. Pr., 172.
174. **Chemical Engineering Calculations. S. (3)** West.
Applications of thermodynamics in chemical engineering unit operations and processes. Pr., 182.
175. **Industrial Electrochemistry. W. (3)** Moulton.
Industrial applications of electrochemistry, solutions and electric furnace applications. Three lectures. Pr., 181 for chemists and chemical engineers; 74 for others.
- 176, 177, 178. **Chemical Engineering Thesis. A,W,S. (1 to 5 each quarter)**
Benson, Beuschlein, Moulton, West.
An assigned problem is investigated as a research project, and a thesis written.
179. **Research in Electrochemistry. W,S. (2 to 5)** Staff.
Research in electrochemistry under various staff members, or reports on selected topics. Pr., permission of instructor.

Courses for Graduates Only

200. **Departmental Seminar. A,W. (No credit.)** Staff.
Required of all graduate students during residence. Assigned readings and reports on the chemical literature.
- 201, 202. **Advanced Theoretical and Physical Chemistry. A,W. (3,3)** Tartar.
An advanced course giving detailed study of the application of thermodynamics to chemical problems. Offered every other year, alternating with 204, 215, 216. Three lectures. Pr., 182.
203. **Advanced Theoretical and Physical Chemistry. S. (3)** Tartar.
An advanced course dealing with the modern treatment of the electrochemistry of solutions. Three lectures. Offered every other year, alternating with 204, 215, 216. Pr., 182.

***204. Chemistry of Colloids.**

205. **Advanced Inorganic Preparations. A. (2)** **Haendler.**
Literature, method, and technique of preparation of pure inorganic compounds. One conference and two laboratory periods.

206. **Organo-metallic Compounds. W. (2)** **Haendler.**
The descriptive and practical chemistry of organo-metallic compounds. One conference and two laboratory periods.

207. **Coordination Compounds. S. (2)** **Haendler.**
The preparation and application of typical coordination compounds. One lecture and two laboratory periods. Course 223 suggested as accompanying course.

208, 209, 210. **Advanced Quantitative Analysis. A,W,S. (2,2,2)** **Thompson.**
Theoretical principles of analytical chemistry. Two lectures. Pr., 111 and 182, or equivalent.

211, 212. **Advanced Organic Preparations. W,S. (2,2)** **Powell.**
Preparation of special substances involving representative laboratory methods. Either quarter may be taken independently.

***213. Thermodynamics.**

214. **The Phase Rule. A. (3)** **Sivertz.**
The theoretical treatment of the phase rule and its application to physical and chemical problems. Pr., 182.

***215, 216. Advanced Theoretical and Physical Chemistry.**

218, 219, 220. **Selected Topics in Industrial Chemistry. A,W,S. (2,2,2)** **Benson.**
Application of fundamental chemical and economic principles to typical industries. Two lectures. Pr., graduate standing in chemistry or chemical engineering.

221, 222, 223. **Advanced Inorganic Chemistry. A,W,S. (3,3,3)** **Smith.**
Autumn and winter quarters a systematic study is made of the chemistry of all the elements, radioactivity, and atomic structure. Spring quarter is devoted to the chemistry of the coordination compounds.

224. **Chemistry of Nutrition. A. (3)** **Norris.**
Enzyme and chemical reactions involved in digestion and metabolism. Two lectures and one lab. period. Pr., 162.

225. **Problems in Analytical Chemistry. A,W,S. (2 to 6)** **Thompson.**
Mainly laboratory work with occasional conferences. Pr., 182.

226. **Micro-Quantitative Analysis. A. (3)** **Robinson.**
Principles and technique of micro-quantitative analysis. One lecture and two lab. periods. Pr., 111, 132, or equivalent.

227. **General Chemical Microscopy. W. (3)** **Robinson.**
Theory of the polarizing microscope and its application to chemistry. One lecture and two lab. periods. Pr., 141 or 182.

228. **Micro-Qualitative Analysis. S. (3)** **Robinson.**
Identification of ions by means of optical properties of their crystals. Pr., 101, 227, or equivalent.

231, 232, 233. **Advanced Organic Chemistry. A,W,S. (3,3,3)** **_____.**
Special fields of organic chemistry. Three lectures. Pr., 132 or equivalent.

* Not offered in 1942-1943.

- *236. Advanced Physical Chemical Laboratory.
- *241, 242, 243. Advanced Unit Operations. A,W,S. (3,3,3) Beuschlein.
Heat transfer. Fluid flow. Mechanical separations. Offered every other year alternating with 244, 245, 246. Three lectures. Pr., 173.
- 244, 245, 246. Advanced Unit Operations. A,W,S. (3,3,3) Beuschlein.
Evaporation and drying. Distillation. Absorption and extraction. Offered every other year alternating with 241, 242, 243. Three lectures. Pr., 173.
249. Graduate Seminar. A,W,S. (†) Staff.
Assigned readings and reports dealing with special topics. Offered as desired by members of the different divisions of the department.
250. Research. †. (†) Staff.
(1) Special investigations by advanced students under direction of members of the staff; (2) research for the master's degree, maximum, nine credits; (3) research for the doctor's degree under direction of any member of the senior staff of the department, maximum, 45 credits.

CIVIL ENGINEERING

Professors Van Horn, Farquharson, Harris, May, Miller, More, Tyler; Associate Professors Hawthorn, Hennes, Moritz, Sergev, Smith; Assistant Professors Chittenden, Collier, Rhodes; Lecturer Hauan.

LOWER DIVISION COURSES

56. Forest Surveying. S. (8) Chittenden
Comprehensive course in plane surveying with special emphasis on forest mapping, the use of steel tape, compass, clinometer, level, transit and plane table. Pack Forest.
57. Transportation Surveying. A. (4) Hawthorn, Chittenden, Collier.
Curves and earthwork. Complete survey notes and map for highway or railway grading project. Pr., G.E. 21.
58. Transportation Engineering. W. (4) Hawthorn, Chittenden, Collier.
Highway-railway grades, automobile and locomotive performance; superelevation and widening of curves; sight distances; legal descriptions. Profile, mass diagram, and estimates. Pr., 57.
59. Advanced Surveying. S. (4; mines students, 3) Hawthorn, Collier, Hennes.
Base-line measurement; triangulation; precise leveling; determination of azimuth, latitude, and time; plane table. One section for mines students only. Pr., G.E. 21.
91. Mechanics. A,W,S. (3) Smith, Brown, Sergev, Farquharson, Rhodes.
Fundamental principles of mechanics for students not in civil engineering. Kinetics, kinematics. Pr., G.E. 12, Math. 33, Phys. 97.
92. Mechanics. A,W,S. (3) Farquharson, Smith, Sergev, Chittenden, Rhodes.
Mechanics of materials for students not in civil engineering. Analysis and application of fundamentals to elementary structural design. Pr., 91.
95. Mechanics. A,W. (3) Miller, Rhodes, Farquharson.
For students in civil engineering. Fundamentals of static and dynamic equilibrium. Kinematics. Pr., Math. 33, G.E. 12, preceded by or concurrent with Phys. 97.

* Not offered in 1942-1943.

† To be arranged.

96. **Mechanics. S. (3)** Miller, Rhodes, Farquharson.
For students in civil engineering. Mechanics of materials. Fundamentals of structural mechanics. Pr., 95.

UPPER DIVISION FIELDS AND COURSES

***109. Engineering Relations.**

117. **Building Construction. W. (3)** Sergev.
General principles of structural design; girders, columns and roof trusses in timber and steel as applied by the architect. Pr., C.E. 170. Architectural majors only.
118. **Building Construction. S. (3)** Sergev.
Principles of concrete design; slab, joists, tile and joist columns and the like, as applied by the architect. Pr., 117. Architectural majors only.

Transportation Engineering

121. **Roads and Pavements. S. (3)** Hawthorn, Hennes.
Location, construction, and maintenance of roads and pavements. Materials and accessories. Pr., 58.
123. **Highway and Railway Economics. A,W. (3)** Hawthorn.
Economics of highway and railway location, construction, and operation. Pr., 121.
124. **Highway Design. S. (3)** Hawthorn.
Selection and design of pavements. Pavement subgrades and embankments. Roadway and intersection design. Pr., 121.
125. **Principles of Transportation Engineering. S. (3)** Hawthorn.
Principles involved in planning highway, railway, air, and water transportation. Development of the master plan. Pr., senior or graduate standing; not open to Civil Engineering students.
128. **Transportation Administration. W. (3)** Hawthorn.
Highway and railway organization and finance. Administrative problems. Sampling and testing of highway materials. Pr., 121.

Highway and Sanitary Engineering

141. **Dynamics of Fluids. A. (3)** Harris, Moritz.
Conservation of energy and loss of energy in fluid motion. Application of principles of Torricelli, Bernoulli, and Borda. No laboratory work. Pr., 91.
142. **Hydraulics. A,W,S. (5)** Harris, Moritz, Wilcox, Hennes, Tyler.
Flow of water through pipes and orifices, over weirs, and in open channels; energy of jets with application to impulse wheels. Pr., 91 or 95.
143. **Hydraulic Engineering. W,S. (5)** Van Horn, Moritz.
Complete projects presenting hydraulic engineering; hydrometric methods; economic design of pipes and spillways. Pr., 142.
145. **Hydraulic Machinery. A,W. (3)** Harris.
Development and theory of water wheels and turbine pumps; design of a reaction turbine; hydrostatic machinery and dredging equipment. Pr., 142.
147. **Hydraulic Power. S. (3)** Harris.
Investigation of power development; generation of power; penstocks and turbines; types of installation. Pr., 143 and/or 142; senior standing.

* Not offered in 1942-1943.

150. **Sanitary Engineering and Public Health.** S. (3) Van Horn.
Relation of biology, bacteriology and chemistry to water supply, sewage, and public health problems. Pr., Chem. 22-25 and junior standing.
151. **Sanitation and Plumbing.** W. (2) Hauan.
For architects.
152. **Municipal Engineering.** S. (3) Tyler.
For students in City Planning. Location, design, and construction of city streets; traffic and transportation. Municipal sanitation. Pr., junior standing. Not open to Civil Engineering students.
153. **Principles of Regional Planning.** W. (3) Tyler.
Principles governing the planning of land use, development of natural resources and problems of land settlement, as pertaining to county, state, regional, or national planning. Pr., senior or graduate standing.
154. **Sanitary Designs.** S. (3) Tyler.
Design of sewers, sewage-disposal plants, and water-purification plants. Pr., 155, 158.
155. **Water Supply Problems.** A. (3) Tyler.
Design, cost estimation, construction, operation, and maintenance of water supplies, distribution systems, and purification plants. Pr., 142, 150.
157. **Reclamation.** A,W. (3) Van Horn.
Elements of the reclamation of land by drainage and irrigation engineering. Soil conservation. Pr., 143 and senior standing.
158. **Sewerage and Sewage Treatment.** A,W. (3) Tyler.
Design and operation of sewage systems and disposal plants. Refuse collection and disposal. Pr., 142, 150.

Engineering Materials

162. **Materials of Construction.** W,S. (3) Collier, Smith.
Investigation of strength and physical characteristics of Portland cement and concrete. Designing concrete mixtures. Pr., 96.
163. **Materials of Construction.** W,S. (3) Smith, Collier.
Strength and physical characteristics of timber and steel. Pr., 96.
166. **Soil Mechanics.** A,S. (3) Hennes.
Settlement and bearing capacity of foundations; stability of earth slopes. A study of consolidation, stability and stress distribution in the subsoil. Seniors and graduates only.
167. **Soil Mechanics.** W. (3) Hennes.
Earth pressure on walls and substructures; earth fill; leakage under dams. A study of shear, permeability, and the physical properties of the subsoil. Seniors and graduates only.

Structural Analysis and Design

170. **Theory of Building Construction.** A. (3) Sergev.
Pr., junior standing in architecture, Math. 56, Arch. 48.
- 171, 172, 173. **Structural Analysis.** A,W,S. (3,3,3) Miller, Rhodes, Farquharson.
Theory of structural mechanics. Mechanics of materials with special consideration of reinforced concrete, steel, and timber. Pr., 96 (or 92); 172 pr. to 173.
- 175, 176, 177. **Structural Design.** A,W,S. (4,4,3) More.
Application of the theory of structures and mechanics of materials to the design of reinforced concrete, steel, and timber members and connections. Pr., 173.

- 181, 182. Advanced Structures. A,W. (3,3) More.
 Stresses and deflections in structures and structural members; particular reference to statically indeterminate cases. Seniors and graduates in civil engineering. Pr., 173.
183. Advanced Structures. S. (4) More.
 Statically indeterminate trusses. Seniors and graduates. Pr., 182.

Special Senior and Graduate Courses

- **191, 193, 195. Advanced Professional Design and/or Analysis. A,W,S. Staff.
 (2 to 5 each quarter)
- **192, 194, 196. Research. A,W,S. (3 to 6 each quarter) Staff.
 Special investigations by seniors or advanced students under the direction of members of the staff.
198. Thesis. A,W,S. (3 to 6) Staff.
199. Engineering Relations. S. (3) _____.

Courses for Graduates Only

- **210, 212, 214. Research. A,W,S. (2 to 5 each quarter) Staff.
- **220, 222, 224. Seminar. A,W,S. (2 to 5 each quarter) Staff.

CLASSICAL LANGUAGES AND LITERATURE

Professors Densmore, Thomson, Sidey, Stone; Associate Professor Read.

I. Greek

- 1-2, 3. Elementary Greek. A,W,S. (5-5,5) Densmore.
- 4, 5. Socrates. A,W. (3,3) Densmore.
 Study of the life and personality of the philosopher, based on Plato, Xenophon, Aristophanes. Should be accompanied if possible by 8 and 9. Pr., 3.
6. The World of Homer. S. (3) Densmore.
 Readings from the story of Achilles. Pr., 5.
7. New Testament Greek. S. (3) Densmore.
 Will be given instead of 6 if the class elects it.
- 8, 9. Grammar and Composition. A,W. (2,2) Read.
 Pr., 3.
- 51, 51, 51. Greek Authors. A,W,S. (No credit.) Densmore.
 Two hours weekly. Practice at sight-reading from a wide range of authors. Pr., 5 or permission.
101. The Persian War Period. A. (3) Read.
 Readings in Herodotus and Plutarch. Pr., 5.
102. Pericles and the Peloponnesian War. W. (3) Read.
 Aristotle, Thucydides, Xenophon, and Plutarch. Pr., 5.

**Students registering for these courses must indicate their field of study by a letter symbol after the course number, for example: 193H. These engineering fields of study and their symbols are Hydraulics (H), Materials (M), Structural (S), Sanitary (W), and Transportation (T).

103. Periods of Theban and Macedonian Supremacy. S. (3) Read.
Plutarch, Demosthenes, and Arrian. Pr., 5.
- *104. Drama.
- *105. Drama.
- *106. Lyric Poetry.
122. Grammar and Composition. A. (3) Read.
Pr., 9 or equivalent.
- 151, 152. Plato. A,W. (3 to 5 each quarter) Densmore.
The Phaedo, Symposium, and extensive readings in the second half of the Republic. Pr., 103.
153. Plato. S. (3 to 5) Densmore.
Selections from the Parmenides, Theaetetus, Sophist, Timaeus. Pr., 152.
- *191, 192, 193. Literary Criticism and Sophocles.

Courses for Graduates Only

201. Greek Philosophers. A. (3 to 5) Densmore.
The Pre-Socratics.
- *202. Greek Philosophers.
- *211, 212. Hellenistic Literature.
- *221, 222, 223. Epigraphy.
231. Research in Special Authors. A,W,S. (3 to 5) Densmore.
For 1942-1943, Aeschylus.

II. Latin

- 1-2, 3. Elementary Latin and Caesar. A,W,S. (5-5,5) Read.
- 4, 5, 6. Cicero and Ovid. A,W,S. (5,5,5) _____
Pr., two years high school Latin or Latin 1-2, 3 in university. Qualifies a student for Latin 21. Review of grammar and syntax.
- NOTE: To enter Latin 21 to 25, the student should be thoroughly familiar with the declensions and conjugations and with the normal phenomena of Latin syntax to be found in Caesar, Cicero, and Virgil.
21. Cicero: De Senectute. A. (5) Thomson.
With exercises in grammar and composition. Pr., three and one-half years high school Latin.
- *22. Catullus.
23. Virgil: Georgics and Bucolics. S. (5) Thomson.
- *24. Sallust: Jugurtha.
25. Ovid: Metamorphoses. W. (5) Thomson.

* Not offered in 1942-1943.

100. Livy. A. (5) Read
One book and selections from other books. Pr., 21, 23, 25, or special permission.
101. Horace. W. (5) Read.
Selections from the complete works. Pr., as for 100.
- *102. Tacitus: *Germania* and *Agricola*.
- *103. Plautus and Terence.
104. Martial: *Epigrams*. S. (5) Stone.
Pr., as for 100.
106. Syntax and Prose Composition. W. (3) Stone.
Pr., 100 or equivalent.
- *107. Cicero's Letters.
- *109. Pliny's Letters.
- *140. Relations of Latin to English and the Romanic Languages.
152. Quintilian: *Book X* and Horace: *Ars Poetica*. A. (3) Sidey
Pr., 100, 101.
153. Augustine: *Confessions*. W. (3) Read.
154. Lucretius. S. (3) Thomson
Pr., as for 152.
- *156. Horace: *Satires* and *Epistles*.
- *157. Cicero: *In Verrem*.
- 160, 161, 162. Major Conference. A, W, S. (1,1,1) Staff.
Discussion with members of the staff of various features of Greek and Roman life and literature not specifically dealt with in other courses. Required of all majors.
- *165. Cicero: *De Finibus*.
- *166. Survey of Latin Satire.
- Teachers' Course in Latin. (See Educ. 75P.)

Courses for Graduates Only

204. Tacitus: *Histories*. W. (3) Read.
- *207. Seneca: *Moral Essays*.
- *211. Latin Novel.
214. Suetonius: *Augustus*. A. (3) Sidey.
- *216. Christian Latin.
- *218. Cicero: *De Natura Deorum*.
220. Latin Elegy. S. (3) Read.
- 285, **286. Vulgar Latin. W. (3) Stone.
Pr., completion of work in Latin and at least one Romance language, satisfactory to instructor.
- 287, **288. Medieval Latin. S. (3) Stone.
Pr., same as for 285.

* Not offered in 1942-1943.

** Will be offered if a sufficient number of students elect the course.

III. Courses in Classical Antiquities, Given in English

Greek

11. **Greek Civilization.** A. (5) Sidey.
Study of the rise, growth, achievements, and decline of Greek Humanism as expressed in Greek political and social ideals and institutions as well as in their literature and art. Modern parallels in institutions and ideals will be examined. No knowledge of Greek required.
13. **Greek Literature.** W, S. (5) Sidey, Read.
The masterpieces in English translation. Knowledge of Greek not required.
- *17. **Greek and Roman Art.**
18. **Greek and Roman Mythology.** W. (3) Sidey.
Study of the principal myths of Greece and Rome, with special reference to their appearance in English literature.

Latin

11. **Roman Civilization.** W. (5) Stone.
Brief review of Roman history, together with a study of the private life of the Romans and their contribution to modern civilization. Knowledge of Latin not required.
- *13. **Roman Literature.**

DRAMA

Professor Hughes; Assistant Professor Conway; Instructors Ferrall, Harrington, Hicken; Associate Gray; Acting Associate Hardman; Theatre Assistants Bell, Colle, Davis.

- 1, 2, 3. **Introduction to the Theatre.** A, W, S. (2, 2, 2) Hughes.
Significant aspects of the modern theatre. Orientation course primarily for students expecting to major or minor in drama. Lectures and required reading.
- 46, 47, 48. **Theatre Speech.** A, W, S. (3, 3, 3) Harrington, Ferrall, Gray.
To prepare the speech of students for desirable usage in the theatre.
- 51, 52, 53. **Acting.** A, W, S. (3, 3, 3) Harrington, Ferrall, Gray.
Theory and practice. Includes pantomime, improvisation, and characterization. Pr., 46, 47, 48.
103. **Scene Construction.** A, W, S. (3) Hicken, Hardman.
Principles and actual construction of stage scenery and properties. One hour lecture, four hours lab.
104. **Scene Design.** A, W, S. (3) Conway.
Theory and practice. One hour lecture, four hours lab. Pr., 103.
105. **Theatrical Costume Design and Construction.** A, W, S. (3) Conway.
Theory and practice. One hour lecture, four hours lab.
106. **Make-up.** A, W, S. (3) Conway, Davis.
Principles and practice. One hour lecture, four hours lab.

* Not offered in 1942-1943.

- 107, 108, 109. **Puppetry.** A,W,S. (2,2,2) Davis.
 Practical course in educational and professional puppetry. History and principles of the marionette theatre. Design, construction, costuming, stringing, and manipulation of puppets. Portable puppet stage construction. With permission of department, this course may be repeated for credit.
- 111, 112, 113. **Playwriting.** A,W,S. (3, 3, 3) Hughes.
 Advanced course for those who wish to write professionally for the stage. Course may be substituted for required courses in Drama with consent of department. Pr., one quarter of English 74, 75, 76, or permission of instructor.
114. **Stage Lighting.** A,W,S. (3) Hicken, Hardman.
 A survey course, non-technical in character. Practical methods of lighting in play production.
115. **Advanced Stage Lighting.** W,S (3) Hicken, Hardman.
- 117, 118, 119. **Advanced Theatre Workshop.** A,W,S. (2,2,2) Staff.
 Pr., one of: 103, 104, 105, or 115 or permission. Four hours laboratory.
- 121, 122, 123. **Advanced Acting.** A,W,S. (3,3,3) Harrington, Ferrall.
 Emphasis on group acting. Styles in acting: tragedy, comedy; period, modern. Members of class given first consideration for parts in public productions. Pr., 51, 52, 53.
- 127, 128, 129. **History of the Theatre.** A,W,S. (2, 2, 2) Conway.
 Origin and evolution of theatre art in the Orient, Europe, and America. The physical playhouse, methods of production, great actors, stage machinery, scenery, lighting, costumes, and masks.
- 141, 142, 143. **Radio Acting and Production.** A,W,S. (2, 2, 2) Bell.
 Technique of radio acting and methods of dramatic production for radio. Actual broadcasting experience. Pr., two quarters of acting.
- 144, 145, 146. **Radio Writing.** A,W,S. (3, 3, 3) Bell.
 Principles of dramatic composition for radio with experimental production of scripts under actual broadcasting conditions. Pr., two quarters of advanced English composition or one quarter of playwriting.
- 151, 152, 153. **Representative Plays.** A,W,S. (3, 3, 3) Hughes.
 Origin and development of the drama in the Orient, Europe, and America. Representative plays of great playwrights of all important periods. Theories of the drama.
- 181, 182, 183. **Directing.** A,W,S. (2,2,2) Harrington.
 Theory and practice of play directing. Pr., 51, 52, 53, 121, 122.
197. **Theatre Organization and Management.** S. (2) Hughes.
 Practical course for theatre directors. Theatre personnel, box-office methods, advertising, production costs, royalties, executive policies. Pr., senior or graduate standing.

Courses for Graduates Only

- 210, 211, 212. **Research in Drama.** A,W,S. (5,5,5) Hughes.
 Pr., permission of the instructor.
- 240, 241, 242. **Thesis Research.** A,W,S. (†) Hughes.
 Student should not enroll for this course until he has chosen a thesis subject.

For other courses in Drama, see English 154, 170, 171, 172, 217, 218, 219.

† To be arranged.

ECONOMICS AND BUSINESS

Professors Preston, Burd, Cox, Dakan, Demmery, Engle, Farwell, Gregory, Hall, Mund, Skinner, Smith; Professor Emeritus McMahon; Associate Professors Brown, Butterbaugh, Lorig, Mackenzie, Miller; Assistant Professors Bartels, Chertkov, Huber, Kerr, Lockling, Mikesell; Lecturers Draper, McConahey, Truax; Instructors Fordon, Sheldon; Associates Hamack, Sutermeister, Walker.

E.B. 1-2 are required for majors in economics and business and should also be taken by students who plan to devote two courses to economics. Students who take but one course in economics must choose E.B. 4, *Survey of Economics and Business*. All advanced courses have at least one specified intermediate course or equivalent as a prerequisite. The following courses are open only to professional majors in the College of Economics and Business, except by permission of the dean of the college and the instructor concerned: 123, 126, 127, 132, 143, 144, 145, 146, 147, 148, 149, 152, 153, 154, 155, 156, 157, 158, 169, 170, 193.

Lower Division Courses

1-2. Principles of Economics. A,W,S. (5-5) Cox, Huber, Lockling, Mund, Hall.

Planned to give a general understanding of the organization of our economic life and the fundamental principles underlying it.

3. General Economics. A,W,S. (3) Cox, Huber, Sutermeister.

Condensation of E.B. 1-2; abbreviated for students in chemistry, pharmacy, forestry, and engineering. Others should elect E.B. 4 if only 5 credits are desired, E.B. 1-2 if 10 or more credits in economics is planned. Pr., sophomore standing.

4. Survey of Economics. A,W,S. (5) Mikesell.

Not open to students in Economics and Business, economics majors in the College of Arts and Sciences, or others who expect to continue with Economics and Business courses. Students who desire more than one course in economics should begin with E.B. 1-2.

Economic Geography. (See Geography 7.)

16-17-18. Secretarial Training. A,W,S. (3-3-3) Hamack.

Designed to standardize skills in shorthand and typewriting and other secretarial subjects. Three hours lecture, five hours laboratory.

54. Business Law. A,W,S. (5) Brown, Chertkov.

Fundamentals of law which bear most closely upon ordinary business transactions. Introduction to study of law, its origin and development, formation and performance of contracts. Pr., sophomore standing.

55. Business Law. A,W,S. (5) Brown, Chertkov.

Continuation of 54: negotiable instruments, sales, credit transactions, and business associations. Pr., 54.

57. Business Law. A,S. (3) Brown, Chertkov.

For engineering students or others unable to devote more than three credits to study of business law. May not be substituted for 54. Does not carry credit for students in economics and business. Pr., sophomore standing and English requirement of respective college.

60. Statistical Analysis. A,W,S. (5) Butterbaugh.

Application of statistical method to practical business and economic problems. Correct interpretation of statistical data is stressed. Pr., 1-2.

62. Principles of Accounting. A,W,S. (5) Mackenzie, Lorig.

Study of fundamental theory. Objectives of financial and operating statements analyzed. Four hours a week in accounting laboratory. Three lectures. Pr., sophomore standing.

63. **Principles of Accounting.** A,W,S. (5) **Mackenzie.**
More specialized problems in general theory, practice, and analysis. Four hours a week in accounting laboratory. Three lectures. Pr., 62.
88. **Introduction to Insurance.** A. (5) **Smith.**
Study of the principles and uses of insurance in general. Pr., 1-2.

Intermediate Courses

101. **Scientific Management.** A,W,S. (5) **Mackenzie.**
General non-technical study. Scientific management as a philosophy and a scientific approach applicable to all business enterprises. Pr., 1-2.
103. **Money and Banking.** A,W,S. (5) **Dakan, Preston, Mikesell.**
Functions of money; standards of value; principles of banking with special reference to the banking system of the United States. Pr., 1-2.
104. **Principles of Transportation.** A,W,S. (5) **Sheldon.**
General survey of the elements of transportation and communication. Pr., 1-2.
105. **Economics of Labor.** A,W,S. (5) **Kerr.**
Economic factors in labor problems; economic and social aspects of labor and employing organizations; analysis of government measures with regard to labor problems. Pr., 1-2.
106. **Economics of Marketing and Advertising.** A,W,S. (5) **Bartels, Miller.**
Development of economic principles; market processes and systems; the middlemen and their functions. Pr., 1-2.
107. **World Economic Policies.** A,S. (5) **Skinner.**
Economic and commercial relations of nations; commercial treaties, tariff systems and administration. Pr., 1-2.
108. **Risk and Risk Bearing.** W. (5) **Smith.**
The risk factor in its economic and social consequences; ways of meeting risk. Pr., 1-2.
109. **Principles of Real Estate I.** A,W. (5) **Demmery.**
Economic principles underlying the utilization of land; determining factors for the location and development of residential, commercial, industrial, and financial districts; public control. Pr., 1-2.
110. **Accounting Analysis and Control.** A,W,S. (5) **Fordon, Gregory, Lorig.**
Form, content, and interpretation of the balance sheet, the profit and loss statement, and certain analytical statements. Principles of valuation and their application to individual accounting categories. Pr., 63.
111. **Advanced Theory of Accounts I.** A,W,S. (5) **Draper.**
Application of accounting theory to business problems; advanced partnership and corporation problems; receiverships; annuities; consignments. Pr., 110.
112. **Advanced Theory of Accounts II.** A,S. (5) **Draper.**
Continuation of 111. Mergers and consolidations; consolidated balance sheets and profit and loss statements; accounting for securities. Pr., 111.
- *113. **Accounting for Teachers of Secondary Schools.**
115. **Business Correspondence.** A,S. (5) **Bartels.**
Analysis of principles, including psychological factors. Study of actual business letters in terms of these fundamentals. Pr., English 1 and junior standing.

* Not offered in 1942-1943.

116. **Office Appliances.** A. (5) Hamack.
Study and demonstration of important business machines; uses to which put; economies secured; costs; practical application to secondary school instruction. Pr., E.B. 18 and consent of instructor.
117. **Secretarial Training—Advanced.** W. (5) Hamack.
Advanced practice in dictation and transcription; office practice and methods; the business relationships of the secretary. (Meetings 5 days weekly, plus laboratory.) Pr., E.B. 18 and consent of instructor.
- *120. **Business Organization and Combination.**

Advanced Courses

Banking and Finance

121. **Corporation Finance.** A,W,S. (5) Dakan.
Financial problems connected with the promotion of corporations, underwriting and sale of securities; financial management; financial problems accompanying corporation expansion. Reorganization of unsuccessful corporations. Pr., 63 and 103.
122. **Principles of Investment.** W. (5) Dakan.
Underlying principles of investment credit; origin and purpose of credit instruments; selection of sound investments; investment policy of individuals and institutions; care of investments; relation of the investment market to the money market. Pr., 103 or senior standing.
123. **Investment Analysis.** S. (5) Dakan.
Analytical study of typical industrial, public utility, and railroad securities; analysis of financial operations, revenue and expense reports; their use in determining investment values. Pr., 122.
125. **Advanced Money and Banking.** S. (5) Mikesell.
Presupposes a knowledge of our existing financial organization and devotes attention to questions of banking and monetary policy. Pr., 103.
126. **Bank Credit Administration.** W. (3) Truax.
Based on actual problems selected from portfolios of Pacific Northwest banks. Pr., 63, 103, and consent.
127. **Foreign Exchange and International Banking.** A,W. (5) Huber.
Foreign currencies and banking systems; foreign banking by American institutions; foreign exchange markets; theory of international exchange; financing of exports and imports; specie movements. Pr., 103.
128. **Personal Insurance.** S. (5) Smith.
Scientific basis of life insurance; types of policies; premium rates and reserves. Pr., 108. Given spring, 1943, and alternate years.
- *129. **Property Insurance.**
(Offered in alternate years.)

Foreign and Domestic Commerce

131. **Principles of Foreign Trade.** A. (5) Skinner.
Historical development of world commerce; theories, principal materials, trends. Pr., Geog. 7 or 1, E.B. 107.
132. **Advanced Foreign Trade.** S. (5) Skinner.
International trade theories as tested by the facts of commerce; government and private trade promotion; organization and management of foreign trade concerns; foreign trade methods and practices. Pr., 131.

* Not offered in 1942-1943.

134. **Wholesaling.** A,W. (5) Miller.
Wholesale functions and agencies performing them; historical development and economic justification; recent trends and future prospects. Pr., 106.
135. **Retailing.** W,S. (5) Miller.
Various types of retail organizations; their evolution, present status, and future prospects; economic functions performed by each type; their relative efficiency. Pr., 106.
136. **Advertising.** A,S. (5) Miller.
Advertising as a business force; its economic justification as a factor in marketing; analysis of current criticism; advertising organizations, their functions and procedure. Pr., 106.
137. **Marketing for Quartermaster Corps.** A,W,S. (5) Burd, Miller.
Marketing principles, techniques, and problems applied to the quartermaster function. Warehousing, stock control, industrial purchasing, problems. Open only to men in the Quartermaster Corps.
- *138. **Recent Marketing Trends.**

Public Utilities and Transportation

***141. Regulation of Public Utilities.**

142. **Economics of Public Utilities.** W. (5) Hall.
Economic characteristics of public utilities; rate principles and practices with reference to cost differentiation; finance, etc. Pr., 1-2.
143. **Railway Transportation.** W. (5) Sheldon.
Critical evaluation of problems of finance, operation, competition, combination, and regulation. Pr., 104.
144. **Water Transportation.** A. (5) Farwell.
Problems of joint and special costs, competition, rate practices, rate agreements, shipping subsidies, intercoastal regulations. Pr., 104.
145. **Highway Transportation.** S. (5) Sheldon.
Treatment of the principles used in the traffic and operating divisions of highway transportation. Pr., 104.
146. **Air Transportation.** A. (5) Sheldon.
Economic principles, with particular reference to operating methods and costs; traffic promotion; schedule maintenance; safety; governmental regulation; airport management. Pr., 104.
147. **Transportation Rates.** S. (5) Sheldon.
Intensive examination of theory underlying commodity classifications and tariffs. Rate-making power of governmental bodies. Pr., one of the following: 143, 144, 145, 146.
148. **Traffic Management.** W. (5) Farwell.
Problems of routing, expediting, auditing, demurrage, reconsignment, port and terminal facilities. Pr., as for 147.
149. **Marine Insurance and Carriers' Risks.** S. (5) Farwell.
Liabilities of rail and water carriers; plans of marine insurance; marine underwriters; insurable interests; warranties. Pr., as for 147.

* Not offered in 1942-1943.

Management and Accounting

150. **Advanced Industrial Management.** S. (5) **Mackenzie.**
Case study of individual companies with emphasis upon problems of organization, planning and control as they apply to the business as a coordinated unit. Pr., 101.
152. **Government Accounting.** A. (5) **Lorig.**
Accounting and financial reporting for municipal, county, state, and federal governments. Includes examination of types of funds necessary and their accounting, interpretation of government reports, and the accounting aspect of budgetary control. Pr., 110.
153. **Accounting Systems.** S. (5) **Lorig.**
Thorough study of accounting and personnel problems to be considered in developing and installing systems of accounting. Special attention to the objectives of the system; planning to provide the information required by the management; chart of accounts with details of routine; forms and equipment required, and record of results or periodic report. Pr., 112.
154. **Cost Accounting I.** A, S. (5) **Gregory.**
Economics of cost accounting; industrial analysis; production control through costs; types of cost systems, burden application; standard costs; selected problems. Pr., 110.
- *155. **Cost Accounting II.**
156. **Income Tax Accounting.** A, W. (5) **McConahey.**
Selected cases illustrating the definition of taxable income of individuals, corporations, partnerships. Regulations of Treasury Department. Pr., 112.
157. **Auditing.** A, W. (5) **Cox.**
Auditing procedure; balance sheet audits; analysis of income and expense; certifications and reports; classification of audits and asset and liability values; profit and loss statement audits; analysis of investigations. Pr., 112.
158. **C.P.A. Problems.** W, S. (5) **McConahey.**
Selected problems taken from the American Institute of Accountants and state C.P.A. examinations. Pr., 157.

Advanced Economics and Business

161. **Labor Legislation.** S. (5) **Chertkov.**
Consideration of legislative and judicial actions bearing directly on labor problems and the labor movement in their relation to social, political, and economic theories. Pr., 105.
163. **Economics of Consumption.** S. (5) **Huber.**
Historical development of human wants in relation to economic processes in general and the economic principles of consumption; analysis of standards of living; attempts to control consumption through individual and group action. Pr., 105.
164. **Labor Relations.** A. (5) **Kerr.**
Study of labor relations and collective bargaining in various branches of American industry, together with an analysis of experience here and abroad with government intervention in labor disputes. Pr., 105.
- *165. **European Labor Problems.**
169. **Real Estate II.** S. (5) **Demmery.**
Types of real estate uses and their characteristics; appraisals of farm and urban land and improvements; property rights; real estate finance; management of real property; leases. Pr., 109.

* Not offered in 1942-1943.

170. **Advanced Statistical Analysis.** W. (5) **Butterbaugh.**
Cases and problems are analyzed in order to develop ability in applying statistical technique to practical problems in economics and business. Pr., 60.
171. **Public Finance and Taxation I.** A, S. (5) **Hall.**
Growth of public expenditures; underlying principles and theory of various forms of public revenue; character of various forms of taxation; the principles and practices of public credit and of public financial administration. Pr., 103.
- *172. **Public Finance and Taxation II.**
175. **Business Fluctuations.** A, W, S. (5) **Demmery.**
Survey of past business fluctuations, secular trends, seasonal variations, irregular fluctuations and business cycles; discussion of forces which tend to destroy economic equilibrium; proposals for controlling business fluctuations. Pr., 103.
- *177. **Social Insurance.**
181. **Economic Development of the United States.** A. (5) **Lockling.**
Special attention to manufactures, commerce, labor, finance, and agriculture. Pr., 30 upper division credits in economics and business.
185. **Advanced Economics.** A, W. (5) **Mund.**
A study of markets, the making and control of prices, pricing formulas for industrial products, the laws of cost, and application of price analysis to wages, rent, interest, and profit. Pr., 120 university credits.
187. **History of Economic Thought.** S. (5) **Mund.**
The rise of modern capitalism, self-interest and commercial activity, and the development of thought and opinion on the system of free enterprise. Special attention is given to the Mercantilists, the Physiocrats, Adam Smith, Ricardo, the Socialists, and to recent economic thought. Pr., E.B. 185, or senior standing and consent.

Research Courses for Undergraduates and Graduates

- 193A, B, C. **Problems in Wholesaling, Retailing and Advertising.** A, W, S. (5, 5, 5) **Burd.**
Individual and group study. Required business contacts. Compiling, organizing, and interpreting data from original and library sources. Each student will specialize on one of the three fields. Pr., 134, 135, 136, consent.
- 194A, B. **Research in Transportation.** A, W. (3,3) **Sheldon.**
Open only to qualified students in transportation who will be placed in part-time contact with transportation agencies. Pr., consent of instructor.
- 195A, B, C. **Research in Management and Accounting.** A, W, S. (3,3,3) **Gregory.**
Open to qualified undergraduate and graduate students. Pr., consent of instructor.
- 196A, B, C. **Research in Public Utilities or Public Finance.** A, W, S. (3,3,3) **Hall.**
Open to qualified undergraduate and graduate students. Pr., consent of instructor.
- 197C. **Research in International Trade.** S. (3) **Huber.**
Open to qualified undergraduate and graduate students. Pr., consent of instructor.
- 199B, C. **Research in Real Estate and Business Fluctuations.** W, S. (3,3) **Demmery.**
Open to qualified undergraduate and graduate students. Pr., consent of instructor.

* Not offered in 1942-1943.

Courses for Graduates Only

- 200A, B, C. Thesis Seminar. A,W,S. (No credit.) Staff.
- 202B. Graduate Seminar in Finance. W. (5 to 7) Preston.
For students interested in monetary and banking history and theory, and business finance.
Pr., consent of instructor.
- 205C. Graduate Seminar in Public Finance. S. (5 to 7) Hall.
Pr., graduate standing, consent of instructor.
- 206B. Graduate Seminar in Labor. W. (5 to 7) Kerr.
Theories and problems. Pr., one advanced course in labor and consent of instructor.
- 208A. Graduate Seminar in Economics. A. (5 to 7) Mund.
Systematic review of the theories of value, price, and distribution; special references to recent developments. Pr., consent of instructor.
- 210A, C. French and German Economists. A,S. (3,3) Skinner.
Pr., consent of instructor.
- *212. Seminar in Public Service Problems.
- 214A. Graduate Seminar in International Economics. A. (5 to 7) Huber.
Pr., graduate standing, consent of instructor.
- 215B. Seminar in Economic History. W. (5 to 7) Lockling.
Pr., graduate standing and consent of instructor.
258. Graduate Seminar in Accounting. S. (5) McConahey.
Graduate standing and consent of instructor.
- Teachers' courses in Economics and Business. (See Educ. 75E, 75F.)

EDUCATION

Professors Powers, Bolton, Cole, Corbally, Draper, Dvorak, Osburn, Stevens, Williams; Associate Professor Jessup; Associate Batie.

1. Education Orientation. A,W,S. (2) Williams.
Preview of the field of teaching. Conferences. For those contemplating teaching as a profession. Credit only to freshmen and sophomores. Required of all undergraduates planning to secure the normal diploma.

I. Elementary Courses (Upper Division Credit)

9. Psychology of Secondary Education. A,W,S. (3) Powers, Batie.
Pr., 1, Psych. 1, and all-university grade-point average of at least 2.2.
30. Washington State Manual. A,W,S. (No credit.) Corbally, Jessup.
For all applicants for Washington teaching certificates.
60. Principles of Secondary Education. A,W,S. (3) Draper.
Problems of high school teaching. Conferences; visits to public schools. May be taken concurrently with 90. Pr., 1, 9, 70, and all-university grade-point average of at least 2.2.
70. Introduction to High School Procedures. A,W,S. (5) Williams.
Pr., 1, 9, and all-university grade-point average of at least 2.2.

* Not offered in 1942-1943.

- 71-72. Cadet Teaching. A, S. (Semester basis, 5-3)** Corbally, Powers.
 Course 72 may precede or follow 71. Pr., 1, 9, 70, 90, 75 or approved equivalent, and all-university grade-point average of at least 2.2. Also register for Education 30, no credit. Three successive free hours should be provided in the schedule each quarter for cadet teaching. Cadets registering for autumn semester report at 113b Education Hall, Monday, September 28, from 8:30 to 11:30 a.m. for assignments.
- 71N-72N. Cadet Teaching for Vocational Home Economics Majors Only. A,W, S. (5-3)** Corbally.
 Students must register for Education 71N and 72N at the same time and should take Education 30 the quarter preceding or following that in which they are registered for 71N and 72N. Pr., as for 71-72.
- 71P-72P-73P. Cadet Teaching for Women Physical and Health Education Majors. A,W, S. (3-2-3)** Corbally.
 Pr., as for 71-72. Eight credits; three quarters required. Teaching arrangements made by the school of physical and health education for women and the director of cadets.

Teachers' Courses in Secondary Subjects

- 75A. Art. A. (2)** Johnson.
 Summary of aims, objectives, and current methods of teaching and supervising art. Pr., Educ. 70, senior standing in art, consent.
- 75B. Botany. A. (2)** Frye.
 Pr., two years of botany. To be taken concurrently with 71.
- 75C. Chemistry. A,W, S. (2)** Smith.
 Pr., at least 20 credits of college chemistry of average "B" grade.
- 75D. Civics. S. (2)** Webster.
 Attitude of approach, arrangement of material, methods of presentation.
- 75E. Commercial Course, Accounting. S. (5)** Draper.
 Two credits to count as education; three credits as economics and business. Pr., 30 credits of the 54 required for a major in commercial teaching, including 15 credits in accounting.
- 75F. Commercial Course, Shorthand and Typewriting. S. (5)** Hamack.
 Study of curriculum, methods, objectives, standards, grading, examination, and demonstrational problems.
- 75H. English. A, S. (5)** Sperlin.
 Two credits count as education; three as English.
- 75K. French. S. (2)** Simpson.
 Pr., Fr. 41, 103, and 158.
- 75L. German. S. (2)** Vail.
 Pr., Ger. 120, or consent of instructor.
- 75M. History. S. (5)** Gates.
 Two credits count as education; three as history. Special reference to work of the high school. Open to seniors.
- 75NA. Home Economics. S. (3)** Raitt.
 Two credits only count toward normal diploma. Objectives, organization, curricula of home economics in elementary, junior, and senior high schools. Pr., 25 credits in home economics.

- 75NB. Home Economics. A. (3) Terrell.
Two credits only count toward normal diploma. Organization and methods for nurses, dietitians, internes, employees of hospitals and other institutions. Pr., 25 credits in home economics.
- 75O. Geography. S. (2) Earle.
Pr., Geog. 1, and five additional credits.
- Journalism. (See Journalism 125 for teachers' course in journalism.)
- 75P. Latin. S. (2) Stone.
Pr., 20 credits of college Latin. Course must be taken in combination with Latin 107 by special arrangement.
- 75Q. Mathematics. S. (3) Jerbert.
Two credits count as education; one credit as elective. Pr., Math. 109.
- 75R. Senior High School Music. W, S. (2) Munro.
Analysis of the high school problem in relation to music. Pr., 116.
- Physical Education for Men. (See P.E. 158, 161, 163, for teachers' courses in Physical Education.)
- 75V. Health and Physical Education for Women. A. (2) Wilson.
Pr., P. E. 156, 162, 163, 164, at least five credits of which must be in residence.
- Piano. (See Music 167 for teachers' course in piano.)
- 75X. Speech. S. (5) Bixby.
Two credits count as education; three as electives in speech.
- Sociology. (See Soc. 164 for teachers' course in sociology.)
- 75Y. Spanish. S. (2) W. Wilson.
Pr., Span. 103 and 158.
- 75Z. Zoology. W. (2) ———.
Pr., 20 credits in zoology.
90. Measurement in Secondary Education. A, W, S. (2) Dvorak.
Use of tests and scales for diagnosis, remedial education, motivation, and study of individual differences. May be taken concurrently with 60. Pr., 1, 9, 70, and all-university grade-point average of at least 2.2.

II. Intermediate Courses (Upper Division and Graduate Credit)

101. Educational Psychology. A. (3) Powers.
Systematic treatment of theoretical principles and experimental backgrounds.
104. Psychology and Training of Exceptional Children. S. (5) Dvorak.
Subnormal, superior, backward, eccentric, and delinquent children studied from the point of view of the teacher.
- *105. Modern Problems of Adolescence.
120. Educational Sociology. A, W, S. (3) Jessup.
Consideration of problems of education related to process of social evolution.
122. Diagnosis in Education. W. (3) Osburn.
For administrators, elementary and secondary teachers. A study of the literature of educational diagnosis; materials and devices for locating pupil difficulties. Special reference to scholastic progress.

* Not offered in 1942-1943.

***134. High School Organization and Administration.**

140. School Supervision. A. (4) Jessup.
Problems and technique of the improvement of school work through the in-service education of teachers.

141. Supervision of Elementary School Subjects. W. (4) Jessup.

***145V. Principles and Objectives of Vocational Education.**

146. Extracurricular Activities. S. (3) Draper.
Weekly conferences with instructor. Class limited to twenty students. Pr., 60.

147. Educational and Vocational Guidance. A. (3) Corbally.

153. Elementary School Curricula. S. (4) Jessup.

- 158A. Investigations in Reading. A. (3) Osburn.
Scientific studies of elementary school reading. Primarily for administrators and teachers with experience.

- 164-165. Principles and Techniques of Curriculum Making. A,W. (3-3) Draper.

175. Improvement of Teaching. S. (3) Osburn.
Adaption of instruction to individual differences. Examination of laboratory studies; summarization of research.

- 180, 181, 182. History of Education. A,W,S. (3,3,3) Jessup.
Social interpretation of the historic beginnings of education.

***183. Historical Backgrounds of Educational Method.**

184. Comparative Education. S. (5) Jessup.
Modern education in foreign countries.

188. Philosophy of Education. A. (3) Jessup.

191. Advanced Educational Measurements. W. (3) Dvorak.
Pr., 90 or equivalent.

193. Character Education. W. (3) Powers.
Experimental background of the modern effort toward character development.

- 197, 198, 199. Individual Research. A,W,S. (2 to 5 each quarter) Staff.
Pr., consent of department.

III. Advanced Courses (Open to Graduates Only)

201. Advanced Educational Psychology. S. (3) Powers.
Pr., courses in general and educational psychology.

***209-210. Seminar in Psychology of High School Subjects.**

220. Seminar in Educational Sociology. W. (5) Corbally.

222. Seminar in Diagnostic and Remedial Work in Education. S. (5) Osburn.

230. Seminar in Administration. (Legislation.)**232. Reconstruction in Education.*****233. Seminar in Administration. (School Buildings.)**

* Not offered in 1942-1943.

***240. Technique of Objective Supervision.**

245,246,247. Organization of Supervisory and Administrative Programs. A,W,S.
(5,5,5) Cole.

Types of schools and changes being made in them. Supervision of instruction, and pupil accounting.

***260-261. Seminar in Secondary Education.**

263. Junior College. S. (3) Dvorak.

265, 266. College Problems. A,W. (5) Stevens.

Higher education from the standpoint of the new instructor. History of administrative organization. Course will be adapted to individual needs through special assignments. One two-hour lab. period to be arranged.

267, 268, 269. Guidance and Counseling. A,W,S. (5,5,5) Stevens.

Counseling in colleges and public schools. Students must reserve time each week for duties in a counselor's office. Discussion and reports.

270. Problems in Modern Method. A. (3) Williams.

***271. Problems in Modern Methods.**

275. Improvement of College Teaching. S. (5) Stevens.

Effective methods. One two-hour lab. period to be arranged.

287, 288, 289. Seminar in Philosophy of Education. A,W,S. (3,3,3) Williams.

290. Educational Statistics. A. (5) Dvorak.

Required of candidates for the doctor's degree in education.

291. Methods of Educational Research. A,W. (3) Dvorak.

Required for master's and doctor's degrees in education.

298, 299, 300. Individual Research. A,W,S. (†) Staff.

Field of interest should be indicated by letter when registering. Sections or "fields":

- A. Educational psychology.
- B. Educational sociology.
- C. Educational administration and supervision.
- D. Elementary education.
- E. Secondary education.
- F. Classroom techniques.
- G. History and philosophy of education and comparative education.
- H. Higher education.
- I. Curriculum.
- J. Guidance and extra-curricular activities.
- K. Remedial and special education.

ELECTRICAL ENGINEERING

Professors A. V. Eastman, Loew, Hoard, Shuck, G. S. Smith; Associate Professor Lindblom; Assistant Professors Cochran, Hill; Instructor Sheckels.

71. Direct and Alternating Currents. A,W. (5) Staff.
A short course in electric circuit theory and machinery, for Naval Science students.

73. Vacuum Tubes and Radio. A,S. (5) Staff.
A short course in vacuum tubes and radio, for Naval Science students. Code practice is included.

* Not offered in 1942-1943.

† To be arranged.

101. **Direct Currents.** A,W,S. (4) **Staff.**
Short course in direct-current theory and machinery, for non-electrical students. To be taken with E.E. 102. Pr., Physics 98, Math. 41.
102. **Direct-current Laboratory.** A,W,S. (2) **Staff.**
Direct-current machinery, for non-electrical students. To be taken with E.E. 101. Pr., Physics 98.
103. **Direct Currents.** A. (3) **Staff.**
Short course in direct-current theory and machinery for civil engineering students. To be taken with 104. Pr., Physics 98, Math. 41.
104. **Direct-current Laboratory.** A. (1) **Staff.**
Direct-current machinery for civil engineering students. To be taken with 103. Pr., Physics 98.
105. **Electric Wiring.** A. (2) **Shuck.**
Short course for architects.
109. **Direct Currents.** W,S. (5) **Staff.**
Theory of electric, magnetic and dielectric circuits; preliminary study of direct-current machinery. To be taken with 110. Pr., Math. 41.
110. **Direct-current Laboratory.** W,S. (2) **Staff.**
Laboratory work in direct-current circuits and direct-current measurements. To be taken with 109.
111. **Direct Currents.** A,S. (3) **Staff.**
Continuation of 109. Theory and characteristics of direct-current machinery. Direct-current distribution and applications. To be taken with 112. Pr., 109.
112. **Direct-current Laboratory.** A,S. (4) **Staff.**
Experimental work on direct-current dynamo machinery. To be taken with 111. Pr., 110.
- **15. Elementary Direct Currents. (Extension night class)** **Shuck.**
Laws of the electric and magnetic circuits with application to direct-current machinery. Practical course for electricians.
- **20. Elementary Alternating Currents. (Extension night class)** **Shuck.**
Alternating-current theory with experimental work on alternating-current machinery. Pr., 15.
121. **Alternating Currents.** A,W,S. (4) **Staff.**
Short course in alternating-current theory and machinery for non-electrical students. To be taken with 122. Pr., 101.
122. **Alternating-current Laboratory.** A,W,S. (2) **Staff.**
Experimental work on alternating-current machinery. To be taken with 121. Pr., E.E. 102.
123. **Alternating Currents.** W. (3) **Staff.**
Short course in alternating-current theory and machinery for civil engineering students. To be taken with 124. Pr., 103, 104.
124. **Alternating-current Laboratory.** W. (1) **Staff.**
For civil engineering students. To be taken with 123. Pr., 103, 104.
141. **Illumination.** A. (3) **Shuck.**
Electric lamps; commercial photometry; adaptation of electric lighting to commercial requirements. Junior or senior elective. Pr., 109, 110.

****Will be offered if a sufficient number of students elect the course.**

152. **Electrical Machine Design.** A,W. (3) Lindblom.
Complete design of one direct-current generator or motor. Pr., 111, 112.
- **154. Design of Electric Apparatus.** (4) Lindblom.
Switchboards, transformers, alternators, alternating-current motors, etc. Pr., 152, 163.
159. **Alternating Currents.** A,W. (3) Staff.
Fundamental theory of alternating-current circuits. Pr., 111.
161. **Alternating Currents.** W,S. (4) Staff.
Theory of alternating-current machinery; transformers, induction motors, alternators, synchronous motors. To be taken with 162. Pr., 159.
162. **Alternating-current Laboratory.** W,S. (4) Staff.
Experimental work in alternating-current circuits and machinery. To be taken with 161. Pr., 112.
163. **Alternating Currents.** A,S. (4) Staff.
Theory of single-phase motors and of transmission and distribution systems. To be taken with 164. Pr., 161.
164. **Alternating-current Laboratory.** A,S. (5) Staff.
Experimental work with alternating-current machinery and transmission lines. To be taken with 163. Pr., 162.
- *171. Electric Railways.**
- **173. Central Stations.**
175. **Power Transmission.** W. (5) Loew.
Theory, design, and operation of electric-power transmission lines. Pr., 163, 164.
181. **Vacuum Tubes.** A,W,S. (4) Eastman, Hoard.
Fundamentals, theory of rectifiers and amplifiers; photoelectric cells, thyratrons; applications to power and low-frequency fields. To be taken with 182. Pr., 159.
182. **Vacuum-tube Laboratory.** A,W,S. (2) Cochran, Hoard.
Experimental work with vacuum tubes. To be taken with 181. Pr., 159.
183. **Radio.** A,W,S. (4) Eastman, Cochran.
Theory of vacuum-tube oscillators, modulators, detectors, and amplifiers; applications of the vacuum tube in the communication field. To be taken with 184. Pr., 181.
184. **Radio Laboratory.** A,W,S. (2) Eastman, Cochran.
Experimental work with vacuum tubes and radio circuits. To be taken with 183. Pr., 182.
185. **Telephone Transmission.** W. (5) Eastman, Cochran.
Theory of telephone transmission; reflection phenomena; standing and traveling waves; loading; measurement of line constants; filter design. Pr., 159.
- *186. Radio-Telephone Transmitter Practice.**
- 188, 190, 192. **Research.** A,W,S. (2 to 5 each quarter.) Staff.
191. **Advanced Circuit Theory.** S. (3) Loew.
Operational calculus applied to the solution of electric circuits. Pr., 161, 162.
193. **Advanced Circuit Theory.** S. (3) Shuck.
Study of net-works under short circuit conditions by the method of symmetrical components. Pr., 161.
- *194. Seminar.**

** Will be offered if a sufficient number of students elect the course.

* Not offered in 1942-1943.

195. Electric Transients. S. (4) Smith.
Single and double energy transients; standing and traveling waves; short-circuit transients; surges; corona; lightning. Pr., 163.
196. Electric-transient Laboratory. S. (2) Smith.
To be taken with 195. Pr., 162.
- *197. Seminar.
198. Electric-transient Laboratory. A,W,S. (2 to 5) Smith.
Continuation of 196. Study of electric-transient phenomena by means of vibrator and cathode ray oscillographs, klydonograph, and voltage impulse recorders.

Courses for Graduates Only

205. Seminar. S. (3) Eastman.
For 1942-1943, seminar in field of radio transmission.
- 210, 212, 214. Research. A,W,S. (2 to 5 each quarter) Staff.

ENGLISH

Language and Literature: *Professors Griffith, Benham, Cox, Harrison, Hughes, Padelford, Taylor, Winther; Associate Professors Blankenship, Eby, Wagenknecht; Assistant Professors Bostetter, Cornu, Kocher, Stirling, Zillman; Lecturer Sperlin; Instructors Burns, Ethel, Kahin; Associate Butterworth.* Composition and Creative Writing: *Professor Bement, director; Associate Professor Lawson (in charge Freshman English); Assistant Professors Hall (in charge of Engineering English), Savage; Instructors Beal, Crisler, Gillette, Nix, Person, Walters, Watters; Associates Adams, S. F. Anderson, V. Anderson, Burgess, Emery, Kuhn, Mark, McKinlay, Norlin, St. Clair, Stubbs, Vickner.*

English 1 or equivalent is prerequisite to all literature courses.

- A. Elementary Composition. A,W,S. (Non-credit) Lawson in charge.
Required of students who fail in examinations for entrance into 1 or 4.
- B. Elementary Composition. A,W,S. (Non-credit) Hall in charge.
Fundamentals of writing. For those who fail in test for admission to English 100. Passing grade in Composition B is equivalent to passing test for English 100.
- 1, 2, 3. Composition. A,W,S. (5,5,5) Lawson in charge.
Principles and practice of composition, supplemented by an analysis of essays, poetry, novel, and drama; methods of collecting material for longer papers and introduction to the study of evidence, fallacies, and proof.
- 4, 5, 6. Composition. A,W,S. (3, 3, 3) Lawson in charge.
For students in architecture, art, and nursing education. In content, this course is the same as 1 and 2.
- 9, 10. Composition. W,S. (3,2) Lawson in charge.
For students in pharmacy.
37. Argumentation. A,W,S. (5) Stirling in charge.
Required in College of Economics and Business of those who do not earn credit for English 2 and 3. Elective to others. Analysis, use of evidence, discovery of fallacies, organization of logical discussion.

* Not offered in 1942-1943.

- 51, 52, 53. **Advanced Exposition.** A,W,S. (3,3,3) **Person.**
Advanced writing, similar in method to English 1, 2, and 3, and adjusting the writing to the student's particular interests and needs. Upper division credit for upper division students. Prerequisite, English 1 and 2, or equivalent.
54. **Introduction to Non-Fictional Writing.** A,W. (3) _____
Writing of biographies, magazine and feature articles, and expository papers. Upper division credit for upper division students. Prerequisite, English 1 and 2, or equivalent.
55. **Writing for Form and Style.** A,W,S. (3) **Ethel, Padelford, Wagenknecht, Stirling, Winther, Harrison.**
Writing for English majors and others to develop diction and style. Upper division credit for upper division students. Prerequisite, English 1 and 2, or equivalent.
57. **Introduction to Poetry.** A,W,S. (5) **Zillman.**
With illustrations from the nineteenth century. Not open to students who have credit for 21, 83, and 84.
58. **Introduction to Fiction.** A,W,S. (5) **Griffith, Ethel.**
Critical analysis of narrative poems, short stories, novels, plays. For majors in literature and drama and for others who desire to study the organization of narrative literature. Upper division credit for upper division students. Not open to students who have credit for Lit. 75.
60. **Report Writing.** A,W,S. (3) **Person, Adams.**
Organization and writing of reports. Especially designed for students in departments other than English who desire training in the writing of their particular fields. Upper division credit for upper division students. Section B, winter quarter, is for students in the College of Forestry. Prerequisite, English 1, or equivalent.
- 61, 62, 63. **Verse Writing.** A,W,S. (2, 2, 2) **Zillman.**
Pr., English 1, 2.
- 64, 65, 66. **Literary Backgrounds.** A,W,S. (5,5,5) **Bostetter, Cox, Ethel, Harrison, Kahin, Kocher, Stirling, Wagenknecht.**
English classics, especially Beowulf, Chaucer, Spenser, Shakespeare, Milton, Dryden, Pope, Johnson, Burns, Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, and some nineteenth-century novelists, emphasizing literary forms, their appreciation, and social relations. Grade of "A" or "B" grants upper division credit to an upper division student for the quarter in which the grade is earned. Course 66 not open to those having credit for 50.
67. **Survey of American Literature.** A,W,S. (5) **Blankenship.**
Not open to students having credit for Lit. 20.
73. **Introduction to Modern Literature.** A,W,S. (5) **Stirling, _____.**
Essays on European and American thought. Readings in poetry, novel, and drama.
- 74, 75, 76. **Dramatic Composition.** A,W,S. (3, 3, 3) **Savage.**
Study of principles with experimental creative work in dramatic writing. May be substituted for required courses in drama with the consent of department. Upper division credit for upper division students. Pr., 1 and 2 or equivalent.
- 77, 78, 79. **Introduction to Narrative Writing.** A,W,S. (3,3,3) **Bement.**
For students desiring an introduction to fiction writing. Upper division credit for upper division students. Pr., English 1 and 2, or equivalent.
96. **The Bible as Literature.** A,S. (5) **Wagenknecht.**
Open to all. Upper division credit for upper division students. Not open to those having credit for 97, 98, 99.

100. **Technical Composition.** A,W,S. (3) **Hall in charge.**
For students in the colleges of Engineering and Mines. Logical organization of material, its effective presentation in form of articles, business letters, and reports. Pr., passing of test in the mechanics of English, given to sophomore engineers on the third Tuesday of autumn quarter.
101. **Modern Reading.** A,W,S. (3 to 5) **Hall.**
For students in technology. Intended to direct reading in the non-technological fields. Conferences, written and oral reports. Students registered in this course may continue directed reading during vacations.
102. **English for Engineers.** A,W,S. (3) **Hall.**
For students in the colleges of Engineering and Mines who wish to come in contact with authors representative of the thought or the culture of the past or present. Student is given opportunity to improve his style of writing and to progress in accordance with his ability. Individual weekly conferences. Pr., English 100.
103. **English for Engineers.** A,W,S. (3) **Hall.**
Continuation of English 102.
104. **Modern European Literature.** S. (5) **Harrison.**
Special studies in continental contemporary literature for advanced students..
106. **Modern English Literature.** A,S. (5) **Harrison, Winther.**
Special studies in English contemporary literature for advanced students, with emphasis upon the novel.
- 107, 108, 109. **Non-Technical Reading.** A,W,S. (1,1,1) **Hall.**
For students in the colleges of Engineering and Mines. Pr., 100.
- 110, 111, 112. **Advanced Verse Writing.** A,W,S. (2, 2, 2) **Zillman.**
Given in conjunction with 61, 62, 63. All the elementary credits must be earned before advanced credit will be given.
117. **History of the English Language.** A,W,S. (5) **Butterworth.**
Pronunciation, vocabulary, and syntax. Open to sophomores who intend to major in English. English 180 may be substituted for this course.
- 131, 132, *133. **Advanced Non-Fictional Writing.** W,S. (5,5) _____.
Advanced writing of biographies, magazine and feature articles, expository papers, and non-fictional books. Pr., 54.
- 137, 138, 139. **Advanced Short Story Writing.** A,W,S. (5,5,5) **Bement.**
Pr., 77, 78, 79, or permission.
140. **Social Ideals in Literature.** W. (5) **Benham.**
Model commonwealths and such other literatures as illustrate the development of social and economic thought.
- 144, 145. **Eighteenth Century Literature.** A,W,S. (5,5) **Cox.**
The classic period, Johnson and his age, and pre-romanticism. Pr., 144 for 145.
- *147, 148, *149. **The English Novel.** W. (5) **Wagenknecht.**
Austen to Eliot.
- 150, 151. **Old and Middle English Literature.** A,W,S. (5,5) **Griffith, Butterworth, Wagenknecht.**
Old English literature in translation (150); Middle English: Chaucer and contemporaries (151). Course 151 required of majors.

* Not offered in 1942-1943.

- 153, 154. *English Literature: 1476-1642.* S. (5,5) ———, Taylor.
The Renaissance, Spenser and his contemporaries (153); non-Shakespearean Elizabethan drama (154).
- 156, 157, 158. *Novel Writing.* A,W,S. (5,5,5) Savage.
Pr., 77, 78, 79, or permission.
- 161, 162, 163. *American Literature.* A,W,S. (5,5,5) Harrison, Eby, Blankenship.
Course 161, exclusive of New England; 162, New England; 163, Twain, Howells, James.
Course 163 not open to students having credit for 164. Pr., Lit. 67.
166. *Modern American Literature.* A,W,S. (5) Harrison.
The beginning of realism; tendencies from 1900 to 1915; contemporary fiction and poetry.
- 167, 168, 169. *Seventeenth Century Literature.* A,W,S. (5,5,5) Benham, Ethel.
Survey of the period; Milton and his contemporaries; the Restoration.
- 170, 171, 172. *Shakespeare.* A,W,S. (5,5,5) Taylor, Kocher, Stirling.
Introduction (170); Comedies and Histories (171); Tragedies and Romances (172). Pr.,
64 and 65, or permission; 170 for 171 and/or 172.
- 174, 175. *Late Nineteenth Century Literature.* A,W,S. (5,5) Winther, Wagenknecht.
Poetry, novels, essays, and drama. Pr., 174 for 175.
- *176. *Late Nineteenth Century Literature: Browning.*
- 177, 178. *Early Nineteenth Century Literature.* A,W,S. (5, 5) Cox, Zillman, Bostetter.
Poetry, novels, essays, and drama. Pr., 177 for 178.
- 180, 181, 182. *Old English Language.* A,W,S. (5, 5, 5) Butterworth.
Reading of Anglo-Saxon classics in the original; study of grammatical forms.
- 184, 185, 186. *Creative Writing Conference.* A,W,S. (3 to 5 each quarter) Bement, Savage.
Revision of manuscripts for emphasis, organization, and style. Student entering this
course should have the preliminary work on his writing project completed. Pr., permis-
sion of instructor.
- *191. *Major Conference.*

Teachers' courses. (See Educ. 75H.)

For descriptions of courses in foreign literatures in translation, see departments
of Classical, Far Eastern, Germanic, Scandinavian, and Romanic Languages.

Courses for Graduates Only

- 201, 202. *Graduate English Studies.* A,W. (5,5) ———.
Introduction to graduate study by practice in research writing, bibliography, reading
and studies in assigned periods of English and American literature. Required of candidates
for the master's degree.
203. *Literary Criticism.* S. (5) Winther.
History of English criticism. Required of candidates for the master's degree.
- 204, 205, 206. *Chaucer.* A,W,S. (5, 5, 5) Griffith.
Problems of Chaucerian scholarship. Required of candidates for the doctor's degree.

* Not offered in 1942-1943.

- *208, 209, 210. Pre-Shakespearean Drama.
- 211, 212, 213. Sixteenth Century Literature: Spenser. A,W,S. (5,5,5) Padelford.
- 217, 218, 219. Shakespeare. A,W,S. (5,5,5) Taylor.
- 221, 222, 223. Seventeenth Century Literature. A,W,S. (5,5,5) Benham.
- 224, 225, 226. American Literature. A,W,S. (5, 5, 5) Eby.
- *229. American Literature: Whitman.
- 230, 231, 232. Old English. A,W,S. (5, 5, 5) Butterworth.
Anglo-Saxon grammar, readings in Old English prose and poetry; Middle English language; Beowulf. Required of candidates for the doctor's degree.
- *233, *234. Advanced Old English.
- 238, 239, 240. Early 19th Century Literature. A,W,S. (5,5,5) Bostetter.
- 241, 242, 243. Victorian Literature. A,W,S. (†) Winther.
- 244, 245, 246. Eighteenth Century Literature. A,W,S. (5, 5, 5) Cox.
- 250, 251, 252. Thesis Research. A,W,S. (†) Staff.
Student should not enroll for this course until he has chosen a thesis subject.

FAR EASTERN

Professor Taylor; Professor Gowen; Associate Professor Schultheis; Assistant Professors Spector, Tatsumi.

- 1-2, 3. Japanese Language. A,W,S. (5-5, 5) _____.
First-year course. Elements of spoken and written language; grammar, *kana*, characters.
- 7-8, 9. Russian Language. A,W,S. (5-5, 5) Spector.
First-year course. Grammar, pronunciation, reading, composition.
10. Survey, Problems of the Pacific. A,W,S. (5) Taylor.
Contemporary problems, background, of Pacific Rim countries.
40. Chinese Civilization. W. (5) Schultheis.
Social, intellectual, institutional life of the Chinese; emphasis on recent changes.
- *41. Japanese Civilization.
- 44-45, 46. Chinese Language. A,W,S. (5-5, 5) Schultheis.
First year *Kuo Yu*; grammar, pronunciation, translation, composition.
50. Literature of India. A. (5) Gowen.
Indian literature from the Vedas to Tagore. Upper division credit to upper division students.
52. The Muhammadan World. W. (5) Gowen.
The literary, religious, and cultural background of the Muhammadan world, including recent developments. Upper division credit to upper division students.
90. History of China. A. (5) Schultheis.
Introduction to Chinese history, political, social, intellectual. Upper division credit to upper division students.

* Not offered in 1942-1943.

† To be arranged.

91. **History of Japan.** W. (5) _____
Introduction to Japanese history, political, social, religious, aesthetic. Upper division credit to upper division students.
- *101-102-103. **Hebrew.**
- *104-105-106. **Sanskrit.**
- 107, 108, 109. **Japanese Language.** A,W,S. (5,5,5) _____
Intensive second-year course; ideographs, grammar, reading in Japanese literature. Pr. to 107, 3 or equivalent.
110. **Japanese Composition and Conversation.** W. (5) _____
Third-year course; advanced composition and conversation. Pr., 109 or equivalent.
111. **Japanese Reading and Translation.** A. (5) _____
Third-year course. Pr., 109 or equivalent.
- *114. **History of Religion.**
- Primitive Religion.** See Anthro. 142.
115. **History of Religion.** A. (3) **Gowen.**
Religions of the Ancient Empires, and religions of the Orient.
116. **History of Religion.** W. (3) **Gowen.**
Survey of Judaism, Christianity, Muhammadanism.
- *117-118-119. **Arabic or Aramaic.**
- International Relations of the Far East.** (See Pol. Sci. 129.)
- ***Oriental Political Thought.** (See Pol. Sci. 114.)
- Far Eastern Government and Politics.** (See Pol. Sci. 158.)
- The Middle and Near East.** (See Pol. Sci. 130.)
- American Foreign Policy in the Far East.** (See Pol. Sci. 132.)
130. **Russian Literature.** S. (5) **Spector.**
Great Russian novelists of the Golden Age; post-revolutionary literature.
136. **Modern Russian History.** W. (5) **Spector.**
The nineteenth century and the contemporary period in Russian history, with special attention to the Russian Revolution.
- 140, 141, 142. **Russian Language.** A,W,S. (3, 3, 3) **Spector.**
Second-year course. Pr. to 140, 9, or equivalent.
- 146, 147, 148. **Chinese Language.** A,W,S. (5, 5, 5) **Schultheis.**
Second-year course. Pr. to 146, 46 or equivalent.
- 149, 150, 151. **Chinese Language.** A,W,S. (3, 3, 3) **Schultheis.**
Third-year course. Pr. to 149, 148 or equivalent.
- *152, 153, 154. **Sanskrit.**

* Not offered in 1942-1943.

*155, 156, 157. Hebrew.

*158, 159, 160. Arabic.

162, 163. Russian Language. A,W. (3, 3)

Spector.

Third-year course. Readings in nineteenth century novel. Pr., 142 or equivalent.

*170. Literature of China in Translation.

*171. Literature of Japan in Translation.

180. Modern Chinese History. W. (5)

Taylor, staff.

The nineteenth century and the contemporary period in Chinese history, with major emphasis upon internal affairs. Pr., 90 or upper division standing.

181. Modern Japanese History. S. (5)

Intensive topical treatment of periods in Japanese history; particular attention to modern developments.

190. Undergraduate Research. A,W,S. (3 to 5)

Staff.

Directed reading concentrated in some specific field of Asiatic history. The student will submit reports and papers. Primarily for F.E. majors. Pr., instructor's permission.

192. History of the Ming Dynasty. W. (3)

Schultheis.

Intensive study of the history of China from 1368-1644, with special attention to methods of research in primary sources. Pr., instructor's permission.

*195. The Meiji Restoration in Japan.

196. Russian Expansion and Colonization in Asia. A. (3)

Intensive study of development of Russian empire in Asia from Peter the Great to 1917, with special reference to methods of research in primary sources. Pr., instructor's permission.

NOTE: Course 190 may, with consent of instructor, be repeated for credit.

Courses Primarily for Graduates

*220. Seminar in Eastern Asia.

*221. Sources in East Asia.

222. Sources in West Asia and India. W. (2)

Gowen.

Introduction to standard primary and secondary sources for study of West Asiatic and Indian history, religion, and literature.

225, 226. Seminar in Far Eastern Diplomacy. A,W. (3, 3)

Taylor.

Special reference to present conflict. Pr., consent of instructor.

280, 281, 282. Research. A,W,S. (†)

Staff.

Research in Far Eastern and Slavic fields for those qualified. Instructor's permission necessary.

290, 291, 292. Thesis. A,W,S. (2 to 5 each quarter)

Staff.

Directed investigation and writing in connection with work for advanced degrees.

* Not offered in 1942-1943.

† To be arranged.

FISHERIES

Professor W. F. Thompson; Associate Professor Lynch; Assistant Professors Donaldson, Rankin; Associate Welander

101. Comparative Anatomy of Fishes. A. (5) Welander.
Morphology. Emphasis on evolution of structures in reference to phylogeny. Pr., Zool. 1 and 2. Two lab. periods, three lectures.
102. Classification and Identification of Soft-rayed Fishes. W. (5) Welander.
Special attention given to salmon and trout. Two lab. periods, three lectures. Pr., 101.
103. Classification and Identification of Spiny-rayed Fishes. S. (5) Welander.
Special emphasis on game and food fishes. Two lab. periods, three lectures. Pr., 102.
- 105, 106, 107. Commercial Aquatic Invertebrates. A,W,S. (5,5,5) Lynch.
Classification, life history, uses of commercially important invertebrates. Two lab. periods, three lectures. Pr., Zool. 1 and 2.
- 108, 109, 110. Problems of Fisheries Science. A,W,S. (1, 1, 1) Thompson, staff.
No prerequisite. Required of all majors not later than junior year.
- *125. Spawning Habits of Game and Other Fishes.
- *126. Early Life History of Fishes.
151. Natural Fish Foods and Water Supplies. A. (5) Lynch, Donaldson.
Fresh-water insects and crustacea and their relations to pond culture. Physical and chemical determinations of the suitability of water. Propagation of salt-water fishes. Three 2-hour lab. periods and three lectures. Pr., Zool. 1 and 2; Chem. 1, 2, or 21 and 22.
152. Propagation of Freshwater Fishes; Methods of Hatching and Rearing. W. (5) Lynch, Donaldson.
Methods of feeding and efficiency evaluation of diets. Design, structure, maintenance of hatcheries, pond systems, and aquaria. Three 2-hour lab. periods, three lectures. Pr., 151.
153. Hatchery Biology. S. (5) Lynch, Donaldson.
Algae, higher plants, and miscellaneous invertebrates in relation to fish. Sanitation, disease prevention. Stream improvement. Stocking policies. Three 2-hour lab. periods, three lectures. Pr., 152.
154. Diseases of Fish. A. (5) Rankin.
Nature and cause of disease in fish. Two lab. periods, three lectures. Pr., Zool. 1 and 2; Fish. 101 and 102.
157. Age and Growth of Game and Food Fishes. A. (5) Donaldson.
Determination by means of length frequencies, scales, otoliths. Two 4-hour laboratory periods, two lectures. Pr., 102.
158. Migrations of Game and Food Fishes. W. (5) Donaldson.
Marking experiments and racial investigations. Two 4-hour laboratory periods, two lectures. Pr., 102.
- 165, 166, 167. Elementary Problems. A,W,S. (2 to 5 each quarter.) Staff.
Students assigned problems to be worked out under direction of an instructor. Pr., 15 credits in fisheries.
- 195, 196, 197. Seminar. A,W,S. (2 to 5 each quarter.) Thompson.
Reports and discussions of current fisheries literature. Pr., 15 credits in fisheries.

* Not offered in 1942-1943.

Courses for Graduates Only

- 201, 202, 203. Research. A,W,S. (†) Thompson and staff.
Pr., 25 credits in fisheries or its equivalent in zoology.
- 205, 206, 207. Graduate Seminar. A,W,S. (2 to 5 each quarter.) Thompson, staff.
Required of all graduate students. Maximum 6 credits. Open to graduates in zoology.

FORESTRY AND LUMBERING

Professors Winkenwerder, Grondal, Marchworth; Associate Professor Pearce; Assistant Professors Hanley, Schrader, Wangaard, Zumwalt.

- 1a. Dendrology. S. (3) Wangaard, assistants.
Identification, classification, distribution of the trees of North America.
- 1b. Dendrology. A. (3) Wangaard, assistants.
Continuation of 1a. Pr., 1a.
2. Introduction to Forestry. A. (2) Winkenwerder.
Orientation course required of all freshmen.
3. Introduction to Forestry. W. (2) Winkenwerder, assistants.
Continuation of but need not be preceded by 2.
4. Forest Protection. S. (3) Winkenwerder, assistants.
Factors influencing the spread of forest fires, methods of presuppression, detection and suppression. Required of all freshmen.
5. First Aid to the Injured. A,S. (2) Dr. Hall.
6. General Forestry. W. (3) Winkenwerder.
Survey of forestry as a whole for non-majors.
7. Forestry Problems. S. (3) Schrader.
Training in methods of attacking forestry problems, emphasizing accuracy, analysis, and interpretation of forestry data. Pr., Math. 21, advanced algebra.
8. Forestry Problems. A. (3) Zumwalt.
Continuation of For. 7. Pr., 7.
10. Wood Technology. A. (3) Grondal.
Identification, taxonomy, physical and chemical properties of wood. Pr., Physics 3 or 6, For. 1a, 10 credits in chemistry, Bot. 10 and 11.
11. Wood Structure. W. (3) Grondal, assistants.
Microstructure of wood; identification, xylotomy, and elementary microtechnique. Pr., 10.
15. General Lumbering. A. (4) Pearce.
Comparative methods of lumbering on the Pacific Coast and in other lumbering regions of the United States. Prerequisite to all courses in logging and milling.
40. Silviculture. S. (2) Zumwalt.
Field studies of forest types and silvicultural problems. Given at Pack Forest. Pr., 121.
60. Forest Mensuration. W. (5) Zumwalt, assistants.
Theory of scaling, volume and taper tables, sample plot methods, determination of contents of stands, growth, yield. Pr., 3, Math. 21, For. 7, 8.

† To be arranged.

62. **Forest Mensuration.** S. (6) Zumwalt, assistants.
Studies in scaling, volume tables, cruising, mapping, growth and yield. Given at Pack Forest. Pr., 1b, 60, G.E. 7.
- *65. **Forest Recreation Planning.**
104. **Timber Physics.** A. (5) Wangaard, assistants.
General mechanics, stresses, tests, theory of flexure, moisture and strength; mechanical properties of wood. Pr., For. 8, Physics 3 or 6.
105. **Wood Preservation.** S. (3) Schrader.
Factors influencing development of fungi; classification and control of wood-destroying agencies; mechanical properties of treated wood. Pr., 11.
106. **Wood Preservation Laboratory.** S. (2) Grondal.
Evaluation of preservatives; methods of testing and inspection of treated material. Must be preceded or accompanied by 105.
115. **Forest Protection.** S. (3) Winkenwerder.
Fire plans, relation of forestry practice in the control of insect and fungus attacks. Pr., 4.
119. **Forest Administration.** W. (3) Marckworth.
Objects, principles, and methods of administering private and public forest industries. Pr., E.B. 3 or 4; senior standing.
121. **Silvics.** W. (3) Zumwalt.
Relation of trees and forests to soil, moisture, light, and temperature as a foundation for forest practice; forest ecology. Pr., 1b, 3, Bot. 11.
122. **Silvicultural Methods.** A. (5) Zumwalt, assistants.
Type and site classification; intermediate cuttings; final cuttings; natural and artificial regeneration. Pr., 40, 121.
126. **Forest Economics.** A. (4) Marckworth.
Position of forests in the economic structure of the U.S. and other countries. Pr., E.B. 3 or 4; senior standing.
140. **Construction.** W. (4) Pearce, assistants.
Machinery, specifications, cost estimates, maintenance and methods of constructing roads, trails, wooden bridges, telephone lines; land clearing. Pr., 104, G.E. 7, C.E. 56.
151. **Forest Finance.** A. (4) Marckworth.
Mathematics of forest finance and operations; cost of growing timber; valuation of land for forest production. Pr., 122.
152. **Forest Organization.** W. (4) Marckworth.
Principles of organization and regulation; sustained yield management; forest working plans. Pr., 151.
- *154. **Wild Life Management.**
155. **Range Management.** W. (3) Zumwalt.
Correlation of grazing with other forest uses; range regulation and economics. Pr., 1b; Bot. 10, 11; junior or senior standing
158. **Forest Utilization.** W. (5) Wangaard.
Classification and utilization of secondary and derived forest products from the viewpoint of forest economics. Pr., 10.

- 160, 161, 162. Undergraduate Studies. A,W,S. (1 to 5 ea. qtr.) Staff.
Enables students to prepare themselves for work in fields for which there is not sufficient demand to warrant the organization of regular classes. Opportunities are offered in city forestry, tree surgery, wood fibers, microtechnique in the study of wood, research methods, advanced work in any of the regular forestry subjects. Instructor assigned according to nature of work.
164. Forest Management Surveys. S. (4) Marckworth.
165. Forest Management Inventory. S. (4) Marckworth.
166. Forest Management Studies. S. (4) Marckworth.
167. Forest Management Report. S. (4) Marckworth.
Field trip. Lectures, assigned readings and extensive field work on large scale tracts of timber. Required of management majors. Pr., For. 119, 152.
171. Forest Geography. W. (4) Pearce.
Economic geography of the forest regions of world. Forest resources, management, products, industries, trade. Pr., senior standing.
182. Lumber Grading. W. (2) Schrader.
Study and practice of regional grading rules and American Lumber standards of sizes and patterns. Pr., junior standing, 10, 15, 104.
183. Milling. A. (5) Grondal.
Organization, planning, operation, and administration of timber conversion plants. Pr., 15, 104, 158, M.E. 82.
184. Manufacturing Problems. S. (5) Schrader.
Lumber producing regions; economics and geography of utilization; selling and distribution of lumber; financing methods. Pr., E.B. 62, For. 183.
185. Forest Engineering. A. (5) Pearce.
Logging plans and costs; correlation of logging engineering methods with condition of stand, topography, forest management, etc. Pr., senior standing.
186. Logging Engineering. W. (5) Pearce.
Logging machinery and equipment. Machine costs, output and depreciation. Solution of machine and equipment problems. Pr., 185, C.E. 57, M.E. 82.
187. Logging Engineering Field Trip. S. (16) Pearce.
One week field study of types of logging and log transportation methods; costs and appraisals. Six weeks collecting data for plan to open new operation; four weeks compilation. Pr., 186.
188. Theory and Practice of Kiln Drying. W. (3) Grondal.
Wood-liquid relationships and hygrometry; application of gas laws. Problems in the design of dry kilns. Pr., 11, 158.
189. Wood Pulp. S. (5) Grondal.
Design of waste conversion plants; wood pulp manufacture. Pr., 11, 158, 183, 188.
- 193, 194. Seminar. A,W. (3, 3) Staff.
Review and advanced work in dendrology, mensuration, silviculture, and lumbering. Pr., senior standing.

Courses for Graduates Only

202. Thesis. A,W,S. (3 to 6 each quarter.) Staff.
Total requirement nine credits; instructors assigned according to nature of work.
203. Advanced Wood Preservation. A. (3) Grondal.
Theory of penetrance; design of wood preservation plants. Fire proofing and fire proofing compounds. Pr., 105, 106.

204. **Forest Management Plans.** A,W,S. (3 to 5 each quarter) **Marckworth.**
Development of data covering a working circle; valuation of forest area; organizing forest property to conserve earning and productive power. Pr., 164, 165, 166, 167.
208. **Graduate Seminar.** W. (3) **Staff.**
Reviews, assigned readings, reports and discussions on current periodical literature, Forest Service and state publications.
- 210, 211, 212. **Graduate Studies.** A,W,S. (3 to 5 each quarter) **Staff.**
For students who wish to prepare themselves in fields in which the faculty of the department is prepared to give instruction but for which there is not sufficient demand to organize regular courses. Pr., graduate standing.
- 213, 214, 215. **Research.** A,W,S. (3 to 5 each quarter.) **Staff.**
Ample opportunity is offered for research in special phases of forestry.
220. **Advanced Forest Engineering.** W. (5) **Pearce.**
Logging management, analysis of costs. Economic selective logging and valuation. Stumpage and logging appraisal; financial reports. Pr., graduate standing.
221. **Forest History and Policy.** W. (3) **Marckworth.**
Forest policy of the U. S.; forestry in the states and island possessions; the rise of forestry abroad.

GENERAL ENGINEERING

Professors Wilcox, Warner; Associate Professor Brown; Assistant Professors Engel, Jacobsen, Jensen, Rowlands; Instructors Boehmer, Douglass, Hiltner, Oliver, Wallace; Lecturer Bliven; Associate Hillis.

1. **Engineering Drawing.** A,W,S. (3) **Warner, Boehmer.**
Fundamental principles of orthographic projection; theory of related views; types of graphical representation. Should be preceded by or accompanied by solid geometry.
2. **Engineering Drawing.** A,W,S. (3) **Rowlands, Douglass.**
Fundamental requirements of working drawings; practice in their reading and execution. Pr., 1.
3. **Drafting Problems.** A,W,S. (3) **Warner.**
Detailed analysis and solution of engineering problems by use of drafting room methods, descriptive geometry. Pr., 1, 2.
7. **Engineering Drawing.** W. (3) **Warner, Chittenden.**
Special short course for forestry students.
11. **Engineering Problems.** A,W,S. (3) **Wilcox, Brown.**
Training in methods of attacking, analyzing, and solving engineering problems. Coaching in proper methods of work and study, including training in systematic arrangement and clear workmanship. Deals principally with problems in dynamics. Student is assisted in orienting himself in his engineering work. Pr., high school physics, advanced algebra.
12. **Engineering Problems.** A,W,S. (3) **Wilcox, Jensen.**
Elementary mechanics, statics, and graphics. Continuation of 11. Pr., 1, 11, Math. 31.
21. **Plane Surveying.** A,W,S. (3) **Engel.**
Surveying methods, use of instruments, computations, mapping, U. S. public land surveys. Pr., 1, 2, or equivalents, and trigonometry.
- 47-48. **Elementary Theory of Construction.** A,W. (3 ea. qtr.) **Sergev, Jensen.**
Analysis of fundamental structural problems by application of the laws of equilibrium. Three credits a quarter; autumn, winter. (For architecture majors only.)
151. **Inventions and Patents.** A. (1) **Bliven.**
Law and procedure for patenting inventions, employer-employee relationship, trademarks. Pr., junior standing.

GENERAL LITERATURE

Professor Benham.

51-52-53. Masterpieces of European Literature. A,W,S. (3-3-3) Read.

101. Introduction to Criticism and Literature. S. (5) Benham.
The relation to life in the light of recent critical, philosophical, psychological, and social scholarship. (May receive credit in English.)

191, 192, 193. General European Literature. A,W,S. (3,3,3) Benham.
A synthetic view of the literatures of the world as they have affected English literature. Course conducted by means of lectures and readings in English literature and other literatures in translation.

194, 195, 196. General European Literature. A,W,S. (3,3,3) Benham.
Continuation of studies begun in Gen. Lit. 191, 192, 193, to approximately 1650 A.D.

For other courses that form a part of the general literature program, see English, the foreign language departments, and especially the following courses offering foreign literatures in English translation: French 34, 35, 36, 118, 119, 120, 134, 135, 136; German 100, 101, 102, 103, 104; Greek 11, 13, 17, 18; Italian 34, 35, 36, 134, 135, 136, 181, 182, 184; Latin 11, 13; Far Eastern 50, 170, 171; Scandinavian 98, 99, 109, 110, 111, 180, 181, 182; and Spanish 34, 35, 36, 115, 116, 117, 118, 119, 120, 134, 135, 136.

GENERAL STUDIES

Advisory Committee: *H. B. Densmore* (Greek), Chairman; *J. B. Harrison* (English); *Grace Denny* (Home Economics); *G. E. Goodspeed* (Geology); *C. Leo Hitchcock* (Botany); *Merrill M. Jensen* (History); *H. L. Nostrand* (Romanic Languages); *M. M. Skinner* (Economics and Business); *E. B. Stevens* (Education); *E. R. Wilcox* (General Engineering).

21-22. American Social Trends. A,W. (5-5) Jensen.
Non-technical introduction to the various social sciences in terms of American experiences and institutions. Lectures, discussion sections, supervised reading and individual projects.

151, 152. Sources of the Modern Cultural Crisis. 151: A, S., Sum.; 152: A. (2,3) Interdepartmental Staff.¹

151: Individual reading, to be assigned by the appropriate members of the interdepartmental staff, and tested early in autumn quarter. 152: Directed reading and discussion, based on Randall, *Making of the Modern Mind*, and selected primary source material. Primarily for upper-division students. Pr., permission of the department based on (a) general preparation, and (b) standing in major field.

155-156. Analysis of the Modern Cultural Crisis. W,S. (3-3) Interdepartmental Staff.¹

Lectures, discussion, and reports. A series of faculty-student discussions will treat the chief aspects of the present social crisis (e.g. economic, psychological, scientific and technological, artistic, moral, religious). Essential conflicts will be studied, as well as the problem of synthesis. Primarily for seniors. Pr. 152 or permission of the department.

191, 192, 193. Senior Study. A,W,S. (†)

Seniors who wish to follow some course of supervised study or who need research allowance for their major project may enroll in these courses for credit to be arranged on consultation with their advisers.

¹ G. Costigan (History), H. B. Densmore (General Studies), O. Gombosi (Music), R. H. Gundlach (Psychology), J. B. Harrison (English), M. H. Hatch (Zoology), A. E. Hudson (Anthropology), M. Jacobs (Anthropology), C. Kerr (Economics and Business), W. G. Lutey (Liberal Arts), L. A. Mander (Political Science), H. L. Nostrand (Romanic Languages), H. J. Phillips (Philosophy), L. H. Pries (Architecture), M. Rader (Philosophy), S. Riemer (Sociology), V. Sivertz (Chemistry), D. Thomson (Classics), R. G. Tyler (Engineering), C. T. Williams (Education).

† To be arranged.

GEOGRAPHY

Professor Martin; Associate Professors Earle, Seeman; Assistant Professor Church; Instructor Pierson.

1. **Survey of World Geography.** A,W,S. (5) Earle, Pierson.
World regions; man's changing relation to his habitat; background for social sciences. Not open to students who have had 7 or 70.
2. **Physical Geography.** A,W,S. (5) Seeman.
Physical basis of geography. Major and minor land forms; types and uses of soils; underground and surface waters; mineral products. Use and interpretation of topographic maps. Lab., field trips.
7. **Economic Geography.** A,W,S. (5) Martin, Seeman.
Resources of the world; factors locating industries; commodities in international trade. Not open to students who have had 1 or 70.
11. **Weather and Climate.** A,W,S. (5) Church, Pierson.
World distribution of temperature, pressure, winds, precipitation. Climatic cycles. Interpretation of weather maps.
70. **World Geography.** A. (5) Martin, Pierson.
Economic-political geography especially designed for journalism students. Not open to students who have had 1 or 7.
77. **Urban Geography.** A. (2) Martin.
Major urban centers of the world. Geographic factors of location; economic and industrial development.
101. **World Regional Geography.** A,W,S. (5) Earle, Pierson.
Same as 1, but with additional work and readings. Not open to those who have had 1, 7, or 70. Pr., junior standing.
102. **Geography of United States.** A,W,S. (5) Martin, Seeman, Earle.
Regional specialization; sectionalism, growth of cities, internal problems. Pr., 1 or 101, 7, or junior standing.
103. **Geography of Asia.** A. (5) Earle.
Countries and natural regions. Distribution of resources; population problems. Transportation and trade. Pr., 1, or 101, 7, or permission.
104. **Geography of Europe.** S. (5) Martin.
Survey by countries. Localization of manufactures. Geographic bases for commerce. Pr., 1 or 101, 7, or permission.
105. **Geography of South America.** S. (5) Seeman.
Economic and social development; raw materials and potential markets; inter-American relations. Pr., 1 or 101, 7, or permission.
106. **Geography of Africa-Australasia.** W. (5) Earle.
European colonization and development. The native problem. Resources, plantation agriculture, tropical trade. Pr., 1 or 101, 7, or permission.
108. **Geography of Canada and Alaska.** S. (3) Pierson.
Natural regions, resources, economic and social development; problems of northern settlement. Pr., 1 or 101, 7, or permission.
109. **Geography of Middle America.** W. (3) Seeman.
Regions and resources of Mexico, Central America, the West Indies. Transportation and trade. American policy in the Caribbean. Pr., 1 or 101, 7, or permission. Not open to those having 115.

110. **Resources of the Pacific Northwest.** A. (3) Pierson.
Geography and resources of the Northwest; rural and urban development; industry and commerce; regional problems.
111. **Climatology.** A,W,S. (5) Church, Pierson.
Same as 11, but with additional work and readings. Not open to those who have had 11. Pr., junior standing.
112. **Meteorology.** A,S. (5) Church.
Fundamentals of the physics of the atmosphere. Pr., 11, or 111.
121. **Regional Climatology.** S. (5) Church.
Descriptive analysis of climatic characteristics of continents. Controls of climate. Types and distribution. Climatic classifications. Pr., 11, 111, or permission.
122. **Aeronautical Meteorology.** W. (3) Church.
The troposphere. Radiation, temperature, clouds, fog, thunderstorms, ice formation on aircraft. Engineering juniors and seniors only.
125. **Geographic Background of History.** W. (3) Martin.
Use of geographic data in interpretation of American history. Pr., 10 credits of history or geography.
140. **Geography in the Social Studies.** W. (3) Earle.
The place of geography in the social science curriculum. Pr., 10 credits in geography, or permission.
152. **Air Mass Analysis.** W. (3) Church.
The frontal theory. Vertical and horizontal properties of air masses. Life cycle of extra-tropical cyclones. Practice forecasting. Pr., 112 or 122.
- 153, 154. **Meteorological Laboratory.** W,S. (3,3) Church.
Construction and analysis of weather charts based on frontal and isentropic methods. Practice forecasting.
155. **Influences of Geographic Environment.** S. (5) Earle.
Development of geographic theory; studies of occupancy; urbanization; human adjustment. Pr., 20 credits of geography, or permission.
160. **Cartography.** W. (5) Pierson.
Map projections, areal distribution, scales, sketch mapping, block diagrams.
170. **Conservation of Natural Resources.** W. (5) Martin.
Public policy in the management of soils, forests, minerals, fisheries, etc. Land reclamation; problems in resource utilization.
175. **Problems in Political Geography.** W. (5) Seeman.
Geographic aspects of current international issues. Territorial problems. Pr., 10 credits of geography, permission.
192. **Research Problems in Meteorology and Climatology.** A,W,S. (†) Church.
Pr., permission.
195. **Individual Conference and Research.** A,W,S. (2 to 5) Staff.
For advanced undergraduates. Pr., permission.
199. **Preseminar in Geography.** S. (5) Martin.
Training in research methods; preparation and presentation of a paper. Pr., permission.

Teachers' Course in Geography. (See Educ. 75-O.)

† To be arranged.

Courses for Graduates Only

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| 200. | Seminar. A. (3), S. (5) | Earle, Martin. |
| | The special topic autumn quarter will be geography source materials. The work spring quarter will consist of preparation and presentation of a paper on an approved topic. | |
| 201. | Research. A,W,S. (†) | Staff. |
| 207. | World Resources and Industries. A,W,S. (†) | Martin. |
| | Readings and research. | |
| 211. | Research in Meteorology. A,W,S. (†) | Church. |
| 220. | Land Utilization. S. (5) | Pierson. |
| | Resource inventory, land classification, conservation, and theory of use. | |
| 255. | History and Theory of Geography. A. (†) | Earle. |

GEOLOGY

Professors Goodspeed, Weaver, Fuller; Associate Professor Mackin; Assistant Professors Barksdale, Coombs.

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|-------|--|--------------------|
| 1. | Survey of Geology. A,W,S. (5) | Mackin, Barksdale. |
| | Lectures, laboratory, field trips. | |
| 5. | Rocks and Minerals. A. (5) | Goodspeed. |
| | Pr., at least a high school course in chemistry. | |
| 6. | Elements of Physiography. W. (5) | Mackin. |
| | Processes and agencies affecting the earth's surface; relation of topography to structure, etc. Pr., 1 or 5. | |
| 7. | Historical Geology. S. (5) | Weaver. |
| | Origin and evolution of the earth, with emphasis on the general history of North America. Pr., five credits of geology or Zool. 1 and 2. | |
| 101. | History of Geology. A. (3) | Mackin. |
| | The rise of geology as a science. Required of all majors in geology. Pr., 15 credits in geology. | |
| 105. | Petrology as Applied to Engineering. A. (5) | Goodspeed, Coombs. |
| | Same as 5, but with additional work, readings. For students in civil, electrical, or mechanical engineering. Pr., junior standing. | |
| 106. | Elements of Physiography. W. (5) | Mackin. |
| | Same as 6, but with additional work and readings. Pr., junior standing. | |
| 107. | Historical Geology. S. (5) | Weaver. |
| | Same as 7, but with additional work and reading. Pr., 5 credits in geology or Zool. 1 and 2, and junior standing. | |
| 112. | Physiography of Eastern United States. A. (5) | Mackin. |
| | Physical history of surface forms in the physiographic provinces of the eastern United States. Pr., 5, 6, 7, 131, or permission. | |
| *113. | Physiography of the Western United States. | |
| 114. | Map Interpretation: Constructional Landforms. W. (5) | Mackin. |
| | Pr., 5, 6, 7, 112, or 113. | |

† To be arranged.

* Not offered in 1942-1943.

116. **Glacial Geology.** S. (5) Mackin.
Study of mechanism of glacial action including field work on actual glaciers. Pr., 5 and 6.
121. **Mineralogy.** S. (5) Goodspeed, Coombs.
Elements of crystallography and blowpipe analysis. Descriptive and determinative mineralogy. Pr., 5, and at least high school chemistry.
122. **Field Methods.** S. (5) Barksdale.
Methods of geologic and topographic surveying and recording in geologic field work. Pr., 124, 142.
123. **Optical Mineralogy.** A. (3 or 5) Coombs.
Principles in the use of the petrographic microscope and recognition of common minerals in thin section. Pr., 5, 121 (except for U.D. chemistry students).
124. **Petrography and Petrology.** W. (3 or 5) Coombs.
Systematic study of rocks both in the hand specimen and in thin section with the petrographic microscope. Pr., 123.
125. **Petrography and Petrology.** S. (3 or 5) Goodspeed.
Continuation of methods in 124. Special problems of petrogenesis and field petrology. Pr., 124.
126. **Sedimentary Petrography.** A. (3 or 5) Coombs.
Principles of correlation of sedimentary rocks by their mineral constituents. Pr., 124.
127. **Ore Deposits.** W. (5) Goodspeed.
Form, structure, mineralogy, petrology, and mode of origin of ore deposits. Pr., 121, 124.
- *128. **Mineral Resources—Non-Metals.**
- *129. **Mineral Resources—Metals.**
130. **General Paleontology.** W. (5) Weaver.
Principles of paleontology and a general systematic study of fossils. Pr., 7, or Zool. 1 and 2.
131. **Stratigraphy.** A. (3) Barksdale.
Origin, deposition, and methods of correlation of sedimentary strata. Pr., 5, 6, 7, 124.
132. **Invertebrate Paleontology.** S. (5) Weaver.
Important type fossils of each geologic period. Pr., 7, or Zool. 1 and 2.
133. **Mesozoic Geology.** W. (5) Weaver.
Geological history of the Mesozoic era and its fauna from a world-wide standpoint with special emphasis upon Europe. Pr., 130, 132.
134. **Tertiary Geology.** S. (5) Weaver.
Tertiary formations and their faunas, with special emphasis upon Europe and correlation with North and South America. Pr., 130, 132.
- *135. **Study of Ammonites.**
- *136. **Geology of South America.**
137. **Tertiary Faunas of Washington.** W. (5) Weaver.
Pr., permission.

* Not offered in 1942-1943.

142. **Structural Geology.** W. (5) Barksdale.
Interpretation of rock structures and their genesis. Pr., 5, 6, 7.
143. **Advanced Structural Geology.** S. (3) Barksdale.
Pr., 142.
- *150. **Elements of Seismology.**
- *160. **Principles of Geomorphology.**
181. **Preparation of Geologic Reports and Publications.** S. (3) Coombs.
The procedure in preparing and illustrating a geological report. Pr., senior standing in geology.
190. **Undergraduate Thesis.** A,W,S. (†) Staff.
Preparation of thesis in geology or any of its branches. Thesis must be submitted at least one month before graduation. Pr., senior standing. Five credits allowed for thesis.

Course Open to Approved Seniors and Graduates

200. **Field Studies.** A,W,S. (†) Staff.
Advanced work in geology or a general seminar. Open to advanced undergraduates upon permission of instructor.

Courses for Graduates Only

Two modern languages, a Teutonic and a Romanic, are necessary for graduate work in geology.

201. **Advanced Petrography and Petrology of Igneous Rocks.** A,W,S. (†) Goodspeed.
202. **Advanced Petrography and Petrology of Metamorphic Rocks.** A,W,S. (†) Goodspeed.
212. **Advanced Studies or Field Work in Physiography.** A,W,S. (†) Mackin.
220. **Advanced or Research Work in Mineralogy, Petrography, and Petrology.** A,W,S. (†) Goodspeed, Coombs.
227. **Advanced or Research Work in Economic Geology.** A,W,S. (†) Goodspeed.
230. **Advanced or Research Work in Paleontology and Stratigraphy.** A,W,S. (†) Weaver.
240. **Advanced Studies in Structural Geology.** A,W,S. (†) Barksdale.

* Not offered in 1942-1943

† To be arranged.

GERMANIC LANGUAGES AND LITERATURE

*Professors Vail, Eckelman, Lauer, Meisnest; Associate Professor Meyer;
Instructors Ankele, Schertel; Associates Wesner, Wilkie.*

Students of mathematics and the applied sciences should take German 1-2, 3, an additional course in second-year German, 60, and the upper-division scientific courses for specialized reading.

Students of history and the social sciences should elect German 10 and the courses listed in the 130's.

Credit is allowed for any quarter in any course except German 1-2.

- 1-2. **First Year. A,W,S. (5-5)** Staff.
Stage pronunciation, grammar, reading of easy prose, oral and aural training.
- 1X-2X. **First Year. A,W. (5-5)** Staff.
Primarily for graduate students. Emphasis on the attainment of a reading knowledge of the language. No auditors are permitted in this section.
3. **First Year Reading. A,W,S. (5)** Staff.
Modern prose, oral and aural training, continuance of grammar and vocabulary studies. Pr., 1-2, or one year in high school.
- 3X. **First Year Reading. S. (5)** Staff.
Continuation of 1X-2X. No auditors are permitted in this section.
4. **Second Year Reading. A,W,S. (5)** Staff.
Pronunciation, vocabulary building, modern prose, aural and oral training. Pr., 3, or two years high school.
5. **Second Year Reading. A,W,S. (3)** Staff.
Vocabulary building, modern prose, oral and aural training. Pr., 3, or two years high school. Not open to students having had 4.
6. **Second Year Reading. A,W. (2)** Staff.
Vocabulary building, modern prose, and aural training. Pr., 3, or two years high school. Not open to students having had 4.
7. **Second Year Grammar Review. W,S. (3)** Wesner.
Systematic grammar review with some elementary composition. For second-year students wishing to develop correctness of expression and accuracy in reading. Especially valuable as preparation for 120, 121, 122. Pr., 4, 5, or 6.
10. **Advanced Second Year Reading. A,W. (3)** Staff.
Pronunciation, modern prose, vocabulary building, oral and aural training. Pr., 4, 5, or 6.
30. **Conversation Based on Rapid Reading. S. (3)** Ankele.
Second year reading. Special emphasis upon oral and aural training. For students interested primarily in acquiring a speaking knowledge of the language. Pr., 4, 5, or 6.
60. **Lower Division Scientific German. A,W,S. (3)** Staff.
Introduction to general scientific German. Outside and class reading. Vocabulary building. Students making a grade of "B" in this course may go directly to Upper Division Scientific German, if they desire. Pr., 4, 5, or 6.
61. **Intermediate Scientific German. W,S. (2)** Staff.
Continuation of 60.

100. Literature in Translation: Main Currents in German Literature. A. (5) Vail.
The Middle Ages to the 19th century. Major tendencies and movements as reflected in personalities and masterpieces. Lectures, discussions, reports. No knowledge of German required. Open to freshmen and sophomores.
101. Literature in Translation: The Novel. W. (3) Eckelman.
Nineteenth-century survey of the German novel. Its reflection of the main currents of thought. Discussion, special reports. No knowledge of German required. Open to freshmen and sophomores.
- *102. Literature in Translation: Goethe.
- *103. Literature in Translation: The Drama.
104. Literature in Translation: Frenssen and Thomas Mann. S. (3) Schertel.
Study of conflicting tendencies in German thought and letters during the 20th century. Social and economic backgrounds. Interpretation of *Jorn Uhl*, *Buddenbrooks*, *Magic Mountain*, and *Joseph and His Brothers*. No knowledge of German required. Open to freshmen and sophomores.
- 113, 114, 115. Upper Division Scientific German. A,W,S. (2 or 3 each quarter) Schertel.
Scientific monographs, technical periodicals. Each student reports on reading in his own field in weekly conferences. Pr., 60, grade "B," or 61, or equivalent.
116. Upper Division Scientific German for Pre-medics. W,S. (3) Schertel.
Readings in medical German. Pr., 60, grade "B," or 61, or equivalent.
117. Military German. A,W,S. (2 or 3) Schertel.
Readings based upon military, naval, and aeronautical science. A study of Nazi terminology and tactics as revealed in the current writings. Pr., 60.
- 120, 121, 122. Grammar and Composition. A,W,S. (2,2,2) Vail.
Grammar and syntax, translation and original composition, dictation, oral work, letter writing, themes. Primarily for majors and minors. Pr., eight credits of second-year German, or equivalent.
128. Phonetics. S. (2) Meyer.
Systematic study of the nature, production, and classification of the German speech sounds. Stage pronunciation, phonetic transcription, oral practice. Pr., 3.
129. History of the German Language. S. (5) Meyer.
From early Germanic to the present day: sound changes, and the development of dialect and standard German. Open to senior and graduate majors and minors, and to junior majors.
- 130, 131. Introduction to the Classical Period. A,W. (3,3) Ankele.
The reading of representative dramas and other works of Lessing, Goethe, and Schiller. Biographical studies. Discussion, oral and written reports. Pr., eight credits of second-year German, or equivalent.
132. Introduction to the German Novelle. S. (3) Wesner.
The reading and study of *Novellen* by such representative writers as Keller, Meyer, and Storm. Lectures, discussions, and reports on the works and on the theory of the *Novelle*. Biographical studies. Pr., eight credits of second-year German, or equivalent.
- *139. Studies in German Literature.

* Not offered in 1942-1943.

- *140. *Heimatkunst.*
- *141. *Recent Novellen.*
- *143. *Expressionism and Twentieth Century Realism.*
- *145. *Modern Novels.*
- *147, 148. *Modern Drama.*
- 160. *Lessing: Life and Dramatic Works.* A. (3) Meisnest.
A comprehensive study of Lessing's dramas and critical writings. Pr., 130 or equivalent.
- *162. *Goethe's Lyric Poetry.*
- *163. *Goethe's Dramatic Works.*
- 166. *Goethe's Faust, Part I.* W. (3) Eckelman.
Reading of the entire text together with background studies. Pr., 130 or equivalent.
- *167. *Goethe's Faust, Part II.*
- 168. *Schiller's Historical Dramas.* S. (3) Eckelman.
Reading of the historical dramas and study of their dramatic technique. Pr., 130 or equivalent.
- *180, 181, 182. *Nineteenth Century Literature.*
- 183, 184, 185. *History of German Literature.* A,W,S. (3,3,3) Vail.
Survey of German literature from the beginnings to the Age of Goethe. Assigned readings in chief masterpieces, background studies. Pr., 130 or equivalent.
- *186. *Lyrics and Ballads.*

Teachers' Course in German. (See Educ. 75L.)

For courses in comparative philology, consult the offerings in the Department of Scandinavian Languages.

Courses for Graduates Only

The following graduate courses are regularly offered by the department. In order to form suitable groups for graduate study, students must consult with the executive officer of the department and secure permission to register for any of the courses listed below. Credit and time for all courses will be arranged.

- 200, 201, 202. *Goethe's Lyrics and Letters.*
- 203, 204, 205. *Storm and Stress Period.*
- 206, 207, 208. *The Romantic School.*
- 209, 210, 211. *Schiller.*
- 220, 221, 222. *Interrelations of German and English Literature.*
- 230. *Reformation.*
- 235. *Pietism and Sentimentalism.*

* Not offered in 1941-1942.

- 240. The Literature of the Middle High German Period.
- 243. The Baroque Literature of the 17th Century.
- 250. Middle High German.
- 251. Middle High German Literature in the Original.
- 255. Old High German.
- 256. Old High German Literature in the Original.
- 258. Gothic.
- 259. Old Saxon.
- 270. Renaissance.

HISTORY

Professors Holt, Levy, Lucas; Associate Professors Costigan, Dobie, Jensen, Quainton; Assistant Professors Gates, Katz; Lecturer Kimmel; Associate Davis.

- 1-2. Medieval and Modern European History. A,W,S. (5-5)

Lucas, Quainton, Dobie, Katz.

General survey from the Roman world empire of Augustus to our own times. Both 1 and 2 given each quarter.
- 3-4. Survey of Western Civilization. A,W. (5-5) Lucas.

Introduction to the social sciences.
- 5-6. English Political and Social History. A,W. (5-5) Costigan.

By special work, upper division students may receive upper division credit.
- 7. A Survey of the History of the United States. A,S. (5) Holt, Gates.

By special work, upper division students may receive upper division credit.
- 21-22. American Social Trends. A,W. (5-5) Jensen.

Survey of social trends from the earliest times to the present. Lectures, discussion sections, supervised reading, and individual projects.
- 72-73. Ancient History. W,S. (5-5) Katz.

The Ancient Mediterranean world, Greece and Rome. By special work, upper division students may receive upper division credit. Not open to freshmen.
- 100. Greece in the Age of Pericles. W. (3) Katz.
- 101. Alexander the Great, and the Hellenistic Period. S. (3) Katz.
- *103. Age of Caesar and Cicero: History and Culture.
- *104. The Roman Empire.
- 106. English Constitutional History. S. (5) Costigan.

Development of legal and governmental institutions of the English people to the present time. Pr., 5-6.

* Not offered in 1942-1943.

110. The Byzantine Empire: History and Culture. A. (5) Katz.
- *111. Greek and Roman Political Institutions.
114. The Culture of the Renaissance. A. (5) Lucas.
115. The Reformation. W. (5) Lucas.
- *118. Medieval Civilization: The Dark Ages from the Barbarian Invasions to The Age of Feudalism (350-1000).
- *119. Medieval Civilization: Economic Aspects of the Middle Ages from the Decline of Rome to the Renaissance.
120. Medieval Civilization: Art, Letters, Religion, Education and Thought. S. (5) Lucas.
- *124. Economic History of Europe Since the Industrial Revolution.
- *128. France from the Reformation to the French Revolution.
129. The French Revolution and Napoleonic Era. A. (5) Quinton.
130. Europe 1814-1870. W. (5) Quinton.
131. Europe 1870-1914. S. (5) Quinton.
132. History of Modern Colonial Empires. S. (5) Dobie.
133. Europe Since 1914. A. (5) Levy.
134. Germany from 1648 to 1914. W. (5) Levy.
A survey of German political and social history.
135. History of Modern Military Systems from Gustavus Adolphus to the Present. A. (3) Kimmel.
Pr., junior standing or permission.
140. American Colonial History. A. (5) Jensen.
141. American Revolution and Confederation. A. (5) Jensen.
144. History of the United States, 1789-1829. S. (5) Gates.
- *145. History of the United States, 1829-1860.
- *147. History of the Civil War Period and Reconstruction.
- *149. History of the United States, 1877-1920.
- *151. History of American Industrial Society.
155. History of Canada. S. (5) Dobie.
Canadian development to the present time.
- *158. The United States in World Affairs: 1776-1861.
159. The United States in World Affairs: 1861 to the Present Day. W. (5) Gates.
164. History of Washington and the Pacific Northwest. A, S. (5) Jensen, Gates.
- *166. Constitutional Law in Europe.

* Not offered in 1942-1943.

- *170. Constitutional History of the United States: From the Colonial Foundations to 1801.
- *171. Constitutional History of the United States: From 1801 to the Present.
- *180. History of the British Empire since 1783: Britain in Africa and the Pacific.
181. History of the British Empire since 1783: British Commonwealth of Nations. W. (5) Dobie.
Special emphasis on the history of Australia and New Zealand.
182. England in the Eighteenth Century. A. (5) Costigan.
183. England in the Nineteenth Century. W. (5) Costigan.
184. England in the Twentieth Century. S. (5) Costigan.
190. Introduction to Roman Law. A. (5) Levy.
Open to qualified sophomores.
- *191. Comparative Law.
192. Introduction to Modern Civil Law. W. (5) Levy.
Main features of the law of persons, property, contracts, torts, and succession in the world today, as developed on the basis of Roman law. Open to qualified sophomores.
- Teachers' Course in History. (See Educ. 75M.)
- Geographic Background of American History. (See Geog. 125.)

Courses for Graduates Only

Courses for graduate students to be given either as seminars, reading courses, or lecture courses are offered in the following fields:

201. Historiography. A. (5) Katz.
Normally the first graduate course in history. Required of all majors and minors.
- *202-203. American Historiography.
- 208, 209. Greek and Roman History. W, S. (3,3) Katz.
- 216, 217. Philosophy of History. W, S. (3,3) Costigan.
- 218, 219. British Empire. A, W. (3,3) Dobie.
- *221-222-223. American History.
- 225-226. American History. W, S. (3-3) Gates.
- 227-228. American History. W, S. (3-3) Jensen.
Subject for 1942-1943: The American Revolution. Students should have taken 141.
- 231, 232, 233. Modern European History (1600-1815). A, W, S. (3,3,3) Quainton.
234. Roman Law. W. (3) Levy.
- 251, 252, 253. Advanced Seminar in American History. A, W, S. (†) Jensen, Gates.
Admission by invitation only.
- 300, 301, 302. Individual Research or Thesis Work. A, W, S. (†) Staff.

* Not offered in 1942-1943.

† To be arranged.

HOME ECONOMICS

Professors Raitt, Denny, Payne, Rowntree; Associate Professors Bliss, Dresslar, Ingalls, Warren; Assistant Professors Terrell, Tilden, Starr, Storvick; Lecturer Wade; Instructors Black, McAdams; Acting Instructor Brown.

7. Introduction to Home Economics. A. (2) Raitt.
Function of home economics, history, present status in technological and relational aspects, place in curriculum, professional opportunities, personal accounts, and budgets.
9. Nutrition for Student Nurses. A,W,S. (6) Bliss.
Nutrition and food preparation. Open to student nurses only. Pr., Chem. 21.
12. Costume Design and Construction. A,W,S. (5) Payne, Ingalls, Starr.
General enough to be of practical value if only one course is taken, yet basically organized as a foundation for the costume design courses which follow.
15. Food Preparation. A,S. (3 or 5) Dresslar, Tilden.
General enough to be of practical value if only one course is taken, yet basically organized as a foundation for all the food preparation which follows. Technics presented by demonstration followed by laboratory practice. Not open to freshmen. Students who present two years of home economics credit from high school may omit the laboratory work and receive 3 credits.
24. Textiles for Non-Majors. A. (2) _____.
Textile fibers and fabrics, characteristics, varieties, uses, and care.
25. Textiles. W,S. (5) Denny.
Textile products and their uses, economic and esthetic values. Relation of raw material, construction, and finish to quality and cost of fabrics. Not open to freshmen.
26. Institution Textiles. W. (3) Denny.
Textile supplies for institutions. Methods of purchase, specifications, testing, storage, care.
41. Home Furnishing for Non-Majors. S. (3) _____.
Furnishing of homes in terms of artistic structure, color harmony, cost, and upkeep.
- 101, 102. Needlecraft. A,W. (2,2) Payne.
Interpretation of the needle arts of various nationalities. Application of authentic and original designs. Study of historic laces and embroideries is carried through the courses. Pr., 12, Art 9.
104. Nutrition for Non-Majors. S. (2) Rowntree.
For physical education majors, pre-medics, social service workers and others for whom a specific nutritional knowledge is essential. Pr., Physiol. 7, high school or college chemistry, junior standing, or permission of instructor.
105. Diet Therapy for Graduate and Student Nurses. W,S. (5) Storvick.
Pr., graduate nurse; or Home Econ. 9, Chem. 1, 2, 137, Physiol. 53, 54.
106. Nutrition for Public Health Nurses. A. (5) Storvick.
Pr., graduate nurse.
- 107-108. Nutrition. A,W. (5-3) Rowntree.
Fundamental principles of human nutrition. Pr., Chem. 135-136, H.E. 15, Physiol. 7. Pre-medical students and chemistry majors may enroll with the instructor's consent. Prerequisite to all advanced courses in nutrition.
109. Cost-of-Living Studies and Family Budgets. W. (3) Warren.
Cost-of-living and consumption studies; economic factors influencing family standards, expenditures and levels of living; attempts through social control to raise levels of living. Of special interest to social workers.

- *110. Food Study for Technology.
- *111. Nutrition for Technology.
- 112. Costume Design and Construction. A,W. (3) Staff.
Study and construction of children's clothing and wool dresses with choices based on personality, principles of design, and social and economic factors. Pr., 12, Art 9.
- 113. Costume Design and Construction. W,S. (3) Ingalls.
Design of clothing by modeling garments in muslin. Final problem in silk. Psychology of dress, factory-made clothing, fashion, and sources of consumer information. Pr., 112.
- 114. Costume Design and Construction. S. (3) _____.
Application of the basic principles of coat and suit construction. Selection and purchase of clothing as related to the budget. Pr., 113.
- 115. Food Preparation. A,W. (3) Dresslar, Tilden.
Relation of the fundamental sciences to the processes and technics of food preparation. Introduction to investigation methods. Pr., 15, Chem. 1-2, Physiol. 7.
- 116. Advanced Food Preparation. W,S. (5) Dresslar, Tilden.
Adapted for teacher-training majors. Pr., 115.
- 120. Advanced Food Preparation. W,S. (3) Tilden.
Adapted for institution administration majors. Pr., 115.
- 121. Institution Food Preparation. S. (5) Terrell.
Study and practice in large quantity manipulation, cost accounting, standardization of formulas, menu planning. Pr., 120.
- 122. Institution Purchasing. W. (3) Terrell.
Factors influencing quality, grade, and cost of food with a view to developing accurate judgments in food purchase. Pr., 120.
- 123. Institution Management I. W. (3) Raitt.
Organization, housing, and furnishing standards for institutions. Open to students accepted for the professional curriculum; others by permission of instructor. Pr., E.B. 1-2.
- 124. Institution Management II. W,S. (3) Terrell.
Food service organization and administration. A study of financial, personnel, and equipment management. Open to students accepted for the professional curriculum; others by permission. Pr., 121.
- 126. Demonstration Cookery. W. (3) Dresslar.
Study, observation, and experience in the technic of the demonstration as an effective method in teaching and business. Pr., 116 or 120.
- 131. Clothing Selection. W,S. (2) Ingalls.
Choice of clothing, emphasizing appropriateness to personality and occasion as well as judgment of quality and cost. Two lectures a week. No credit to those who take 12.
- 133. History of Costume. S. (5) Payne.
Costumes as an expression of the culture of successive periods in history. A large collection of national costumes enriches the course. Source material for professional costume designers. Pr., 112, Art 169.
- 141. The House, Equipment, Management. A,W,S. (5) Black.
Housing needs for various groups; floor plans and construction. Housing standards and social regulation; fixtures and equipment. Household management in relation to time and energy. Pr. or parallel, Physics 89 or Chem. 1.

* Not offered in 1942-1943.

144. **Income Management.** A,W,S. (3) Warren.
Planning personal and family expenditures in accordance with needs and aims in living; problems of choice-making and spending; factors influencing real income; guides and standards for planning expenditures; considerations for savings and investment program. Pr., E.B. 1 or 4, or permission of instructor.
145. **Family Relationships.** W,S. (3) Raitt.
Organization of the household. Basic principles and desirable attitudes in family relationships. Pr., E.B. 1 or 4, Soc. 112, junior standing.
147. **Home Furnishing.** A,W,S. (5) Denny.
Economic and esthetic values applied to purchase and arrangement of furnishings. Study of historic and modern furniture, pictures, rugs, tapestry, china, glass, silver. Pr., Art 9.
148. **Home Management House.** A,W,S. (2) Black.
Organization, financial management, records, housekeeping, food preparation and service, and hospitality. For home economics majors. Pr., fifth year.
- 160, 161. **Advanced Costume Design and Construction.** A,W. (5,5) Payne.
Creative designing of costumes by flat pattern and modeling methods. Open to students accepted for the professional curriculum and others by permission of instructor. Pr., 114, Art 169.
175. **Institution Equipment.** S. (3) Terrell.
Construction, operation, and care of equipment; routing of work. One-hour conference and eight hours laboratory work a week. Open to students accepted for the professional curriculum and others by permission of instructor. Pr., or parallel, 124.
180. **Problems of Family Credit.** S. (5) Warren.
The place of credit in family financial planning; survey and analysis of short-term and long-term consumer credit agencies from the viewpoint of the family; the social implications of credit. Of special interest to students in sociology, economics, social work and home economics. Pr., Sr. standing or permission of instructor.
181. **Consumer Problems.** A,W,S. (3) Warren.
The consumer's position in present-day markets; protection through legislation and other forces of social control; factors influencing consumer demand; standardization and informative labeling; advantages offered consumers by different types of retail stores; installment buying and consumer credit; how consumers may influence and be influenced by marketing policies, costs, and trends. Pr., E.B. 1 or 4, or permission of instructor.
187. **Experimental Cookery.** W. (3) Dresslar.
Study of fundamental principles of the entire field of cookery through reading and laboratory experimentation. Pr., senior or graduate standing, permission of the instructor.
188. **Advanced Textiles.** A. (3) Denny.
Technics and evaluation of testing methods, analysis of fabrics, textile legislation, standardization, consumer education. Pr., 25, E.B. 4.
189. **Hand Weaving.** S. (2) Starr.
Hand weaving as a medium of artistic expression. Color, design, texture, technic of weaving, interpretation of drafts. A collection of modern and traditional weaving of many countries is available for study. Pr., Art 9, H.E. 25.
190. **Child Nutrition and Care.** W,S. (5) Rowntree.
Problems of maternity and infancy, methods of improving physical and mental health of children. Laboratory work in University Child Nutrition Service. Pr., 107.
191. **Diet Therapy.** S. (3) Storvick.
Open to students accepted for the professional curriculum, and others by permission of instructor. Pr., 108.

195. **Research in Home Economics.** A,W,S. (5) **Staff.**
An assigned problem in household management as a research project under various staff members. Pr., fifth year.
- 196, 197. **Supervised Field Work in Institution Administration.** W,S. (15, 15) **Terrell.**
Six months of supervised field work in the fifth year. Pr., 195 credits.
The following are acceptable:
A. Hospital internship approved by the American Dietetic Association.
B. Administrative internship under the auspices of members of the Home Economics staff and approved by the American Dietetic Association.
C. Nursery School Service.
D. Field work in other lines as adequate supervision may be established.
198. **Historic Textiles.** W. (3) **Denny.**
A collection of rare materials is available for study of tapestry, rugs, lace, embroidery, damask, brocades, and velvets, in their historic settings. Pr., 25, 47, Art 9, 10, 11, or equivalent.
- Teachers' Course in Home Economics.** (For junior and senior high school. See Educ. 75NA.)
- Teachers' Course in Home Economics.** (For institution administration. See Educ. 75NB.)

Courses for Graduates Only

200. **Investigation Cookery.** A. (3) **Dresslar.**
Introduction to methods of research, study of problems in food supply and preparation based upon related sciences. Pr., 116 or 120.
- *202. **Home Economics Education.**
204. **Introduction to Research in Nutrition.** A. (5) **Storvick.**
Elementary research carried on cooperatively in basal metabolism studies, animal experimentation, nitrogen, calcium and hemoglobin determination. Must parallel 214. Pr., 108.
- 205, 206. **Research in Nutrition.** W,S. (†) **Storvick.**
Individual research in mineral or energy metabolism, animal feeding, or dietary studies. Pr., 204.
- 207, 208, 209. **Research in Textiles.** A,W,S. (†) **Denny.**
Pr., graduate standing. Confer with instructor before registering.
- 211, 212. **Research in Costume Design.** A,W. (†) **Payne.**
Pr., 114, 133.
214. **Readings in Nutrition.** A. (3) **Rowntree.**
Library research. Pr., 108.
215. **Readings in Nutrition.** W. (3) **Rowntree.**
Library research. Pr., 214.
- 220, 221, 222. **Research in Institution Administration.** A,W,S. (†) **Terrell.**
Problems dealing with food service and housing units in various types of institutions. Pr., 121, 122, 123, 124, 175, or equivalent.
245. **Social and Economic Problems of the Consumer.** A. (†) **Warren.**
Readings and a survey of research in the field of consumption. Pr., 144, 145, 181.
250. **Thesis.** A,W,S. (9) **Staff.**

* Not offered in 1941-1942.

† To be arranged.

JOURNALISM

Professors McKenzie, Jones; Associate Professors Benson, Christian, Kennedy; Assistant Professors Everest, Mansfield; Associate Peterson.

1. Journalism as a Profession. A. (1) McKenzie.
Required in the freshman year of pre-journalism majors.
2. The Newspaper and Society. W. (1) McKenzie.
Required in the freshman year of pre-journalism majors. Pr., 1.
51. Preliminary News Writing. A,W,S. (5) Christian, Benson, Mansfield.
Not open to freshmen; for majors and minors only. Required in the sophomore year of pre-journalism majors.
- 90,* 91, 92. Contemporary Affairs. W,S. (2, 2) Christian.
Current state, national, and world movements. Not open to freshmen.
116. Propaganda as a Social and Political Force. W. (5) Christian.
125. Principles of High School Journalism. S. (5) Benson.
Introductory course primarily for teachers of high school and junior college journalism. Covers problems involved in editorial, advertising, circulation and mechanical production of school publications. Pr., 51, 147 and 149.
130. Fundamentals of Advertising. A. (5) Jones.
The theory of advertising display, attention devices, media. Open only to majors in journalism and to majors in marketing and advertising in the College of Economics and Business. Others must have written permission of instructor.
131. Display Advertising. W. (5) Jones.
Layouts and copy for publications advertising. Pr., 130.
132. Advertising Typography. S. (3) Jones.
Laboratory course in display advertising. Pr., 130, 131.
- 147-148. Fundamentals of Journalism. A. (5-5) Staff.
Business management, contemporary affairs, reporting, copy reading. (Minors may register for 147 only. They will meet with junior majors, but work will consist of copy editing, headline writing, newspaper make-up, typography, engraving and printing processes.)
- 149-150-151. Fundamentals of Journalism. W. (5-5) Staff.
Advertising, reporting, contemporary affairs, law of the press, copy reading. (Minors may register for 149 only. They will meet with junior majors, but work will consist of newspaper advertising and history of journalism.)
- 152-153-154. Fundamentals of Journalism. S. (5-5-5) Staff.
History of American journalism, public relations, advertising, contemporary affairs.
- *160. Editorial Writing.
- 171-172. Magazine and Feature Writing and Trade Journalism. A,W. (3-3) Jones.
Articles graded according to probable marketability.
- 173, 174-175. Short Story Writing. A,W,S. (5, 5-5) Mansfield.
Critical appreciation and practical work in the writing of short stories. Not open to lower division students. Signature of instructor necessary before registration for autumn quarter.
- 191, 192, 193. Advanced Journalism. A,W,S. (2, 2, 2) Staff.
Research and conference course, continuing junior journalism studies in journalistic problems. Pr., 147-154. Registration by special permission of instructors only.
195. Independent Supervised Study. A,W,S. (5 to 10) McKenzie.
Open to journalism majors who have completed their third year.

* Not offered in 1942-1943.

199. **Problems of Journalism.** A,W,S. (2 to 5) McKenzie.
Actual research in the field. Open to seniors and graduate students only.

Courses for Graduates Only

201. **Propaganda.** S. (5) McKenzie.
Study of the crystallization of public opinion and of propaganda techniques. Pr., except by special permission, Pol. Sci. 116. Seminar restricted to a maximum of 10 students.
- 225, 226, 227. **Advanced Short Story Writing.** A,W,S. (2 to 4 each quarter) Mansfield.
Class restricted to a maximum of eight students; admitted by special permission of instructor. Pr., 173, 174, 175.
250. **Research in Journalism.** A,W,S. (3 to 5 each quarter) Staff.
Admission by consent of instructor.

LAW

Professors Falknor, Ayer, Beardsley, Harsch, Levy, Luccock, Nottelmann, O'Bryan, Richards, Shattuck, Sholley; Associate Professor Taylor; Assistant Professors Cornu, Oberdorfer; Lecturers McConahey, Shefelman, Thorgrimson.

FIRST YEAR

All first-year subjects are required

- ‡101. **Contracts.** A. (4); W,S. (3-3) Shattuck.
Goble and Patterson, Cases on Contracts.
- ‡102. **Torts.** A. (4); W,S. (3-3) Richards.
Bohlen, Cases on Torts, 3rd ed.
- ‡104. **Property I.** A,W,S. (3-3-3) Luccock.
Fraser, Cases on Property, Vols. 1, 2.
- ‡105. **Criminal Law and Procedure.** A,W. (3-3) O'Bryan.
Harno, Cases on Criminal Law, 2nd ed., and O'Bryan, Cases on Criminal Procedure.
112. **Agency.** S. (4) Ayer.
Steffen, Cases on Agency.
130. **Legal Bibliography.** W. (3) Beardsley.
Beardsley, Legal Bibliography and the Use of Law Books.

SECOND YEAR

All second-year subjects are required

- ‡110. **Sales.** A,W. (3-3) Ayer.
Vold, Cases on Sales.
111. **Wills.** A. (3) Richards.
Mechem and Atkinson, Cases on Wills and Administration, 2nd ed.
113. **Domestic Relations.** S. (3) Richards.
Shattuck, Washington Materials on Domestic Relations.
- ‡114. **Equity.** A,W. (5-3) Nottelmann.
Walsh, Cases on Equity.
- ‡115. **Evidence.** W,S. (4-4) Falknor.
McCormick, Cases on Evidence.

‡No examination for credit until completion of entire course.

- ‡116. **Bills and Notes.** W, S. (3-3) Taylor.
Britton, Cases on Bills and Notes, 3rd ed.
- ‡119. **Constitutional Law.** A, W, S. (3-2-3) Sholley.
Casebook to be announced.

THIRD YEAR

All third-year subjects are required

117. **Legal Administration and Ethics.** W. (3) Shefelman.
Cheatham, Cases and Materials on the Legal Profession.
120. **Constitutional Law II.** A. (3) Sholley.
Casebook to be announced.
121. **Administrative Law.** S. (4) Oberdorfer.
Gellhorn, Administrative Law, Cases and Comments.
- ‡123. **Property II.** W, S. (3-3) Luccock.
Kirkwood, Cases on Conveyances.
- ‡126. **Trusts.** A, W. (3-3) Nottelmann.
Scott, Cases on Trusts, 2nd ed.
- *127. **Code Pleading.**
142. **Practice and Procedure I.** A. (3) O'Bryan.
McBaine, Cases on Trial Practice, supplemented by Washington Code of Procedure and Washington cases.
In 142 and 144, Moot Court meets once each week. Each student is required to bring his case to issue, introduce the evidence, and try the case before the court or jury.
144. **Practice and Procedure III.** S. (3) O'Bryan.
Mechem and Atkinson, Cases on Wills and Administration, 2nd ed., supplemented by the Washington Probate Code and Washington cases.
- ‡145. **Credit Transactions.** A, W. (4-2) Shattuck.
Shattuck, Washington Materials on Security Transactions.
148. **Legal Writing.** W. (No credit but required of third-year students) Cornu.
- ‡149. **Business Associations.** W, S. (4-4) Ayer.
Ballantine and Lattin, Cases and Materials on the Law of Corporations. Cases assigned on other business organizations.

FOURTH YEAR

Required Courses

118. **Conflict of Laws.** S. (5) Sholley.
Cheatham, Dowling, Goodrich, Cases on Conflict of Laws.
124. **Community Property.** A. (3) Luccock.
Mechem, Sholley, Luccock, Cases on Washington Law of Community Property.
135. **Legislation.** A, W. (2-2) Harsch.
Horack, Cases on Legislation.
146. **Taxation.** W. (4) Harsch.
Magill and Maguire, Cases on Taxation, 3rd ed.
199. **Seminars and Individual Research Courses**
Ten hours required of the following one-quarter seminars, each carrying five hours of credit.
- 199A. **Trusts (Taxation Problems).** S. (5) Nottelmann.

‡No examination for credit until completion of entire course.

* Not offered in 1942-1943.

- 199B. Banking Law and Advanced Problems in Security. S. (5)
Shattuck and Taylor.
- *199C. Public Utility Regulation.
- 199D. Law of Income Taxation. S. (5) Harsch.
- *199E. Law of Corporation Finance, Regulation and Reorganization.
- *199F. Corporation Practice.
- 199G. Comparative Law. W. (5) Levy.
- 199H. Government Regulation of Business. A. (5) Oberdorfer.
- 199I. Civil and Criminal Procedure. A. (5) Falknor.
- 199J. Labor Law. W. (5) Sholley.

ELECTIVE FOURTH-YEAR COURSES

Sixteen hours of electives to be selected. Of this sixteen, an additional five hours of seminar or individual research may be undertaken with permission of the dean.

- †122. International Law. A,W. (3-3) Stowell.
Briggs, *The Law of Nations*.
- *125. Trade Regulation.
128. Damages. W. (3) Richards.
McCormick, *Cases on Damages*.
- *129. Drafting of Legal Instruments.
- *131. Quasi-Contracts.
132. Legal Accounting. A. (3) McConahey.
Graham and Katz, *Accounting in Law Practice and Assigned Cases*.
133. Public Utilities. A. (4) Taylor.
Welch, *Cases on Public Utility Regulation*, 2nd ed., with supplement.
134. Federal Jurisdiction and Procedure. W. (3) Oberdorfer.
Dobie and Ladd, *Cases on Federal Procedure*.
136. Insurance. W. (4) Taylor.
Vance, *Cases on Insurance*.
- *137. Water Rights.
- *138. Future Interests.
139. Administration of Debtors' Estates. A. (4) Oberdorfer.
Casebook to be announced.
- *140. Mining Law.
141. Admiralty. S. (4) Shefelman.
Lord and Sprague, *Cases on Admiralty*, 2nd ed.
143. Practice and Procedure II (Executions, Garnishments and Attachments).
S. (3) O'Bryan.

†No examination for credit until completion of entire course.

*Not offered in 1942-1943.

147. **Municipal Corporations.** S. (4) Thorgrimson.
Tooke, Cases on Municipal Corporations, 2nd ed.
190. **Roman Law.** A. (3) Levy.
Radin, Handbook of Roman Law.
- *191. **Comparative Law.**
- 199K. **Research Problems in Law.** A,W,S. (1 to 3) Staff.
Properly qualified third- and fourth-year students may, with the consent of a member of the law faculty and the dean of the school, receive from one to three credits for individual research in any of the major fields covered by the curriculum.

LIBERAL ARTS

Professor Cory; Instructor Lutey.

1. **Introduction to Modern Thought.** A,S. (5) Cory, Lutey.
Study of man's place in the universe in the light of contemporary thought; cosmic origins; the origin and nature of life; mind and behavior; values. Upper division students may obtain upper division credit by registering in the proper sections.
11. **Introduction to the Study of the Fine Arts.** W. (5) Cory, Lutey.
The appreciation of masterpieces of architecture, painting, sculpture, poetry, and music; a study of the problems common to them; the philosophy of art; the relations of beauty and truth and morality. Upper division students may obtain upper division credit on the basis of extra reading and conferences.
- 114, 115, 116. **Realism in Philosophy, Literature and the Arts.** A,W,S. Cory.
(5 each quarter)
Not open to students who have had 214, 215, 216. Pr., 1 or 11, or special permission.

LIBRARIANSHIP

Professors Worden, C. W. Smith, Beardsley; Associate Professor Alfonso; Assistant Professor Andrews; Instructor Turner; Lecturer J. S. Richards.

- §170. **Introduction to Children's Work.** A. (3) Andrews.
A basic course.
- ‡171. **Children's Books.** W. (2) Andrews.
A survey of the history of children's books, standards of selection and methods of introducing books to children.
- §172. **Introduction to Library Work.** A. (2) Worden.
Library organization, problems of different types of libraries, and current library topics.
- ‡175. **Classification, Cataloging, Subject Headings.** A,W. (4) Alfonso, Turner.
- ‡176. **Reference for High School Libraries.** A,S. (3) Turner.
- ‡184. **Classification, Cataloging, Subject Headings.** W,S. (3) Alfonso, Turner.
Pr., 175.
- §191. **Classification, Cataloging, Subject Headings.** S. (3 or 5) Alfonso.
Pr. 184.
- §177. **Bibliography and Reference.** A. (3) Smith, Alfonso.
Includes trade and subject bibliography and government documents.
- §185. **Bibliography and Reference.** W. (3 or 4) Smith, Alfonso.
Continuation of 177.

* Not offered in 1942-1943.

§ Open only to students registered in the school.

‡ Open to seniors and graduates who wish to qualify for teacher-librarian positions in high schools.

- §194. **Bibliography and Reference.** S. (2 or 4) Alfonso.
Continuation of 185.
- §178. **History of the Book.** W. (3) Richards.
- §179, §188, §196. **Books for Libraries.** A,W,S. (4, 2 or 3, 3) Worden.
Study of the book field, and the problems of selecting books.
180. **Story Telling.** A,§S. (3) Andrews.
Study of folk and fairy tales, myths, epics, and short stories as source material for story telling. Open to juniors and seniors in autumn.
- §181. **Advanced Children's Work.** W. (2) Andrews.
Organization of a children's department; problems of book buying and administration. Pr., 170.
- †182. **School Library Administration.** A,W,S. (3) Turner.
- §183. **Selection of Books for Children.** W. (3) Andrews.
Pr., 170.
- §186. **Practice.** S. (5) Worden.
Four weeks (40 hours a week) of practice work under expert supervision in neighboring Northwest libraries.
- §189. **Organization and Administration of Small Libraries.** W. (2) Worden.
- §190. **Selection of Books for Children.** S. (3) Andrews.
Pr., 183.
- §192. **Administration.** S. (2) Worden.
Problems of library management, buildings, equipment, finance, publicity.
- †195. **Book Selection for High School Libraries.** A,W,S. (3) Andrews.
- §240. **Advanced Legal Bibliography.** A. (4) Beardsley.
Bibliographical data and use of federal and state law reports and statutes; quasi-legal and commissioners' reports of the states, for association records, legal periodicals, indexes and digests, legal regional bibliographies, cooperative bibliographies of law collections.
- §241. **Order and Accessioning of Law Books.** A. (4) Beardsley.
Study of aids to law book selection, ordering and accessioning of law books, processing, micro-photography of legal material, etc.
- §242. **Legal Reference and Research.** W. (5) Beardsley.
Study of bibliographical lists, law reference questions, briefing, annotations, local legal history.
- §243. **Law Library Administration.** S. (5) Beardsley.
Staff problems, patrons and public relations, circulation problems and procedure, law library architecture and planning, book arrangements, equipment, rules, publicity, publications, budgets, reports, professional societies, regional service, cooperative buying.

SECOND-YEAR LIBRARY WORK WITH CHILDREN

(Not offered in 1942-1943)

- *201, 202, 203. **Children's Literature.**
- *204, 205, 206. **Administration of Children's Libraries.**
- *207, 208, 209. **Traditional Literature.**
- *210, 211, 212. **School Work.**
- *213, 214, 215. **Field Work.** (Not required of students with library experience.)
§ Open only to students registered in the school.
‡ Open to seniors and graduates who wish to qualify for teacher-librarian positions in high schools.
* Not offered in 1942-1943.

MATHEMATICS

Professors Carpenter, Ballantine, Winger; Associate Professors Cramlet, Jerbert, McFarlan; Assistant Professors Birnbaum, Jacobsen, Mullemeister, Neikirk, Taub; Instructors Beaumont, Haller, Zuckerman; Associate Kingston.

1. **Advanced Algebra.** A,W,S. (5) Staff.
Algebra from quadratics on. Pr., one year high school algebra.
2. **Solid Geometry.** A,W,S. (5) Staff.
Pr., one year of plane geometry.
3. **Survey of Mathematics.** S. (5) Staff.
Introduction to mathematical thought and procedure. Elementary processes and their applications. Not for majors. Pr., one year algebra and one year plane geometry.
4. **Plane Trigonometry.** A,W,S. (5) Staff.
Primarily for students in the College of Arts and Sciences. Pr., one and one-half years algebra and one year plane geometry.
5. **College Algebra.** W,S. (5) Staff.
Primarily for students in the College of Arts and Sciences. Pr., Math. 1 or one and one-half years high school algebra.
6. **Analytic Geometry.** A,S. (5) Staff.
Primarily for students in the College of Arts and Sciences. Pr., 4.
11. **Theory of Investment.** A,W,S. (5) Staff.
Interest, annuities, amortization, capitalization and depreciation, sinking funds, etc. Pr., one year algebra.
12. **Mathematics of Finance and Insurance.** W,S. (5) Staff.
Pr., 11.
13. **Elements of Statistical Method.** A,W,S. (5) Birnbaum.
Pr., one year algebra, one year plane geometry.
21. **Mathematics for Foresters.** W. (5) Staff.
Pr., one and one-half years algebra, one year plane geometry.
- 31, 32, 33. **Engineering Freshman Mathematics.** A,W,S. (5, 5, 5) Staff.
Pr., one and one-half years algebra, one year plane geometry; each course prerequisite to the following course.
- 41, 42, 43. **Engineering Calculus.** A,W,S. (3, 3, 3) Staff.
Pr., 33 for 41; 41 and solid geometry for 42; 42 for 43.
- 54, 55, 56. **Mathematics for Architects.** A,W,S. (3, 3, 3) Jerbert.
Pr., one and one-half years algebra, one year plane geometry; each course prerequisite to the following course.
- *101. **Advanced Trigonometry.**
- *102, 103, 104. **Advanced Analytic Geometry.**
- 107, 108, 109. **Calculus.** A,W,S. (5, 5, 5) Staff.
Differential and integral. Pr., 6; each course prerequisite to the following course.
- *111, 112. **Introduction to Actuarial Science.**
- 114, 115, 116. **Ordinary and Partial Differential Equations.** A,W,S. (3, 3, 2)
Pr., 109 or 42; each course prerequisite to the following course.

* Not offered in 1942-1943.

- 117, 118, 119. **Projective Geometry.** A,W,S. (3,3,3) **Winger.**
For teachers and professional mathematicians. Pr., calculus, unless taken concurrently.
- 121, 122, 123. **Theory of Equations.** A,W,S. (2,2,2) **Ballantine.**
Pr., differential and integral calculus or permission.
- *124, 125, 126. **Algebraic Curves.**
- *127, 128, 129. **Elementary Theory of Numbers.**
- *131. **Selected Topics in Mathematics.**
- 141, 142, 143. **Calculus of Probabilities and Statistics.** A,W,S. (3,3,3) **Birnbaum.**
Presentation of the theory of probabilities from its elementary concepts and applications to statistics. Pr., 109 or permission; each course prerequisite to the following course.
- *144, 145, 146. **Calculus of Observations.**
- 150, 151. **Advanced Analysis.** W,S. (2,3) **Kingston.**
Selected topics in advanced differential calculus. Pr., 109 or 114; 150 pr. to 151.
- *152, 153. **Interpolation and Approximation.**
160. **Vector Analysis.** S. (3) **Zuckerman.**
Pr., 107 or 33.
- *167, 168, 169. **Boolean Algebra and Foundations of Algebra.**
- Teachers' Course in Mathematics.** (See Education 75Q.)

Courses for Graduates Only

All courses numbered above 200 require a full year's work in differential and integral calculus as a prerequisite, and the consent of the instructor in charge.

- *201, 202, 203. **Projective Differential Geometry.**
- 204, 205, 206. **Modern Algebra.** A,W,S. (3,3,3) **Beaumont.**
Theory of matrices, linear dependence, linear transformations, bilinear and quadratic forms, algebraic invariants, and elementary divisors.
- *207, 208. **Topology.**
- *209. **Finite Differences.**
- 214, 215, 216. **Higher Calculus.** A,W,S. (3,3,3) _____,
Two lectures and one seminar period per week, with readings from Wilson's and Goursat's treatises in the calculus.
- *217, 218, 219. **Finite Collineation Groups.**
- *224, 225, 226. **Functions of a Real Variable.**
- 230, 231, 232. **Advanced Topics in Algebra.** (†) (3,3,3) **Beaumont.**
Galois theory, cyclic fields, algebras of matrices, and introduction to the theory of ideals. Pr., consent of instructor.
- 237, 238, 239. **Invariant Theory.** A,W,S. (3,3,3) **Cramlet.**
The theory of the representations of the groups of linear transformations. Pr., higher algebra.
- 241, 242, 243. **Functions of Complex Variables.** A,W,S. (2,2,2) **Carpenter.**
Analytic functions, conformal representation, definite integrals with imaginary limits, periods of definite integrals, doubly periodic functions, analytic extension, and other topics. Pr., 116.

* Not offered in 1942-1943.

† To be arranged.

- 244, 245, 246. Calculus of Variations. A,W,S. (3,3,3) McFarlan.
Properties of extremals, Weierstrass theory, problem of Bolza. Pr., 114, 115, unless taken concurrently.
- *247, 248, 249. Metric Differential Geometry.
- *251, 252, 253. Harmonic Analysis.
- *254, 255, 256. Riemannian Geometry.
- *257, 258, 259. Theory of Relativity.
- *261, 262, 263. Integral Equations.
- *264, 265, 266. Continuous Groups.
- *267, 268, 269. Orthogonal Functions.
- *271, 272, 273. Advanced Differential Equations.
- *274, 275, 276. Advanced Projective Differential Geometry.

MECHANICAL ENGINEERING

Professors Eastwood, McMinn, Schaller, Wilson, Winslow; Associate Professors Edmonds, McIntyre, Tymstra; Instructors Crain, Sullivan, Cooper; Associate Snyder.

53. Manufacturing Methods. A,W,S. (1, 1, 1) Schaller.
Principles of the founding of ferrous metals.
54. Manufacturing Methods. A,W,S. (1, 1, 1) Schaller, Sullivan.
Arc and oxy-acetylene welding, flame cutting, heat treating.
55. Manufacturing Methods. A,W,S. (1, 1, 1) Sullivan, Schaller.
Fundamental theory and practice of machining operations on metal.
81. Mechanism. A,W,S. (3,3,3) McIntyre, Edmonds, Tymstra, Crain, Cooper.
Operation of machines involving the transmission of forces and the production of determinate motions. Pr., G.E. 3, Math. 32.
82. Steam Engineering. A,W,S. (3, 3, 3)
Eastwood, McMinn, Edmonds, Tymstra, Crain, Cooper.
Various apparatus used in modern steam plants. Not open to freshmen. Pr., G.E. 2.
83. Steam Engineering Laboratory. A,W,S. (3, 3, 3)
Wilson, McIntyre, Edmonds.
Calibrations of instruments; horse-power tests; complete engine and boiler test. Preceded or accompanied by 82.
104. Manufacturing Methods. W,S. (1) Schaller.
Founding, welding, and machining of non-ferrous metals. Pr., 53, 54, 55.
105. Advanced Manufacturing Methods. A. (1) Sullivan.
Individual problems of machine tooling. Pr., 53, 54, 55.
106. Advanced Manufacturing Methods. W. (1) Sullivan.
Study of machining problems from the standpoint of production. Pr., 105.
107. Production Planning. S. (1) Schaller.
Design and equipment of a representative manufacturing plant. Pr., 106.
108. Production Management. A,S. (3) Schaller.
Study of location, operation, and organization of manufacturing plants.

* Not offered in 1942-1943.

109. **Factory Cost Analysis.** W. (3) Schaller.
Analyzing shop operations from the standpoint of manufacturing costs.
110. **Heating and Ventilation.** S. (2) Eastwood.
Abridged for architecture students. Pr., junior standing in architecture.
- 111, 112. **Machine Design.** A,W, S. (3, 3) McMinn, McIntyre, Edmonds, Tymstra, Crain, Cooper.
Design of machine details. Pr., C.E. 92.
- 113, 114. **Machine Design.** A,W. (2,2) Winslow.
Advanced problems in machine design. Pr., 112.
- *115. **Steam Engine Design.**
- 123, 124. **Engines and Boilers.** A,W. (2, 3) Winslow.
Analysis of power, speed regulation and forces in various types of engines. Steam boiler designs and specifications. Pr., 83; C.E. 91.
- *140. **Time Study and Job Analysis.**
- 151, 152, 153. **Experimental Engineering.** A,W,S. (3,3,3) Wilson, McIntyre, Edmonds.
Continuation of 83, involving more extended and complete investigations. Pr., 83.
167. **Engineering Materials.** A,W,S. (3) McMinn.
Properties of the various materials used in engineering construction. Recitation and laboratory. Pr., C.E. 92.
182. **Heating and Ventilation.** W. (3) Eastwood.
Various systems of heating and ventilating methods with designs. Pr., 82, junior standing in engineering.
183. **Thermodynamics and Refrigeration.** A, S. (5) Eastwood.
Principles underlying transformation of heat into work. Special application to engineering. Pr., 82, junior standing in engineering.
184. **Power Plants.** S. (5) Winslow.
Design of steam power plants, involving their location, building, prime movers, and power transmission. Pr., 83, 123.
185. **Naval Architecture.** S. (3) Rowlands.
Theory of naval architecture. Displacement; stability; strength; construction. Pr., junior standing.
- 191, 192, 193. **Research.** A,W, S. (2 to 5 each quarter.) Staff.
195. **Thesis.** A,W,S. (2 to 5 each quarter.) Wilson.
Investigation, design, or experiment, under direction of the professor in charge. To be taken in the senior year.
198. **Internal Combustion Engines.** A,W,S. (3) Wilson.
Development of gas engineering; stationary, marine, automobile, and airplane motors, and gas-producer plants. Pr., 82, junior standing in engineering.
199. **Internal Combustion Engine Design.** S. (3) Wilson.
Calculations and plans for the design of a given type of motor. Pr., 198.

Courses for Graduates Only

200. **Vibrations of Machinery.** A. (3) Winslow.
Mathematical investigations of vibration phenomena, emphasis on applications to operating conditions of machines. Elective for approved seniors, graduates.
- 211, 212, 213. **Research.** A,W,S. (3, 3, 3) Staff.

* Not offered in 1942-1943.

MILITARY SCIENCE AND TACTICS

Colonel Eden; Lieutenant Colonel Richards, Lieutenant Colonel Ames, Lieutenant Colonel Spoerry; Major Tilton, Major Ramsey, Major Joseph; Captain Cocheu, Captain Myers; First Lieutenant Wienker, First Lieutenant Brinsmead, First Lieutenant Cone, First Lieutenant Hooper, First Lieutenant Vivrette, First Lieutenant Collins; Second Lieutenant Dawson; Staff Sergeant Chandler; Sergeants Whitchurch, Gage, Harrison, Mehaffie, Bolster, Burke.

The instruction for the first two years, together with that provided for the third and fourth years, constitutes the courses prescribed by the War Department for institutional units of the Reserve Officers' Training Corps. The advanced courses, those of the third and fourth years, are open to selected students who have completed the first two years (basic course) of instruction and training.

First Year

1, 2, 3. Basic Infantry. A,W,S. (2, 2, 2)

Leadership, orientation (National Defense Act, obligations of citizenship, military history and policy); military discipline and courtesy; military sanitation and first aid; military and infantry organization; weapons (the rifle, and rifle marksmanship, automatic rifle); combat training (scouting and patrolling, musketry). Two recitations and one lab. period a week.

4, 5, 6. Basic Coast Artillery. A,W,S. (2, 2, 2)

Leadership; military fundamentals (National Defense Act, obligations of citizenship, military history and policy); military and coast artillery organization; military discipline and courtesy; military sanitation and first aid; map reading; rifle marksmanship; coast artillery instruction (ammunition, weapons and materiel, rigging). Two recitations and one lab. period a week.

11, 12, 13. Band. A,W,S. (2,2,2)

Second Year

51, 52, 53. Basic Infantry. A,W,S. (2, 2, 2)

Leadership; map reading, military fundamentals (organization, military history, and current events); weapons (machine guns and characteristics of supporting weapons); combat training (combat principles of rifle squad and section, attack, defense, and security). Two recitations and one lab. period a week.

61, 62, 63. Basic Coast Artillery. A,W,S. (2, 2, 2)

Leadership, coast artillery instruction (weapons and materiel, fire control instruments for seacoast artillery, basic gunnery for anti-aircraft, identification of aircraft, characteristics of naval targets). Two recitations and one lab. period a week.

81, 82, 83. Band. A,W,S. (2, 2, 2)

Pr., 13.

Third Year

104. Advanced Infantry. A,W,S. (3)

Leadership; map and aerial photograph reading; care and operation of motor vehicles; machine gun platoon and howitzer company squad, review of rifle squad and platoon), calisthenics. Five hours a week.

105. Advanced Infantry. A,W,S. (3)

Leadership; weapons (machine guns, mortars, 37 mm. guns, rifle and pistol marksmanship); combat training (field fortifications, combat principles of the rifle platoon, machine gun platoon and howitzer company squad, review of rifle squad and platoon). calisthenics. Five hours a week.

106. **Advanced Infantry. A,W,S. (3)**
Leadership; weapons (machine guns, mortars, 37 mm. guns, rifle and pistol marksmanship; characteristics of infantry supporting weapons, rifle and hand grenades), calisthenics. Five hours a week.
114. **Advanced Coast Artillery. A,W,S. (3)**
Leadership; administration; coast artillery instruction (fire control and position finding for seacoast artillery, gunnery for seacoast artillery). Five hours a week.
115. **Advanced Coast Artillery. A,W,S. (3)**
Leadership; coast artillery instruction (gunnery for anti-aircraft artillery). Five hours a week.
116. **Advanced Coast Artillery. A,W,S. (3)**
Leadership; coast artillery instruction (signal communications, orientation); rifle and pistol marksmanship. Five hours a week.
124. **Advanced Quartermaster Corps. S. (3)**
Fiscal accounting; procurement authorities; circular proposals and bids; contracts; salvage; leadership. Five hours a week.
125. **Advanced Quartermaster Corps. A. (3)**
Property accounting; classification of supplies; warehousing; inspection; leadership. Five hours a week.
126. **Advanced Quartermaster Corps. W. (3)**
Map and photomap reading; organization; company administration; function of Quartermaster Corps; operations of a post or camp Quartermaster office; leadership. Five hours a week.

Fourth Year

154. **Advanced Infantry. A,W,S. (3)**
Leadership; military law; combat principles to include the platoon. Five hours a week.
155. **Advanced Infantry. A,W,S. (3)**
Leadership; oral training (review of offensive and defensive combat and combat orders, combat principles of the rifle company, combat intelligence, infantry signal communication); property and funds. Five hours a week.
156. **Advanced Infantry. A,W,S. (3)**
Leadership; weapons (tanks, mechanization); combat training (combat principles of rifle and heavy weapons, company platoon, anti-aircraft defense). Five hours a week.
164. **Advanced Coast Artillery. A,W,S. (3)**
Leadership; military history and policy; military law and administration; mechanization; defense against chemical warfare; coast artillery instruction (combat orders). Five hours a week.
165. **Advanced Coast Artillery. A,W,S. (3)**
Leadership; coast artillery instruction (artillery technique and tactics, field fortifications). Five hours a week.
166. **Advanced Coast Artillery. A,W,S. (3)**
Leadership; artillery technique and tactics; coast artillery motor transportation; aerial photograph reading; administration; property and funds; duties of Reserve Officers. Five hours a week.
174. **Advanced Quartermaster Corps. S. (3)**
Training methods; transportation; territorial organization for supply; organization of Quartermaster Corps troop units; map reading; calisthenics; leadership. Five hours a week.
- *175. **Advanced Quartermaster Corps.**
176. **Advanced Quartermaster Corps. W. (3)**
Mess management; subsistence; military law and courts-martial; leadership; calisthenics. Five hours a week.

* Not offered in 1942-1943.

MINING, METALLURGICAL AND CERAMIC ENGINEERING

Professors Roberts, Daniels; Associate Professor Corey; Assistant Professor Pask; Instructor Keith; Associate Wick.

Mining Engineering

51. **Elements of Mining. A. (3)** Daniels.
Principles of mining, including prospecting, boring, drilling, explosives, rock breaking. Three recitations. Pr., G.E. 1, 2, or sophomore standing.
52. **Methods of Mining. W. (3)** Daniels.
Continuation of 51. Methods of working metal, coal, and placer mines, non-metallic deposits. Two recitations and one lab. period. Pr., 51.
101. **Milling. A. (3)** Roberts, Wick.
Preliminary course in the principles and practice of mineral dressing. Two recitations and one lab. period. Pr., junior engineering standing.
103. **Mine Rescue Training. W. (1)** Daniels.
Practice in the use of oxygen rescue apparatus, instruction in first-aid; instruction during first six weeks of quarter. Physical examination required.
106. **Mine Excursion. S. (1)** Staff.
Five-day trip in spring of junior year to a neighboring mining region; detailed inspection of mines. Expense approximately \$25.
107. **Mine Excursion. S. (1)** Staff.
Five-day trip in spring of senior year, similar to 106.
122. **Coal Mining Methods. W. (3)** Daniels.
Special methods involved in prospecting, development, and operation of coal and stratified deposits. Three recitations. Pr., 51, 52.
151. **Elements of Mining. A. (3)** Daniels.
Principles of mining, including prospecting, boring, drilling, explosives, rock breaking. Three recitations. Pr., junior standing. Not open to those who have had 51.
152. **Methods of Mining. W. (3)** Daniels.
Continuation of 151. Methods of working metal, coal, and placer mines, non-metallic deposits. Two recitations and one lab. period. Pr., 151 and junior standing. Not open to those who have had 52.
161. **Mineral Dressing. A. (4)** Roberts, Wick.
The principal branches of mineral dressing, with laboratory practice in complete mill tests. Two recitations, two lab. periods. Pr., 101. Not open to those who have had 152 before autumn, 1941.
162. **Economics of the Mineral Industry. W. (4)** Roberts, Wick.
Mine valuation; costs of plant and operation; financial provisions; mining law. Three recitations, one lab. period. Pr., senior engineering standing.
163. **Mining Engineering. S. (4)** Roberts, Wick.
Principles and practice as exemplified by typical mines. Laboratory studies of air compressors, drills, etc.; studies at near-by mines. Two recitations, two lab. periods. Pr., senior engineering standing. Not open to students who have had 151 before autumn, 1941.
- *164. **Mine Operation.**
171. **Mine Ventilation. S. (3)** Daniels.
Composition and properties of mine gases; principles of ventilation applied to both coal and metal mines. Three recitations. Pr., 51, 52, 103.

* Not offered in 1942-1943.

176. Coal Preparation. S. (5) Daniels.
Methods of preparing coal by dry and wet cleaning processes; control by float-and-sink methods. Examinations of washing plants at local mines. Two recitations, two 4-hour lab. periods. Pr., 101, Met. 103.
182. Mineral Industry Management. S. (3) Daniels.
Employment of labor, systems of payment, social and economic aspects of mineral engineering operations. Three recitations. Pr., senior engineering standing, E.B. 3.
- 191, 192, 193, 194. Thesis. A,W,S. (†) Staff.
Preparation of graduation thesis in mining, metallurgical, or ceramic engineering. Completed thesis due three weeks before graduation. Pr., senior standing. Minimum of five credits required.

Courses for Graduates Only

- 201, 202, 203. Seminar. A,W,S. (1, 1, 1) Staff.
Lectures and discussions by Bureau of Mines staff, mining engineering faculty and fellows. Required of fellowship holders in the College of Mines. Pr., graduate standing.
- 211, 212, 213, 214. Graduate Thesis. A,W,S. (†) Staff.
Preparation of thesis in mining, metallurgical, or ceramic engineering. Finished thesis due one month before graduation. Total of nine credits allowed for thesis.
- 221, 222, 223. Metal Mining. † (†) Roberts.
Studies in metal mining. Pr., graduate standing.
- 231, 232, 233. Mineral Dressing. † (†) Roberts.
Studies in ore dressing. Pr., graduate standing.
- 251, 252, 253. Coal Mining. † (†) Daniels.
Studies in coal mining or in the preparation of coal. Pr., graduate standing.
- 261, 262, 263. Fuels and Combustion. † (†) Daniels.
Fuels, their utilization and combustion. Pr., graduate standing.
271. Cooperative Research with U. S. Bureau of Mines. A. (6) Staff.
Investigations by holders of cooperative fellowships in College of Mines and Northwest Experiment Station.

Metallurgical Engineering

53. Elements of Metallurgy. S. (3) Corey.
Properties of metals and alloys, fuels, refractory materials, furnaces, the extraction of the common metals from their ores. Open to all engineering students with sophomore standing. Three recitations. Pr., Chem. 23.
101. Fire Assaying. A. (3) Corey, Wick.
Testing of reagents, crushing, sampling, and assaying of ores, furnace and mill products. One recitation, two lab. periods. Pr., Chem. 111.
102. Metallurgical Laboratory. S. (2) Corey, Wick.
Experiments illustrating metallurgical principles. One 4-hour lab. period. Pr., 53.
103. Fuel Technology. W. (4) Daniels, Corey.
Primary and manufactured fuels; source, composition, methods of utilization, and economy. Laboratory work in analysis of fuels. Three recitations, one lab. period. Pr., junior standing.

† To be arranged.

104. **Non-ferrous Metallurgy.** A. (3) Corey.
Metallurgy of copper, lead, zinc, gold, and silver, especially the methods of utilization, and economy. Three recitations. Pr., Met. 53.
153. **Elements of Metallurgy.** S. (3) Corey.
Properties of metals and alloys, fuels, refractory materials, furnaces, the extraction of the common metals from their ores. Three recitations. Pr., junior standing. Not open to those who have had 53.
154. **Wet Assaying.** W, S. (3) Corey.
Methods for the determination of elements in ores and furnace products. One recitation, two lab. periods. Pr., Chem. 109, 110, or 111.
155. **Iron and Steel.** A. (3) Daniels.
Metallurgy and manufacture of iron and steel; their properties and uses in engineering work. Three recitations. Pr., junior engineering standing.
160. **Metallurgical Analysis.** S. (2) Corey.
Technical methods of analysis of slags, industrial products and (for ceramics and geology students) clays and rocks. Two lab. periods. Pr., 153.
162. **Physical Metallurgy.** A. (3) Corey.
The constitution of metals and alloys and their relations to the physical and mechanical properties of the metal. Open to all upperclass engineering students. Three recitations.
163. **Metallography.** W. (3) Corey, Wick.
Preparation, photomicrography, study of metal sections. One recitation, two lab. periods. Open to all senior engineering students.
165. **Metallurgical Calculations.** W. (3) Corey.
Physical chemistry of the metallurgist, slag calculations, furnace problems. Three recitations. Pr., 104.
166. **Advanced Non-ferrous Metallurgy.** S. (3) Corey.
Study of methods and practice in the extraction of the minor non-ferrous metals. Pr., senior mines or graduate standing.

Courses for Graduates Only

- 221, 222, 223. **Advanced Metallurgy.** † (†) Corey.
Studies in metallurgy. Pr., graduate standing.

Ceramic Engineering

90. **Industrial Minerals.** A, W, S. (3) Pask.
Beginning study of non-metallic minerals and their products. Three recitations. Pr., sophomore standing in mines, engineering, or science.
100. **Clays, Plasticity, and Suspensions.** A. (3) Pask.
Physical characteristics of ceramic materials in the plastic condition and as slip-suspensions. Three recitations. Pr., 90.
101. **Firing and Firing Problems.** W. (3) Pask.
Effect of heat on ceramic materials; vitrification of clay; melting, fusion, crystallization of silicates. Three recitations. Pr., 100.
102. **Ceramic Decoration.** S. (3 to 6) Keith.
Value of decoration in ceramics; study of ceramic colors, surface textures, glazes. Three recitations. Pr., 101.

† To be arranged.

104. Calculations for Bodies and Glazes. A. (3) Keith.
Physics and chemistry of preparing, drying, firing, and testing ceramic materials and glazes. Three recitations. Pr., junior standing in mines or engineering.
105. Drying and Drying Problems. W. (3) Keith.
Problems in the physics and chemistry of drying clay products. Three recitations. Pr., junior standing in mines or engineering.
110. Ceramic Physical-Chemical Measurements. S. (2) Keith.
Testing of clays and other ceramic materials. One recitation, two lab. periods. Pr., junior standing in mines or engineering.
- 121, 122, 123. Ceramic Products Laboratory. A,W,S. (5,5,5) Pask, Keith.
Laboratory problems in preparing raw materials; manufacture and testing of ceramic and non-metallic products. Two recitations, three lab. periods. Pr., 90 to 110.
- 131, 132, 133. General Ceramics, Pottery Techniques. A,W,S. (3 to 5 ea. qtr.) Keith.
(For 3 hrs. credit, 6 hrs. lab.; for 5 hrs. credit, 8 hrs. lab. and a special problem.) Industrial and craft methods of manufacturing ceramic products, mainly architectural terra cotta and pottery; decorative processes; glaze studies. No prerequisites.
- 161, 162, 163. Glazes, Enamels and Refractories. A,W,S. (†) Pask, Keith.
Laboratory problems in the application of ceramic colors, glazes, and enamels. Consent of instructor required.
190. Industrial Minerals. A,W,S. (3) Pask.
Beginning study of non-metallic minerals and their products. Three recitations. Pr., junior standing. Not open to those who have had 90.

Courses for Graduates Only

- 221, 222, 223. Ceramic Research. † (†) Pask.
Studies of the ceramic resources of the Pacific Northwest or in the development of new products or processes. Pr., graduate standing.

MUSIC

Professors Wood, Rosen, Werner; Associate Professors Jacobson, Lawrence, McKay, Munro, Normann, Van Ogle; Assistant Professors Bostwick, Groth, Hall, Irvine, Kirchner, Welke, Wilson, Woodcock; Instructors Creel, Eichinger; Associates Beck, Graf, Horsfall, Pauly, Phillips, Tustin; Lecturers Gombosi, Kinsella.

The following courses are recommended as electives for students not majoring in music: (Such students should consult the music registration adviser before registering.) Music 14, 15, 16, 21, 22, 23, 24, 51, 54, 55, 87, 105, 106, 127, 128, 132, 151, 153, 161, 162, 190, 191, 192, and courses in vocal or instrumental study and ensemble.

- 1AX, 2AX, 3AX. Elementary Piano. A,W,S. (2, 2, 2) Bostwick.
Group instruction. For music students not majoring in piano. Fee, \$10.‡
- 1CX, 2CX, 3CX. Elementary Voice. A,W,S. (2, 2, 2) Wilson.
Group instruction. For music students not majoring in voice. Fee, \$10.‡
- 1FX, 2FX, 3FX. Elementary Woodwind. A,W,S. (2, 2, 2)
Horsfall, Tustin, Phillips, Pauly.
Group instruction. Fee, \$10.‡
4. Introduction to Music Literature and History. W,S. (2) Woodcock.
Technic of listening and of using reference materials in relation to concert programs. Required of freshman music majors.

† To be arranged.

‡ Not governed by refund provisions, page 64, if withdrawal is made after beginning of instruction.

- 7AX, 8AX, 9AX. Elementary Piano. A,W,S. (2,2,2) Bostwick.
Group instruction, second year. Fee, \$10.‡
- 7CX, 8CX, 9CX. Elementary Voice. A,W,S. (2, 2, 2) Wilson.
Group instruction, second year. Fee, \$10.‡
- 10-11-12. University Chorus. A,W,S. (1-1-1) Lawrence.
Mixed voices. Pr., some choral experience, ability to read music at sight.
14. Fundamentals I. A,W,S. (3) Groth in charge.
Laboratory work in hearing and reading music; keyboard drill and dictation; melody writing.
15. Fundamentals II. A,W,S. (3) Groth in charge.
Pr., 14 or exemption.
16. Fundamentals III. A,W,S. (3) Groth in charge.
Pr., 15 or exemption.
- 18, 19, 20. Vocal or Instrumental Music. A,W,S. (2 or 3 each quarter.) Staff.
Majors in vocal or instrumental music will not receive credit for 18, 19, 20, except in a secondary branch.
Register for one-hour class in interpretation and repertory and for one or two individual half-hour lessons per week. The course numbers indicate successive grades of advancement, and any number may be used in any quarter. Detailed description of the courses in vocal and instrumental music may be obtained on application to the secretary of the School of Music. A student who has received two credits may register under the same course number for one additional credit. Fee, \$25 or \$50.‡ The various branches of vocal and instrumental music are designated by capital letters immediately following the course number:
- A. Piano. Van Ogle (A1), Jacobson (A2), Creel (A3).
 - B. Violin or Viola. Rosen.
 - C. Voice. Werner (C1), Lawrence (C2).
 - D. Violoncello or Bass. Kirchner.
 - E. Organ. Eichinger.
 - F. Woodwind. Horsfall (flute, F1), Tustin (oboe, F2), Phillips (clarinet, F3), Pauly (bassoon, F4).
 - G. Brass.
 - H. Harp. Beck (G1), Graf (G2).
21. Survey of Music. A,W,S. (5) Woodcock, Irvine.
Illustrated lectures with supplementary readings to provide backgrounds for understanding of common musical forms, idioms, styles.
22. Music Appreciation. A,W,S. (2) Irvine.
To increase understanding and enjoyment of music. For the general student; no credit to music majors. By special work, upper division students may receive upper division credit.
23. Music Appreciation: Opera. W. (2) Irvine.
Special attention to operas of the current season. By special work, upper division students may receive upper division credit.
24. Music Appreciation: Solo and Chamber Music. S. (2) Irvine.
By special work, upper division students may receive upper division credit.
- 30, 31, 32. Elementary Band. A,W,S. (1, 1, 1) Welke.
For underclassmen not registered in Military Band.
- 37, 38, 39. Piano Ensemble I. A,W,S. (1, 1, 1) Van Ogle.
Experience in reading symphonic literature arranged for two pianos. Permission required.
40. Elementary Orchestral Instruments (Woodwind). A,W,S. (3) Welke, Normann.

Fundamental playing principles of each woodwind instrument. Pr., 15.

‡ Not governed by refund provisions, page 64, if withdrawal is made after beginning of instruction.

41. **Elementary Orchestral Instruments (Brass).** A,W,S. (3) Welke, Normann.
Fundamental playing principles of each brass instrument. Pr., 15.
42. **Elementary Orchestral Instruments (Strings).** A,W,S. (3) Kirchner.
Fundamental playing principles of each string instrument. Pr., 15.
43. **Elementary Orchestra.** A,W,S. (2) Welke.
Performance and analysis of school orchestra material.
- 48, 49, 50. **Vocal or Instrumental Music.** A,W,S. (2 or 3 each quarter.) Staff.
First year for vocal or instrumental majors. See description for 18, 19, 20.
51. **Elementary Harmony.** A,W,S. (5) Staff.
Structure and physical basis of chords. All primary harmonies and non-harmonic tones. Pr., 16 and 3AX or equivalent.
52. **Score Reading.** A,W,S. (3) Irvine.
Practice in reading vocal and instrumental scores; special attention to sight reading, harmonic analysis, ear training, and transposition. Pr., 51.
53. **Intermediate Harmony.** A,W,S. (5) Eichinger.
Secondary harmonies and simple modulations. Pr., 52 or exemption.
54. **The Symphonic Poem.** S. (2) Van Ogle.
Berlioz, Liszt, Strauss. Pr., 4 or 72 or 22.
55. **Russian Composers.** W. (2) Van Ogle.
The Russian Five, Chaikovsky. Pr., 4 or 72 or 22.
60. **Advanced Orchestral Instruments (Wind)** W. (3) Welke.
Class instruction in woodwind and brass. Pr., 40 or permission.
62. **Advanced Orchestral Instruments (String).** S. (3) Kirchner.
Class instruction in strings. Pr., 42 or permission.
- 65-66-67. **Choral Ensemble.** A,W,S. (2-2-2) Lawrence, Werner.
Men's and Women's Glee Clubs. Audition required.
- 68, 69, 70. **Vocal or Instrumental Music.** A,W,S. (2 or 3 each quarter.) Staff.
Second year for vocal or instrumental majors. See description for 18, 19, 20.
72. **Music Literature and History.** A,W. (2) Woodcock.
Study of style, general design, historical background of standard concert repertoire with emphasis on current programs. Pr., 15.
- 80-81-82. **University Choir.** A,W,S. (2-2-2) Lawrence.
Mixed voices. Audition required. Not open to freshmen.
87. **Gregorian Chant.** A. (1) Woodcock.
Introductory study of rhythm, modes, forms, elements of performance and conducting. No credit to those taking 187.
- 90, 91, 92. **University Concert Band.** A,W,S. (2,2,2) Welke.
Study and production of more difficult compositions for band. Audition required first week of quarter.
- 93, 94, 95. **University Symphony Orchestra.** A,W,S. (2,2,2) Kirchner.
Study and production of more difficult orchestral compositions. Auditions every afternoon, first week of quarter.
101. **Advanced Harmony.** A,W,S. (5) McKay.
Chromatic harmonies and modulations. Pr., 109.

105. **The French Impressionists.** A. (2) Van Ogle.
Debussy, Ravel, Satie, and the "Six."
106. **Modern Spanish and British Composers.** W. (2) Van Ogle.
109. **Counterpoint.** A,W,S. (5) Wood, Eichinger.
Regulation of concurrent melodies. Pr., 53.
112. **Musical Forms.** A,S. (5) Wood, Woodcock.
Analysis and exercises in composition. Pr., 53.
113. **Elementary School Music.** A,W. (5) Normann.
Application of educational principles to the teaching of music in the first six grades. Pr., 51, 127.
116. **Junior High School Music.** A,W. (3) Hall.
Contribution of music to the needs of the adolescent. Pr., 113, 136.
- 118, 119, 120. **Vocal or Instrumental Music.** A,W,S. (2 or 3 each quarter) Staff.
Third year for vocal or instrumental majors. See description for 18, 19, 20.
- 121-122-123. **Madrigal Singers.** A,W,S. (2-2-2) Hall.
An organization of selected voices.
- 124, 125, 126. **Chamber Music.** A,W,S. (2, 2, 2) Rosen, Jacobson.
Literature for small instrumental groups both with and without piano. Pr., permission of instructor.
- 127, 128. **Choral Music.** A,W,S. (2,2) Groth, Hall.
A cappella singing with emphasis upon skill in part-singing and interpretation. Pr., 51.
132. **Haydn, Mozart, and Beethoven.** W,S. (2) Woodcock.
Orchestral and chamber music. Pr., 112.
136. **Technique of Conducting.** W,S. (3) Munro.
Principles of conducting; practical experience in directing choral groups. Pr., 127.
138. **Accompanying.** W. (2) Woodcock.
Study of music of different types and periods for piano in combination with voice or instruments. Permission of instructor required.
139. **Piano Ensemble II.** A,S. (2) Jacobson.
Two-piano literature for advanced pianists. Permission of instructor required.
143. **Orchestration.** W. (5) McKay.
Technic of composing and arranging for instrumental and vocal ensembles. Pr., 109.
145. **Church Music.** A. (3) Munro.
Comprehensive study of the chant, anthem, solo, and small ensemble. Pr., 136.
- 147, 148, 149. **Composers' Laboratory, First Year.** A,W,S. (3,3,3) McKay.
Problems of contemporary music, with practical and individual procedure. For composition majors and others specially qualified. Pr., permission.
151. **Richard Wagner.** A. (2) Van Ogle.
His theories and use of motives.
153. **Modern Russian and Finnish Composers.** S. (2) Van Ogle.
Scriabin, Stravinsky, Sibelius.
155. **Music Supervision.** A,S. (3) Normann.
Problems related to the organization and supervision of school music. Pr., Educ. 75R.

- 157, 158, 159. **Composers' Laboratory, Second Year.** A,W,S. (3,3,3) McKay.
Problems of contemporary music with practical and individual procedure. For composition majors and others specially qualified. Pr., permission.
160. **Song Literature.** W. (2) Werner.
A study of the Art Song from the standpoint of interpretation. Permission required.
161. **Music in the Americas.** W. (3) Kinscella.
History of the music of the Americas to the beginning of the twentieth century. Lecture and illustration.
162. **Music in the Americas.** S. (3) Kinscella.
History of music in the Americas in the twentieth century. Lecture and illustration.
163. **Advanced Counterpoint.** W. (5) Wood.
Choral prelude, invention, fugue. Analysis and composition. Pr., 109.
- *165-166-167. **Piano Teaching.**
- 168, 169, 170. **Vocal or Instrumental Music.** A,W,S. (2 or 3 each quarter.) Staff.
Fourth year for vocal or instrumental majors. See description for 18, 19, 20.
180. **Orchestral Conducting.** A,W,S. (3) Welke.
Practical experience afforded by combining with 43. Pr., 40, 42, 136.
181. **History of Keyboard Music.** W. (3) Kinscella.
Keyboard music from the earliest times to the present day. Lecture and illustration.
187. **Music of the Middle Ages.** A. (3) Wood, Gombosi.
Song and polyphony up to the sixteenth century. Lectures with laboratory in Gregorian chant.
190. **Palestrina to Bach.** A. (3) Munro.
Detailed study and performance. Pr., senior standing.
191. **Vocal Music: Haydn to Brahms.** W. (3) Wilson.
Detailed study and performance. Pr., senior standing.
192. **Contemporary Music.** S. (3) McKay, Wilson.
Twentieth century music literature, its idioms and tendencies, through performance. Pr., senior standing.
193. **Music History Reading Course.** A,S. (5) Woodcock.
Required of music majors as a finishing course and of graduate students from other institutions.
195. **Choral Conducting.** S. (3) Munro.
Practical experience and analysis of choral compositions. Pr., 136.
199. **Senior Recital.** A,W,S. (2) Staff.
Pr., permission of faculty committee.
- Teachers' Course in Music. See Education 75R.

Courses for Graduates Only

200. **Introduction to Musicology.** A. (2) Irvine.
Survey of scope, aims, and methods; training in research procedure. Lectures, reports, and discussions. Permission required.
- 201, 202, 203. **Graduate Composition.** † (†) McKay.
204, 205, 206. **Research.** † (†) Staff.
Individual problems in music education or musicology. Pr., permission.

* Not offered in 1942-1943.

† To be arranged.

- 207, 208, 209. Thesis. † (†) Staff.
 Original contribution from student's field of research, or acceptable original composition performed before a committee of the faculty.
- *210. History of Musical Performance.
- *211. Music of the Elizabethan Age.
- *212. Opera.
- 218, 219, 220. Graduate Vocal or Instrumental Music. A,W,S. (2 or 3) Staff.
 Pr., thirty credits in the same branch of music. See description for 18, 19, 20.
221. History of Instruments. A. (2) Gombosi.
 Given every other year, alternating with 210.
222. History of Notation. W. (2) Gombosi.
 Given every other year, alternating with 211.
223. History of Theory. S. (2) Gombosi.
 Given every other year, alternating with 212.
230. Seminar in Music Education. A,W,S. (1 to 3) Munro.
 Selected topics in secondary school music and supervision. Pr., one year of approved teaching experience.
233. Seminar in Musicology. A,W,S. (1 to 3) Gombosi.
 Selected topics in music history, literature, and theory. Pr., permission.

NAVAL SCIENCE AND TACTICS

Captain Barr, Captain Wood; Lieutenant Commander Warren, Lieutenant Commander Farwell, Lieutenant Commander Willis (MC), Lieutenant Commander Ramsey, Lieutenant Commander Thompson; Lieutenant Wendelburg; Chief Gunner's Mate Hamilton; Chief Quartermaster Harmony; Chief Turret Captain Sincere, Chief Turret Captain Hoffman; Chief Yeoman Littell, Chief Yeoman Berns; Chief Specialist Corbett.

First Year

- 1, 2, 3. Basic Course—Indoctrination and Seamanship. A,W,S. (3, 3, 3)
 Theory and practice in elements of radio communication, history and traditions of our Navy, military drill under arms, small boats under oars and sail. Winter and spring quarters offer a thorough theoretical and practical course in seamanship. International and Inland Rules of the Road, and the elements of piloting. Three hours a week plus two hours of drill.

Second Year

- 51-52-53. Basic Course—Navigation and Nautical Astronomy †. A,W,S. (3-3-3)
 Theory and practice in piloting and ocean navigation. Includes methods of chart construction; variation and deviation of a compass; calculation of a ship's position by dead reckoning, by observation of celestial objects, and by bearings of terrestrial objects, or by any combination of the three. Use of navigational instruments. Compensation of the compass. Calculation of tides and currents. Air navigation. Radio and navigation by radio bearings. Three hours a week plus two hours of drill. Pr., advanced algebra and plane trigonometry.

†To be arranged.

‡ See section regarding summer cruises, page 164. The cruises are offered only to those regularly enrolled in the R.O.T.C.

* Not offered in 1942-1943.

Third Year

101, 102, 103. Advanced Course—Ordnance, Gunnery, Naval Engineering and Electricity. A,W,S. (3, 3, 3)

Offered to Naval R.O.T.C. students only. Theoretical course in ordnance and including interior and exterior ballistics, gunnery, powder, and explosives. Electrical installations in the Navy. Naval machinery. Radio communications. Three hours a week, plus two hours of drill.

110. Advanced Course Cruise. Su. (3)

For Naval R.O.T.C. students only. Required practice cruise, on a vessel of the United States Navy, of about three weeks in the summer, following completion of Nav. Sci. 103. Practical training in general ship's duties at deck and engineering stations, and gunnery practice to supplement theoretical work of the first three years in naval science courses.

Fourth Year

151, 152, 153. Advanced Course. A,W,S. (3, 3, 3)

For Naval R.O.T.C. students only. Leadership, administration, strategy and tactics, naval communications, naval aviation, military law; supplemented by a Moot Court and week-end cruises (voluntary) in a naval vessel. Three hours a week, plus two hours of drill.

Courses Open to General Registration

The following courses in naval science are open to general registration and are offered to all students registered in the University not enrolled in the Naval Reserve Officers' Training Corps.

55-56. Seamanship. W,S. (3-3)

Same as 2 and 3.

57c. Seamanship. (By Extension Only.) (3)

Farwell.

Rules of the Road, collision cases. Complete analysis of the practical application of the Nautical Rules of the Road.

61-62-. Sea Navigation. A,W. (3-3-)

Same as 51-52. Pr., advanced algebra and plane trigonometry.

-63. Advanced Sea Navigation and Air Navigation. S. (-3)

Same as 53.

NAVAL AVIATION TRAINING

The Navy Department offers to students of junior standing or University graduates a complete course in Naval Aviation. This training is divided into four phases:

- (a) Physical training and Ground School work at Naval Aviation Induction Centers; three months.
- (b) Preliminary flight training at Naval Reserve Air Bases; three months.
- (c) Advanced flight training at U. S. Naval Air Stations at Pensacola, Florida, and Corpus Christi, Texas.
- (d) Active duty as Aviation Reserve Ensign in the U. S. Fleet; for the duration of the present national emergency, with regular promotion and opportunity to transfer to the Regular Navy.

Enrollment in the Naval R.O.T.C. is not necessary. For particulars, apply to the Professor of Naval Science and Tactics, Naval R.O.T.C. Bldg., on the campus, or to the Procurement Officer, Room 301, 117 Marion Street, Seattle, Washington.

NURSING EDUCATION

Professor Soule; Associate Professor Adams; Assistant Professors Cross, Leahy, Olcott, Smith; Instructors Anderson, Arnason, Basham, Braker, Byers, Coffman, Forman, Hejtmánek, Johnson, Lamberty, Larson, McDuffee, Miller, Moser, Northrop, Shattuck, Slough, Svelander, Takayoshi, Watson; Lecturers Hoedemaker, Newsom, Powers.

1. **History of Nursing.** A,W, S. (3) Soule, Leahy.
Informational study of nursing from the earliest times; traditions of nursing as a profession. Survey of the present field of nursing. Open to any woman student in the University.
 5. **Home Care of the Sick, and Child Hygiene.** A, S. (3) Anderson.
Practical course for women students. Instruction in home nursing procedures, including care of patients ill with common communicable diseases, care of chronics, and infants.
- All Courses 120-148 Open Only to Nursing Majors Enrolled in Curriculum "A"**
120. **Principles and Practice of Elementary Nursing.** A, S. (5) Byers, Olcott.
Elementary nursing techniques used in general care of patients. Two lectures, three two-hour laboratory periods.
 121. **Advanced Nursing Procedure and Methods of Planning Individualized Nursing Care.** W. (3) Byers.
Clinical case study and practice in making advanced nursing care plans, considering the physical, mental, social, and economic needs of the patient.
 - 122-123. **Introduction to Hospital and Special Therapy Practice.** A,W, S. (5-5) Olcott, Byers.
Twenty-four weeks hospital practice in elementary nursing and special therapy, including medical and surgical wards, hospital supplies, pharmacy, diet therapy, physical therapy, laboratory and X-ray services. N. Ed. 123 not open to students who have had 65.
 124. **Principles of General Medicine, Surgery, Otolaryngology and Nursing Care.** W. (5) Braker, Miller, Takayoshi, physicians.
Survey of these fields with etiology, pathology, symptoms, complications, treatments, prevention, and specialized nursing of each disease. Lecture, demonstrations, clinics. Recording and nomenclature included. Not open to students who have had 60 and 70.
 125. **Principles of Medical and Surgical Specialties and Their Nursing Care.** A, S. (5) Braker, Miller, Takayoshi, Hejtmánek, physicians.
Including gynecology, endocrinology and metabolism, dermatology, neurology, orthopedics, and ophthalmology. Not open to students who have had 61, 71, 76.
 128. **Medical Nursing Practice.** A,W, S. (6) Braker.
Practical application of principles of nursing in medical diseases. Twelve weeks experience in medical wards, including weekly clinics, conference, and case studies on each disease.
 129. **Principles of Special Therapy.** A,W, S. (2) Olcott, department heads.
The use of light, electricity, heat, water, massage, exercise, and occupation as aids in the care or control of disease processes.
 130. **Principles of Preventive Medicine and Nursing Care in Communicable Diseases.** W. (4) Cross, Braker, physicians.
Etiology, modes of transmission, symptomatology, complications, treatment, methods of prevention and control in acute communicable, tuberculosis, and venereal diseases. Special emphasis on medical aseptic technique, specialized nursing care and assistance in public health education.
 132. **Surgical Nursing Practice.** A,W, S. (6) Takayoshi.
Practical application of principles of nursing in surgical diseases. Twelve weeks experience in surgical wards, including weekly clinic, conference and case study of each surgical disease.
 133. **Operating Room Practice.** A,W, S. (6) Hejtmánek.
Practical application of principles of operating room technique, including twelve weeks experience in operative nursing and anaesthetic care.

134. **Nursing Practice in Clinics and Emergency Services.** A,W,S. (6)
Miller, Bovier.
Six weeks out-patient and emergency practice, six weeks in-patient emergency and orthopedic practice including weekly clinics, conferences, and case assignments; 36 hours per week hospital practice.
137. **Introduction to Public Health Nursing.** W. (2)
Soule.
138. **Professional Problems in Nursing.** A,S. (2)
Smith.
Includes study of nursing organizations, legislation, grading of schools of nursing, and similar topics.
139. **Principles of Pediatrics and Pediatric Nursing.** A,W,S. (5)
Shattuck, Basham, physicians.
Physical and mental development of normal children, principles of their care and feeding. Clinical presentation of cases illustrating common diseases of infancy and childhood and the appropriate medical and nursing care, together with program of prevention.
140. **Pediatric Nursing Practice.** A,W,S. (6)
Shattuck, Basham.
Twelve weeks practical experience in nursing care of infants and children, including practice in formula room, nursery, out-patient, orthopedic, and pediatric wards, weekly ward clinics, conference, and case study.
141. **Principles of Obstetrics & Obstetrical Nursing.** W. (5) Forman, obstetrician.
Anatomical and physiological aspects of pregnancy, labor, and puerperium, care during normal, operative, and complicated labors, nursing care of mother and new-born. Lectures, demonstrations, clinics.
142. **Obstetrical Nursing Practice.** A,W,S. (6)
Forman, obstetrician.
Practical application of principles of obstetrical nursing. Twelve weeks experience in nursing care of patients during pre-natal, labor, and post-partum periods, including care of the new-born. Weekly clinics, conference, case study.
145. **Tuberculosis Nursing Practice.** A,W,S. (3)
Cross, Arnason.
Six weeks nursing practice in tuberculosis hospital and clinics.
146. **Visiting Nursing Practice.** A,W,S. (3)
Cross, Johnson.
Six weeks nursing practice in a public health nursing agency, including bedside nursing and public health field observation, with emphasis on communicable disease control.
147. **Principles of Psychiatry and Psychiatric Nursing.** A,W,S. (5)
Lamberty, Moser, psychiatrist.
Lectures, demonstrations, and clinics, dealing with various types of mental diseases, principles of mental hygiene, and nursing care of mentally ill patients.
148. **Psychiatric Nursing Practice.** A,W,S. (6)
Lamberty, Moser.
Practical application of principles of psychiatric nursing. Twelve weeks experience in psychiatric wards, out-patient, and commitment clinics; weekly ward clinic, conference and case study.
104. **Public Health Administration and Epidemiology.** W. (2)
Newsom.
Pr., graduate registered nurse or permission.
150. **Principles of Teaching Nursing and Health.** A,W. (5) Anderson, Adams.
Applied to school of nursing or the field of public health. Pr., graduate registered nurse.
151. **Administration of Schools of Nursing.** S. (5)
Adams.
Deals with organization and equipment. Curriculum and content of courses. Class and ward schedule of instruction and classes.
152. **Supervision of Hospital Departments.** W. (5)
Adams.
Organization, equipment, administration.
153. **Hospital Administration in Relation to Nursing Service.** S. (5)
Olcott, Adams.
Pr., graduate registered nurse.

154. **Cadet Teaching and Ward Administration in Hospitals.** A,W,S. (10) **Olcott, Adams.**
Pr., 150, 152, graduate registered nurse.
155. **Advanced Nursing Practice in Institutional Specialties.** A,W,S. (3) ———.
Twelve weeks advanced experience and review for the graduate nurse in her major specialty. Includes weekly doctors' clinics, nursing conference and case assignment, combined with 36 hours hospital practice per week.
156. **Advanced Nursing Practice in Emergency, Fracture, and Neurological Injuries.** A,W,S. (3) **Bovier.**
Twelve weeks experience in emergency care of the injured, including admission, receiving ward, emergency surgery, and post operative care. Includes weekly doctors' clinic, nursing conference, combined with a minimum of 36 hours hospital practice per week.
162. **Field Practice in Public Health Nursing.** A,W,S. (5) **Leahy, Watson, supervisors.**
Application of the principles of public health nursing in relation to teaching and nursing by means of supervised field practice. Must be taken concurrently with 163 and 164. Pr., 167.
163. **Field Practice in Public Health Nursing.** A,W,S. (5) **Leahy, Watson, supervisors.**
Application of the principles of public health nursing in relation to administrative activities and record work by means of supervised field practice. Must be taken concurrently with N.Ed. 162 and 164.
164. **Field Practice in Public Health Nursing.** A,W,S. (6) **Leahy, Watson, supervisors.**
Application of the principles of public health nursing in relation to family planning, use of social agencies, and the maintenance of community relationships by means of supervised field practice. Must be taken concurrently with N.Ed. 162 and 163.
165. **Survey of Current Literature in Specialized Fields in Public Health Nursing.** A,W,S. (2) **Leahy.**
Pr., 167.
166. **Advanced Field Work.** A,W,S. (12) **Leahy, Watson, supervisors.**
Supervised practice in the special fields of nursing. Two hours conference and thirty hours practice a week. Pr., 162, 163, 164.
167. **Principles of Public Health Nursing.** A,S. (3) **Soule.**
Policies and trends in the organization and administration of national, state, and local public health nursing services. Pr., graduate registered nurse.
168. **Special Fields of Public Health Nursing.** W. (5) **Leahy.**
Study of the functions, objectives, and program in the special fields of public health nursing. Pr., 167 or 169.
169. **Public Health.** A,S. (3) **Powers.**
History, development, principles of public health programs including official and non-official agencies with their community relationships. Pr., graduate registered nurse or health education major.
190. **Methods of Supervision of Public Health Nursing.** S. (3) **Leahy.**
Pr., 167, 168, 150, graduate registered nurse.

Courses for Graduates Only

- 201, 202, 203. **Seminar in Nursing Problems.** A,W,S. (†) **Staff.**
Pr., graduate registered nurse, thirty credits in nursing.
205. **Research in Nursing Education, Hospital Administration, Public Health Nursing.** A,W,S. (†) **Staff.**
Pr., 167, 168; Bact. 101, 102, 103, or Nurs. Educ. 150, 151, 152.

† To be arranged.

Service Courses for Other Hospitals

6. Principles and Practice of Elementary Attendant Nursing. A,W,S. (5)
Moser, assistant.
Inservice course for men and women attendants resident in approved hospitals. Instruction and practice in elementary nursing procedures and general hygienic care for persons chronically ill or convalescent.
9. Principles of Psychiatry and Psychiatric Attendant Nursing. A,W,S. (5)
Moser, assistant.
Lectures, demonstrations, and clinics, dealing with various types of mental diseases, principles of mental hygiene, and attendant care of mentally ill patients.
10. Psychiatric Attendant Nursing Practice. A,W,S. (6) Moser, assistant.
Practical application of principles of psychiatric attendant nursing. Twelve weeks experience in psychiatric wards, out-patient and commitment clinics; ward clinic, conference, and case study.

Service Courses for Other University Departments

- Phys. Edu. 6. Health Education. W,S. (2) Anderson.
Community hygiene. Development of public health program in the community. Two lectures a week.
- Phys. Educ. 10. Health Education. A,W,S. (5) McLellan, Anderson, Bliss.
Equivalent of P.E. 4, 6, 8.

OCEANOGRAPHIC LABORATORIES

Professors T. G. Thompson, Kincaid, Norris, Rigg, Utterback; Associate Professors Phifer, Robinson; Assistant Professors Church, Ordal; Instructor Crescitelli.

1. Survey of Oceanography. A, W. (5) Church.
Origin and extent of the oceans; nature of the sea bottom; cause and effects of currents and tides; animal and plant life in the sea.
101. General Oceanography. A, W. (5) Church.
Same as 1, but with additional work and readings. Pr., junior standing.
249. Graduate Seminar. A,W,S. (†) Staff.
Assigned readings and reports dealing with special topics.
250. Research in Oceanography. A,W,S. (†) Staff.
(1) Special investigations by advanced students; (2) research for the master's degree; (3) research for the doctor's degree. Maximum, forty-five credits.

Courses in Oceanographical Bacteriology.
See Bact. 201.

Courses in Oceanographical Botany.
See Bot. 205, 206, 207, 210, 211.

Courses in Oceanographical Chemistry.
See Chem. 155, 156, 166, 225.

Courses in Oceanographical Physics.
See Phys. 166, 219*.

Courses in Oceanographical Zoology.
See Zool. 213, 214, 215.

Special arrangements may be made for conducting research at the laboratories at Friday Harbor throughout the year, or at the laboratories in Seattle.

* Not offered in 1942-1943.

† To be arranged.

PHARMACY, PHARMACOGNOSY, PHARMACEUTICAL CHEMISTRY AND TOXICOLOGY, AND PHARMACOLOGY

Professors Goodrich, Johnson, Rising; Associate Professor Dille; Assistant Professors Fischer, Kelly; Instructors Larson, Plein, ———.

Department of General and Practical Pharmacy.

- 1, 2, 3. Theoretical and Manufacturing Pharmacy. A,W,S. (3,3,3) ———.
Pharmaceutical operations and manufacture of U.S.P. and N.F. preparations. Two lectures, one lab. period a week.
4. The Profession of Pharmacy. A. (2) ———.
Survey of the development of pharmacy as a profession. Two lectures a week.
- 9, 10, 11. Prescriptions. A,W,S. (3, 3, 3) Plein, assistants.
Theory and practical application of extemporaneous compounding. Two lectures, one lab. period a week.
15. Home Remedies. A,W,S. (2) Rising.
Study of medicines commonly used in the home. Open to all students.
51. Elementary Pharmacy. A, S. (2) Larson.
Survey of fundamental knowledge of dispensing which the nurse should have.
- 113, 114, 115. Advanced Prescriptions. A,W,S. (5,5,5) Rising, Plein.
Problems in dispensing and manufacturing; preparation of diagnostic reagents; study U.S.P. and N.F. Two lectures, one quiz, six hours lab. a week.
173. Cosmetic Manufacture. A,W,S. (3 to 5) Rising.
Pr., quantitative and organic chemistry.
183. New Remedies. W. (3) ———.
New and non-official remedies; modern methods of dispensing.
184. Pharmacy Laws, Study and Interpretation of the United States Pharmacopoeia and National Formulary. S. (3) Jones.
188. Diagnostic Reagents. A,W,S. (2 to 5) Kelly.
Manufacture and use.
191. Research Problems. A,W,S. (1 to 5) Staff.
Open to juniors, seniors, and graduates.

Course for Graduates Only

201. Investigations in Practical Pharmacy. A,W,S. (†) Rising, Plein.
Maximum, 45 credits.

Department of Pharmacognosy

- 12, 13, 14. Pharmacognosy. A,W,S. (3, 3, 3) Goodrich, Fischer.
Organic drugs, their source, methods of collection and preservation, identification, active constituents and adulterations. Three lectures a week.
- 104, 105. Pharmacognosy. W,S. (3, 3) Goodrich.
Microscopic study of crude and powdered drugs for purposes of identification and for detection of adulteration. One lecture, two lab. periods a week.

† To be arranged.

106. **Medicinal Plants.** A. (2) Goodrich, Metzger.
Study of cultivated and native medicinal plants of the Northwest. One lecture, one lab. period a week.
112. **Biologicals.** A. (3) Goodrich.
Deals with those animal drugs and biological products used in medicine.
193. **Research Problems.** A,W,S. (1 to 5) Staff.
Open to juniors, seniors, graduates.

Course for Graduates Only

202. **Investigation in Pharmacognosy.** A,W,S. (†) Goodrich.
Maximum of forty-five credits.

Department of Pharmaceutical Chemistry and Toxicology

5. **Gravimetric Quantitative Analysis.** A. (5) Kelly.
Two lectures, one quiz, two 4-hour lab. periods a week.
6. **Volumetric Quantitative Analysis.** W. (5) Kelly.
Two lectures, one quiz, two 4-hour lab. periods a week.
7. **Urinalysis.** S. (2) Kelly.
One lecture, one lab. period a week.
8. **Pharmacopoeial Assay.** S. (2) Kelly.
Assay of drugs by methods in the Pharmacopoeia. One lecture, three hours lab. a week.
192. **Research Problems.** A,W,S. (1 to 5) Staff.
Open to juniors, seniors, and graduates.
- 195, 196, 197. **Pharmaceutical Chemistry and Toxicology.** A,W,S. (5, 5, 5) Fischer.
Pharmacy and chemistry of alkaloids, glucosides, oils, volatile oils, and other plant and animal principles. Also includes the separation and identification of poisons from animal tissue. Two lectures, three lab. periods.

Courses for Graduates Only

203. **Investigation of Toxicology.** A,W,S. (†) Johnson, Fischer.
Maximum of forty-five credits.
204. **Investigation in Pharmaceutical Chemistry.** A,W,S. (†) Johnson, Fischer, Kelly.
Maximum of forty-five credits.

Department of Pharmacology

61. **Pharmacology and Therapeutics.** W. (3) Larson.
Source, actions, and uses of drugs. For nursing students at Harborview.
- 101, 102, 103. **Pharmacology and Toxicology.** A,W,S. (3, 3, 3) Dille.
Survey of the action of drugs, their posology and rational uses in therapeutics with consideration of symptoms and treatment of poisoning.
170. **Pharmacology.** A,W,S. (2) Dille.
Source, action, uses of the common drugs. Open to pre-medical students and others interested in a survey of the field of pharmacology.

† To be arranged.

185. **Experimental Pharmacology.** A. (2 to 3) Dille.
Lecture and laboratory work on the pharmacological theories, actions, and uses of drugs. Pr., 101, 102, 103. One lecture, one lab. period a week.
186. **Experimental Pharmacology.** W. (2 to 3) Dille.
Lecture and laboratory work on the pharmacological theories, actions, and uses of drugs. Pr., 101, 102, 103. One lecture, one lab. period a week.
187. **Biological Assays.** S. (2 to 3) Dille.
The quantitative measurement of the action of drugs and its application to standard pharmaceutical preparations. Pr., 185 or 186. One lecture, one lab. period a week.
194. **Research Problems.** A,W,S. (1 to 5) Staff.
Open to juniors, seniors, and graduates.
199. **Seminar in Pharmacology.** A,W,S. (1) Dille.
Open to qualified students after conference with instructor. Reports and discussions of current research in pharmacology.

Courses for Graduates Only

205. **Investigation in Pharmacology.** A,W,S. (†) Dille.
Maximum of forty-five credits.
210. **Graduate Seminar.** A,W,S. (no credit) Staff.
Reports on assigned reading under direction of members of the staff. One hour a week.

PHILOSOPHY*Professors Savery, Nelson; Assistant Professors Phillips, Rader.*

1. **Introduction to Philosophy.** A,W,S. (5) Phillips.
Main philosophic problems and typical solutions.
2. **Introduction to Social Ethics.** W. (5) Rader.
Social ideals and problems, with special emphasis upon democracy.
3. **Introduction to Ethics.** S. (5) Rader.
Moral principles and their application to the problems of life.
5. **Introduction to Logic.** A,W,S. (5) Nelson.
Conditions of clear statement, adequate evidence, and valid reasoning, and their establishment in the mental processes of the student.
- 101-102-103. **History of Philosophy.** A,W,S. (3-3-3) Rader.
Ancient, medieval, and modern. For juniors and seniors; others by permission.
- 104-105-106. **Metaphysics.** A,W,S. (3-3-3) Savery.
The nature of existence, with special reference to the concepts and principles of science. Pr., 1 and 5, or consent of instructor.
112. **Philosophy of History.** W. (5) Phillips.
Survey and classification of the leading philosophies of history; special attention to the conflicts between idealistic and materialistic, and monistic and pluralistic, theories. An attempt is made to analyze the concepts employed in historical interpretation. Pr., 1.

113. Philosophy of Religion.*History of Religion.** (See Far Eastern 115, 116.)

† To be arranged.

* Not offered in 1942-1943.

129. **Esthetics. A. (5)** **Rader.**
Theories of the nature of art, the nature of beauty, and the various sources of esthetic effect.
133. **Ethical Theory. S. (3)** **Phillips.**
Fundamental concepts and principles of ethics. Pr., 2 or 3.
- 137-138-139. **Development of Social Philosophy. A,W,S. (3-3-3)** **Rader.**
Survey of the classic writers: Plato, Aristotle, Augustine, Hobbes, Locke, Bentham, Hegel, Comte, Marx, Mill, Nietzsche. Interpretation of the social concepts of each thinker in the context of his general philosophy. Emphasis on the conflicts between the ideals of aristocracy and democracy, and individualism and collectivism.
- 141-142-143. **Contemporary Philosophy. A,W,S. (2-2-2)** **Nelson.**
Modern movements: idealism, intuitionism, positivism, pragmatism, realism, mechanism, and vitalism. Pr., 1 or 103.
193. **Advanced Logic. S. (3)** **Nelson.**
Symbolic logic; critical examination of logical doctrines bearing on philosophical questions; inductive method. Pr., 5.
- 194, 195, 196. **Reading Course in Oriental Philosophy. A,W,S. (3,3,3)** **Savery.**
Directed reading in the Upanishads, the Vedānta and Sāṃkhya systems, Buddhism, Taoism, and Confucianism. Pr., permission.
- 197, 198, 199. **Reading in Philosophy. A,W,S. (3, 3, 3)** **Savery.**
Pr., consent of instructor.

Courses for Graduates Only

- 207-208-209. **Seminar in Philosophy of Science. A,W,S. (4-4-4)** **Savery.**
Advanced study of metaphysics. Pr., consent of instructor.
- 214-215-216. **Seminar in Logic. A,W,S. (4-4-4)** **Nelson.**
Pr., 193.
- *234-235-236. **Seminar in Descartes, Spinoza, Leibnitz.**
- *237-238-239. **Seminar in Locke, Berkeley, Hume.**
- *241-242-243. **Seminar in Plato and Aristotle.**
- *244-245-246. **Seminar in Kant and Hegel.**
- 251, 252, 253. **Research in Philosophy. A,W,S. (1 to 6 each quarter)** **Staff.**
Pr., consent of instructor.

* Not offered in 1942-1943.

PHYSICAL AND HEALTH EDUCATION

PHYSICAL AND HEALTH EDUCATION FOR MEN

Professor Foster; Associate Professor Belshaw; Assistant Professors Auernheimer, Peek, Reeves; Associates Buckley, Clark, Duggins, Edmundson, Egtvet, Graves, Raby, Ulbricksen, Welch.

- 1, 2, 3. Adapted Activities. A,W,S. (1,1,1) Reeves.
Individual gymnastics, games, and sports. Adapted to meet the needs of the individual.

- §5, 7, 8. Physical Education Activities for Majors. A,W,S. (1,1,1) Peek & Staff.

- 9, 10, 11. Physical Education for Sophomore Majors. A,W,S. (1, 1, 1)
Peek and Staff.

- 16 to 70. Physical Education Activities. A,W,S. (1 each) Staff.

Course 16, handball; 17, basketball; 18, tennis; 19, playground ball; 20, golf**; 21, track; 22, crew (class); 23, fencing; 24, boxing; 25, tumbling; 26, apparatus and stunts; 27, wrestling; 28, volley ball; 29, swimming; 30, soccer; 31, touch football; 32, badminton; 33, archery; 51, freshman varsity crew; 52, varsity crew; 53, freshman varsity football; 54, varsity football; 55, freshman varsity track; 56, varsity track; 57, freshman varsity swimming; 58, varsity swimming; 59, freshman varsity basketball; 60, varsity basketball; 61, freshman varsity baseball; 62, varsity baseball; 63, freshman varsity tennis; 64, varsity tennis; 65, varsity golf; 66, Pack Forest; 67, varsity skiing; 68, varsity volleyball; 69, varsity hockey; 70, varsity fencing.

15. Personal Health. A,W,S. (2) Reeves and Staff.

Approaches to healthful living. Laws of hygiene as they apply to the individual problem of adjustment. Health information that affords a basis for intelligent guidance in the formation of health habits and attitudes. Academic credit given.

PHYSICAL AND HEALTH EDUCATION FOR WOMEN

Professor Hutchinson; Associate Professor de Vries; Assistant Professors McGownd, Rulifson, Wilson, McLellan; Instructors MacLean, Kidwell; Lecturer Hoedemaker.

Activity Courses

- 11, 12, 13. Physical Education Activities for Freshman Majors. A,W,S.
(2, 2, 2) Rulifson, de Vries, Wilson, MacLean.

Required of all freshman major students. Practice in folk and national dancing, clog and tap dancing, hockey, basketball, tennis, soccer, archery, baseball, volley ball, interpretative dancing, swimming.

- 51, 52, 53. Physical Education Activities for Sophomore Majors. A,W,S.
(2, 2, 2) Rulifson, Wilson, MacLean, de Vries.

Required of all sophomore major students. Practice in the skills and techniques of soccer, tennis, volley ball, badminton, basketball, folk dancing, tap and clog dancing, swimming, life saving, and contemporary dance.

- 57 to 98. Physical Education Activities. A,W,S. (1, 1, 1) Auernheimer,
Rulifson, de Vries, McGownd, Jefferson, McClellan, Wilson, MacLean.

Course 57, fencing; 58, advanced fencing; 61, folk and national dancing; 62, clog and tap dancing; 63, advanced clog and tap dancing; 64, hockey; 65, basketball; 66, advanced folk dancing; 67, tennis; 69, advanced tennis; 70, athletic games; 75, archery; 76, advanced archery; 82, volley ball; 83, indoor baseball; 84, badminton; 85, canoeing; 86, advanced badminton; 87, golf**; 88, advanced golf**; 89, bowling***; 90, skiing; 91, modern dancing; 92, advanced modern dancing; 93, advanced bowling***; 94, equitation†; 95, elementary swimming; 96, intermediate swimming; 97, advanced swimming; 98, diving; 99, life saving.

§ These courses satisfy in part the general University requirement in physical education.

** Golf instruction fee (payable to golf club), autumn, spring, \$3; winter, \$1.50.

† Riding instruction fee (payable to riding academy), each quarter, \$13.

*** Bowling fee (payable at bowling alley), \$3.75.

Health Education Lecture Courses

4. **Health Education.** A,W. (2) McLellan.
Personal hygiene. The development of personal and social attitudes in matters of personal and community hygiene. Two lectures a week.
6. **Health Education.** W,S. (2) Mackenzie.
Community hygiene. Development of public health program in rural communities and cities. Public health and communicable disease. Two lectures a week.
8. **Health Education.** W,S. (2) Westerman.
Nutrition. Food selection in relation to nutritive requirements of various age groups. Two lectures a week.
10. **Health Education.** A,W,S. (5) McLellan, Westerman, Bliss, Mackenzie.
Equivalent of 4, 6, 8.

PROFESSIONAL COURSES FOR MEN AND WOMEN

101. **Methods and Materials in Gymnastics, Stunts and Tumbling.** S. (3) McLellan, Wilson.
WOMEN. Classification of gymnastic material. Principles and technique of teaching. Pr. or accompanying courses, Anat. 100 and Physiol. 50.
- 102-103. **Problems in Physical and Health Education and Recreation.**
A,W. (1-1) Hutchinson, Foster.
MEN and WOMEN. A study of problems in physical education, health education, and recreation on a basis for professional study. Required of all majors.
107. **Personal and General Hygiene.** S. (3) Reeves.
MEN. Advanced course designed primarily for professional students in physical education. Pr., 15.
109. **The School Dance Program.** W. (2) Wilson.
MEN. Practical knowledge of folk dances and tap dance steps to be learned; organization of dance programs for boys in schools and organized recreation centers.
110. **First Aid and Safety.** A,W,S. (2) Reeves, MacLean.
MEN and WOMEN. Emergency treatment for injuries common to the playground, gymnasium, and athletic field. Safety measures for the prevention of injuries. Sec. A for women; sec. B. for men.
111. **Rhythmic Activities for Small Children.** A. (2) Wilson.
WOMEN. Activities suited to the pre-school, kindergarten, and primary child. Educational value, significance in child development, methods of presentation. Lecture and practice.
112. **Elementary School Athletic Program.** S. (3) Rulifson.
WOMEN. Progressive series from the hunting games and elementary forms to the standard athletic activities of late adolescent years.
114. **Advanced First Aid.** A,W,S. (2) Reeves, MacLean.
MEN and WOMEN. Pr., P.E. 110 or equivalent.
115. **Physiology of Muscular Exercise.** S. (5) Belshaw.
MEN and WOMEN. Physiology of muscular exercise as related to physical activities. Study of muscular efficiency, fatigue, recovery, chemical changes, and neuro-muscular control, with special reference to games, sports, corrective work and posture. Pr., Anat. 100, Physiol. 50, or equivalent.

116. **First Aid and Athletic Training. A. (3)** Reeves.
MEN. First Aid treatment for injuries common to the playfield, gymnasium, and athletic field. Training and safety measures for the prevention of injuries. May satisfy both the Standard and Advanced American Red Cross First Aid Certification. Pr., Anat. 100, Physiol. 50.
118. **Analysis of Rhythm. A. (3)** de Vries, Wilson.
WOMEN. Principles underlying expression in rhythmic activities, including rhythmic form and analysis. Rhythm in relation to the physical education program; principles of building rhythmic patterns to be used in teaching dancing; relation of musical form to dance form. Pr., 12 or 62; 13 or 92.
122. **Kinesiology. A. (3)** Belshaw.
MEN and WOMEN. Principles of body mechanics. Analysis of leverage in body movement and problems of readjustment in relation to posture and to physical education activities. Pr., 115, Anat. 100, Physiol. 50.
124. **Activities and Recreational Methods. W. (3)** Reeves.
MEN and WOMEN. Activities suitable for various age levels, i.e., handcraft, music, dramatics, nature study, low organized games, free play, social recreation, contests and tournaments, story telling, special features, and camping and outing activities. Pr., 145.
125. **Administration of Play and Recreation. S. (3)** _____.
MEN and WOMEN. Departmental organization and maintenance. Principles and policies. Pr., 145, 124, 110.
126. **Observation and Practice Teaching. A,W,S. (2-4)** Reeves, Wilson.
MEN and WOMEN. Observation of recreational work in Seattle and vicinity. Fifty hours of practice teaching in organized recreation centers. Pr., 125 and six credits in methods courses. Sec. A, for women, autumn, winter, spring, 4 credits; sec. B, for men, autumn, 2 credits.
127. **Tests and Measurements. A. (3)** Belshaw.
MEN and WOMEN. Place and possibilities of measurement in health and physical education. Criteria for selection of test. Analytical study of the tests in these fields. Formulation of a testing and measuring program. Pr., senior standing.
128. **Organization and Administration of Camp Programs. S. (3)** McLellan.
WOMEN. Theory and practice in camp organization and administration and in the conduct of camp activities; studies are made of the educational significance of current movements and existing local and national organizations. Pr., 124.
129. **Methods in Teaching First Aid and Safety. W.S. (2)** Reeves.
MEN AND WOMEN. Methods and techniques in teaching first aid and safety. Student may satisfy the requirements for an Instructor's First Aid certification in the American Red Cross. Pr., 110 or equivalent.
135. **Adapted Activities. W. (3)** Reeves, Kidwell.
MEN and WOMEN. Study of atypical cases from the standpoint of selecting and adapting activities to meet individual needs. Observation of actual cases under supervision. Pr., 115, 122, Physiol. 50.
145. **Principles of Physical Education. A. (3)** Foster.
MEN and WOMEN. Social, biological, and educational foundations. The place of physical education in the school program. Aims, objectives, content, and standards. Pr., Physiol. 50 and junior standing.
146. **Principles of Health Education. A. (2)** Foster.
MEN and WOMEN. Educational foundations. The place of health education in the school program. Aims, objectives, content, and standards. Pr., Physiol. 50 and junior standing.

150. **The School Physical Education Program.** W. (5 or 2) Foster, Hutchinson.
MEN and WOMEN. Organization and administration of the physical education program in secondary schools. Pr., 158, 161, 163, or 162, 163, 164. Men, winter, five credits; women, winter, two credits.
153. **Methods and Materials in Health Teaching.** S. (3) Hutchinson.
MEN and WOMEN. The place of health education in the school program, the general program of health teaching, subject matter and methods in health teaching in both the elementary and high school. Pr., senior standing and 145, 165, Physiol. 50.
155. **Dance Composition.** S. (2) de Vries.
WOMEN. Practice in modern dance. Analysis of choreography. Opportunity for creative work. Pr., 92, 118.
156. **Methods and Materials in Teaching Dance.** A. (2) de Vries.
WOMEN. Selection and organization of materials in educational program; methods of presentation; sources of material; music, and types of accompaniment. Pr., 53 or 92, 118.
157. **Theory and Practice in Dance Accompaniment and Percussion.** S. (2) de Vries.
WOMEN. Study of rhythmic structure in relation to percussion instruments. Rhythmic pattern and composition. Studies in types of accompaniment together with practice in their use. Pr., 92 or 53, 118.
158. **Methods in Teaching Apparatus, Tumbling and Stunts.** W. (2) Auernheimer.
MEN. Pr., 25, 26, and competence in ten additional physical educational activities.
- 159-160. **Dance Production.** A,W. (2-2) de Vries.
WOMEN. Study of and practice in costuming, lighting, staging, for dance concerts and festival programs. Pr., 92 or 53, 118.
161. **Methods in Teaching Boxing and Wrestling.** A. (2) Raby.
MEN. Pr., 24, 27, and competence in ten additional physical educational activities.
162. **Methods and Materials in Teaching Folk, Tap and Clog Dancing.** S. (2) Wilson.
WOMEN. Section X for majors. Pr., 52. Section Y, minors.
163. **Methods and Materials in Teaching Sports.** W,S. (2 or 3) Rulifson, MacLean, Peek, Reeves.
MEN and WOMEN. Sec. A, women majors; three credits; winter; pr., 51, 52, 112. Sec. B, men; two credits; spring; pr., competence in twelve activities. Sec. Y, women minors; two credits; spring.
164. **Methods in Teaching Swimming.** A,S. (3 or 2) MacLean, Buckley.
MEN and WOMEN. Methods and techniques in teaching swimming and diving; consideration of life saving; direction of camp waterfront program. Sec. A, women; pr., 53, 85; or 97 and 99 may be substituted for 53; three credits. Sec. B, men; pr., 29; two credits.
165. **The School Health Education Program.** W. (3) Belshaw.
MEN and WOMEN. Schoolroom construction, lighting, heating, ventilation, sanitation of spaces, selection and location of equipment, medical inspection and supervision, communicable disease, the school lunch, fatigue, rest, and play. Pr., junior standing.
170. **Methods in Teaching Football.** S. (2) Welch.
MEN. Theory and practice of the fundamental principles underlying both individual and team play. Pr. junior standing.

171. **Methods in Teaching Basketball.** W. (2) **Edmundson.**
MEN. Individual and team development; offensive and defensive play. Pr., junior standing.
172. **Methods in Teaching Track and Field.** A. (2) **Edmundson.**
MEN. Methods of training for the various events. Correct form in running. Conducting and officiating meets. Pr., junior standing.
173. **Methods in Teaching Baseball.** S. (2) **Graves.**
MEN. Fundamentals of batting, base-running, and position play; theory and practice. Pr., junior standing.
193. **Problems in Athletics.** S. (3) **Foster.**
MEN. The place of interschool athletics in education. Control finance, eligibility, safety measures, publicity, and public relations. Qualifications and duties of coaches, managers, and officials. Pr., 145, 150.

Teachers' Course in Physical Education. (See Educ. 75V.)

For additional courses in Health Education, see School of Home Economics and School of Nursing.

Courses for Graduates Only

201. **Seminar in Physical Education.** A. (3) **Hutchinson.**
MEN and WOMEN. Special problems, including administration of school programs, organization of activities. Problems selected will depend upon personnel of class. Pr., 20 credits in physical education.
203. **Seminar in Health Education.** S. (3) **Hutchinson.**
MEN and WOMEN. Study of the problems relating to the school health education program. Problems selected will depend upon personnel of class. Pr., 145, 153, 165.
206. **The Curriculum.** S. (3) **Foster.**
MEN and WOMEN. Principles underlying the curriculum. Selection and organization of program content in relation to such problems as characteristics and needs of pupils and local conditions. Practical experience in curriculum making. Pr., 20 credits in physical education.

PHYSICS

Professors Brakel, Henderson, Loughridge, Osborn, Utterback; Assistant Professors Cady, Higgs, Kenworthy, Uehling; Instructor Sanderman.

Students not in engineering, who do not have a year of high school physics, must elect Physics 4, 5, 6.

- 1, 2, 3. **General Physics.** A,W,S. (5,5,5) **Utterback, Cady, ———.**
These courses will satisfy the science requirement in the College of Arts and Sciences, and may be taken by students in forestry and pharmacy. Pr., one year of high school physics for 1; 1 for 2; 1 for 3.
- 4, 5, 6. **General Physics.** A,W,S. (5,5,5) **Kenworthy.**
For students without a year of high school physics. These courses will satisfy the same requirements as 1, 2, and 3. Pr., plane geometry, 4 pr. to 5; 4 pr. to 6.
10. **Survey of Physics.** W. (5) **Utterback.**
General view of the fundamental principles of physics and their relation to the welfare of man. Students who expect to continue with physics should begin with 1 or 4.

50. Sound and Music. S. (5) Kenworthy.
54. Elementary Photography. A, S. (4) Higgs.
Principles and practice of the elementary photographic processes. Pr., elementary physics or chemistry.
- 89-90. Physics of the Home. W, S. (5-5) Sanderman.
For students in home economics and nursing.
97. Physics for Engineers—Mechanics. A, W. (5) Brakel, Uehling.
Pr., one year high school physics, 10 credits college mathematics.
98. Physics for Engineers—Electricity. W, S. (5) Brakel, Loughridge.
Pr., 97.
99. Physics for Engineers—Light and Heat. A, S. (5) Brakel, Henderson.
Pr., 97.
- 101-102. Introduction to Modern Physics. A, W. (3-3) Utterback.
Pr., 3 or 6.
- 105-106. Electricity. A, W. (3-3) Brakel.
Pr., 3 or 6.
- *109. Pyrometry.
115. Photography. W. (4) Higgs.
Quantitative study of the more important photographic processes and the application of photography to the sciences and arts. Pr., 54.
140. Sound. W. (3) Kenworthy.
Study of sound sources, transmission, and absorption of sound with applications. Pr., 3 or 6.
150. Heat and Introduction to Thermodynamics and Kinetic Theory. S. (3) Utterback.
Pr., 3 or 6.
154. Low and High Frequency Measurements. S. (4) Uehling.
Measurements of resistance, inductance, and capacitance as a function of frequency. Study of simple and coupled circuits, impedance of complex circuits and vacuum tube characteristics. Pr., 106, calculus.
155. Introduction to Modern Physics for Electrical Engineers. W, S. (3) Staff.
Pr., Sr. E.E.
- 160-161. Optics. A, W. (3-3) Osborn.
Pr., 3 or 6, calculus.
- *166. Physical Oceanography.
- 167, 168, 169. Special Problems. A, W, S. (†) Staff.
Pr., permission.
170. Spectrometry. W. (3) Osborn.
Pr., 160, or permission.
180. History of Physics. A. (2) Osborn.
Pr., 3 or 6.

* Not offered in 1941-1942.

† To be arranged.

- 191, 192. Theoretical Mechanics. A,W. (4, 4) Loughridge.
Pr., 20 credits in physics, and calculus.
- 195, 196. Experimental Atomic Physics. W,S. (3,3) Higgs.
Designed to acquaint the student with a group of phenomena representative of modern experimental physics. Pr., 30 credits in physics.

Courses for Graduates Only

- 200, 201, 202. Introduction to Theoretical Physics. A,W,S. (6, 6, 6)
Henderson, Loughridge, Cady.
These courses constitute a thorough foundation for subsequent specialization and more intensive study. Pr., 40 credits in physics; Math. 114 concurrently.
204. Thermodynamics. W. (6) Utterback.
Pr., 40 credits in physics.
205. Kinetic Theory. A. (6) Utterback.
Pr., 40 credits in physics.
- *210. Mathematical Theory of Sound.
- *211. Statistical Mechanics.
212. Conduction of Electricity Through Gases. A. (6) Henderson.
Pr., 40 credits in physics.
- 213, 214. Electricity and Magnetism. W,S. (4,4) Loughridge.
Study of properties of electric and magnetic fields illustrated by problems showing the application of harmonic functions and conformal representation. Discussion of the motion of charged particles in various force fields. Pr., 201.
216. X-Rays. W. (6) Henderson.
Pr., 40 credits in physics.
- *219. Hydrodynamics.
- *220. Advanced Dynamics.
221. Collision Theory. S. (6) Loughridge.
Application of classical and quantum mechanics to collision between atoms, electrons, and ions. Pr., 240.
- *222. The Metallic State.
- *226, 227. Electromagnetic Theory.
- *230, 231. Atomic Structure.
- 239, 240. Wave Mechanics. A,W. (4,4) Uehling.
Fundamental principles of quantum mechanics with numerous applications to practical problems in spectroscopy, nuclear physics, and radiation. The course is intermediate in character, and is intended for those who desire a practical knowledge of the methods of solution of problems in quantum mechanics, as well as for those who plan to take 245, 246, 247, for which a thorough knowledge of non-relativistic quantum mechanics is prerequisite. Pr., 202 or equivalent.
- *241, 242, 243. Relativity.
- *245, 246, 247. Advanced Quantum Mechanics.
- 250, 251, 252. Seminar. A,W,S. (†) Staff.
Pr., graduate standing.
- 256, 257, 258. Research. A,W,S. (†) Staff.

* Not offered in 1942-1943.

† To be arranged.

POLITICAL SCIENCE

Professors Martin, Cole, Levy, Mander, Stowell, Taylor; Associate Professors Cook, Spellacy, Webster, von Brevern.

Lower Division Courses

Elementary Course Primarily for Freshmen

1. **Survey of Political Science.** A,W,S. (5) Mander.
Forms and functions of modern government; political ideas and institutions, American and foreign.

Intermediate Courses Primarily for Sophomores

51. **Principles of Politics.** A. (5) Cook.
Introduction to certain major concepts of political science, such as sovereignty, political obligation, liberty, rights.
52. **Introduction to Public Law.** W. (5) Cole.
Legal construction of political organization. The state and the individual; leading concepts in constitutional, international and administrative law.
54. **International Relations.** A. (5) Stowell.
Rise of modern states; alliances, imperialism, the League of Nations; present problems; factors underlying international relations.
60. **The American Government.** S. (5) Cole.
Principles of the American governmental system, federal and state; the accommodation of eighteenth century doctrines and institutions to the needs of our modern continental republic.
61. **Municipal Government.** S. (5) Spellacy.
Growth of cities, home rule, city charters, forms of city government, politics, and other problems.
71. **Great Personalities: Europe and the Near East.** W. (3) von Brevern.
The leading personalities of Great Britain, France, Germany, Italy, Spain, the Balkans, Turkey, the Arab World, and Russia; their influence in international affairs. Not open to students who have had 72.
- *72. **Great Personalities: The Near East and Asia.**
101. **Introduction to American Constitutional Government.** A,W,S. (2) Webster.
Fundamental principles of American Constitutional system; function, evolution; unwritten constitution.

Group I. Political Theory and Jurisprudence

111. **History of Political Thought.** A. (5) Cook.
Major concepts of the needs of man as a political animal, from Socrates to the beginning of the nineteenth century, with special emphasis on permanent elements in tradition.
112. **American Political Thought.** W. (3) Cook.
Study of some major political thinkers in America from the Colonial Period to the present, emphasizing certain lasting issues, such as centralization vs. decentralization.
113. **Contemporary Political Thought.** S. (5) Cook.
Inquiry into changing concepts of the bases and functions of the state and of the sphere of the individual since the impact of the French and Industrial revolutions.

***114. Oriental Political Thought.**

* Not offered in 1942-1943.

115. **Problems in Systematic Political Science.** W. (3) **Cook.**
Nature, scope, and function of political authority and political power in the modern world.
118. **Law and the State.** A. (5) **Cole.**
Ancient, medieval, and modern conceptions of the relationship between political authority and the legal institution. Law and politics in an ideal commonwealth.
119. **Jurisprudence.** W. (5) **Cole.**
Law as an agency of social control. Survey of such fundamental concepts as rights, persons, property, contract, liability. Sources of law: legislation, precedent, custom.

Group II. International Relations

121. **Foreign Relations of the United States: Europe.** W. (3) **von Brevern.**
Traditional policies of the nineteenth century. New problems after 1914. Relations with international organizations.
122. **The Foreign Service.** S. (3) **Stowell.**
Department of State; diplomatic and consular services; American diplomatic practice and procedure.
123. **Foreign Relations of the United States: the Caribbean Area.** A. (3) **von Brevern.**
The Monroe Doctrine; Pan-Americanism; Imperialism; our special position in relation to Mexico, Central America, and the Caribbean.
124. **Contemporary World Politics.** S. (3) **Mander.**
Assumptions of pre-war international organization; principles of collective security and their apparent breakdown; recent developments in Europe and the Far East.
126. **Politics and Military Armament.** A. (3) **von Brevern.**
National policies of major powers in regard to military preparedness; international policies and power politics.
127. **International Organization and Administration.** W. (5) **Mander.**
International unions, conferences, commissions, especially the League of Nations.
128. **Foreign Relations of the United States: South America.** S. (3) **von Brevern.**
Extension of same criteria as in course 123 over South America; the New Deal policy; inter-dependence of the Americas; hemispheric solidarity.
129. **International Relations in the Far East.** A. (5) **Taylor.**
Relations between China, Japan, Russia, Philippines before 1839. Economic and political expansion of Europe in the East and the relations between Eastern powers from 1839 to 1930. The Far East in world politics.
130. **The Middle and Near East.** S. (5) **Mander.**
European expansion into Egypt, Turkey, Persia, Afghanistan; the mandate for Palestine and Syria; the effect of the present war.
131. **International Practice and Procedure.** W. (3) **Stowell.**
Diplomatic protection of citizens abroad. Rights and duties of aliens. International claims. Modes of redress short of war. Regulations of war and neutrality. Extradition. International arbitral and judicial procedure.
132. **American Foreign Policy in the Far East.** W. (5) **Taylor.**
Early American trade and relations with Eastern Asia. American policy, with special reference to internal politics in America, in relation to Far Eastern Powers themselves and to foreign Powers in the Far East.
133. **Europe Since 1914.** A. (5) **Levy.**
Broad outline of history from the World War to the present.
134. **Power Politics.** S. (3) **Stowell.**
Pragmatic philosophies and Machiavellian practices in modern world politics. Their impingement on political idealism and democratic systems.

135-136. **Colonial Government and Administration.** A,W. (3-3) von Brevern.
Policies of and administration by leading colonial powers and the United States. Government of native peoples; mandates; India and the Philippines.

140. **National Policy in Diplomacy, Defense, and War.** A. (3) von Brevern, staff.
American principles, policies, and practice, recent and contemporary, involved in the present World War, from the standpoints of international alignments, defense preparation, and conduct of the war.

Law 122. **International Law.** A,W. (3) Stowell.
General principles of international law as developed by custom and agreement, and as exhibited in decisions of international tribunals and municipal courts.

Diplomatic History of Eastern Asia. See Far Eastern 125-126, 127.

Group III. Politics and Administration

150. **Pressure Politics.** W. (3) Spellacy.
History and theory of the representation of interests in the United States. Political influence of private and unofficial organizations and groups. The government in politics.

*151. **Problems in American Federal Government.**

152. **Political Parties and Elections.** S. (5) Spellacy.
Organization and methods of political parties; campaigns and conventions; election administration.

153. **Introduction to Constitutional Law.** S. (5) Cole.
Growth and development of the United States Constitution as reflected in decisions of the Supreme Court. Political, economic, social effects.

154. **The Public Service.** W. (5) Webster.
Government employment in the United States and Great Britain. Policies and problems of personnel administration in the United States.

155. **Introduction to Public Administration.** A. (5) Spellacy.
General survey of the field of public administration, including relationship of administration to other agencies of government.

Public Finance. See Economics and Business 171.

156. **Parliamentary Governments in Europe.** S. (3) von Brevern.
The governments of northern and western Europe which have retained their parliamentary institutions.

157. **The New Governments of Europe.** A. (5) Mander.
Democracy and dictatorship in post-war Europe. Probable trends of government.

158. **Government and Politics in the Far East.** S. (5) Taylor.
Political theory and structure of government in China, Japan, Manchukuo, Korea, Formosa. Social and economic basis of government and politics, especially in China and Japan. Colonial administration in Indo-China and the Philippines.

*159. **The British Empire.**

160. **Eastern European Governments.** W. (5) von Brevern.
Governments of eastern and southeastern Europe. Constitutional systems, political structure, administrative organizations, and international relations of Finland, Hungary, the Danubian states, and the Balkans.

161. **Government and Business.** A. (5) Spellacy.
Historical background, constitutional limitations, restraint of trade and manipulation of prices, government control of public utility activities.

162. **Municipal Administration.** A. (5) Spellacy.
Civil service, finance, city planning, zoning, police, traffic, health, water, sewerage, public works, utilities, etc.

* Not offered in 1942-1943.

163. **State Government and Administration.** A. (5) Webster.
Constitutions, governor, legislature, administrative organizations, state activities, counties, parties, elections.
164. **Public Policy in Governmental Planning.** S. (3) Webster.
Historical development of governmental planning; legal basis of national, state, and local planning agencies; general scope of their powers and functions; policy determination; coordination of planning agencies and administrative departments.
- *165. **The Legislative Process.**
- *166. **Constitutional Law in Europe.**
167. **Introduction to Administrative Law.** W. (5) Spellacy.
Creation of administrative authorities, scope of and limitations on their powers, remedies, judicial control of administrative action.

Courses for Advanced Undergraduates

170. **Introduction to Geo-Politics.** S. (3) von Brevern.
Analysis of political development and function of states as conditioned by natural environment, ethnographic and anthropologic factors, cultural heritage.
190. **Introduction to Roman Law.** A. (5) Levy.
General importance of Roman law, its sources and civil procedure. Main features of classical law of persons, property, contracts, torts, and succession in the light of modern research, with a background of political, economic, and social factors. Open to qualified sophomores.
- *191. **Comparative Law.**
192. **Introduction to Modern Civil Law.** W. (5) Levy.
Main features of the law of persons, property, contracts, torts, and succession in the world today, as developed on the basis of Roman law. Open to qualified sophomores.
199. **Individual Conference and Research.** A,W,S. (2 to 5) Cole and Staff.
For advanced undergraduates having high scholastic standing, with consent of instructor concerned.

Courses for Graduates Only

- 201, 202, 203. **Graduate Seminar.** A,W,S. (3, 3, 3) Stowell.
For candidates for higher degrees in political science.
- 211, 212, 213. **Seminar in Political Thought.** A,W,S. (3, 3, 3) Cole.
Readings and discussions based on the writings of first importance of the masters of political science.
215. **Methods and Research in Political Science.** A. (3 to 5) Cook.
Political science and the social sciences; methods of research; bibliography of general and special fields.
216. **Concepts of Political Theory: Problems in Authority and Liberty.** W. (3 to 5) Cook.
217. **Concepts of Political Theory: Problems of Equality and Function.** S. (3 to 5) Cook.
- 221, 222. **Seminar in International Organization.** A,W. (3 to 5 each quarter.) Mander.

* Not offered in 1942-1943.

234. Seminar in Roman Law. W. (3) Levy.
Introduction to modern research in Roman law. Readings in Justinian's *Institutes* and *Digest* in English translation.
251. Seminar in Politics and Administration. W. (3 to 5) Spellacy.
Research in special problems.
256. Seminar in Government and Public Law. A. (3 to 5) Cole.
299. Individual Research. A,W,S. (2 to 5) Cole, Cook, staff.
For advanced graduates admitted to candidacy for higher degrees, with the consent of the department.

Seminar in Oriental Diplomacy. See Far Eastern 225, 226, 227.

Constitutional Law. See Law 119, 120.

Administrative Law. See Law 121.

PSYCHOLOGY

Professors Smith, Guthrie, Wilson, Esper; Associate Professor Gundlach; Assistant Professors Horton, Loucks, Hermans.

1. General Psychology. A,W,S. (5) Wilson and Staff.
Survey of the science. Man's original nature, the way in which nature is altered by use; the individual and social behavior that results.
2. Psychology of Adjustment. A,W,S. (5) Loucks, Horton, Wilson.
Nature of personality and ways in which personalities are formed in adjusting to the world. Pr., 1.
21. Applied Psychology. W. (5) Gundlach.
Psychology of personal efficiency, vocational guidance, scientific management, law, medicine, athletics, business, advertising. Upper division credit for upper division students. Pr., 1.
102. The Neural Basis of Behavior. A. (5) Esper.
Action, emotion, regulatory functions, learning, thinking. Pr., 1, Zool. 1, 2 or 3-4, and permission of instructor.
106. Experimental Psychology. W. (5) Esper.
Training in laboratory methods. Pr., 1, 108, 109, and permission of instructor. Two lectures, six hours lab.
108. Essentials of Mental Measurement. W. (5) Guthrie.
Use of statistical methods in psychology. Pr., Math. 3 or 5, or 31, 32, 33.
109. Advanced Mental Measurement. S. (5) Guthrie.
Continuation of 108.
- *111. History of Psychology.
112. Modern Psychological Theory. S. (3) Guthrie.
Contributions of living psychologists and a critical consideration of current theory. Pr., 1.
116. Animal Behavior. A. (3) Horton.
Psychology of animals in the laboratory and under natural conditions.
117. Superstition and Belief. A. (2) Smith.
Why we are superstitious. Psychological analysis and historical development of certain false opinions. Pr., 1.

* Not offered in 1942-1943.

118. **Social Psychology.** A. (5) Guthrie.
Psychology of social human nature; language, custom, public opinion, morals, war, family, caste, nationalism, religion. Pr. 1.
120. **Psychology and the Arts.** A. (2) Gundlach.
Effective structure of materials. Application to life. Measurement of talent and appreciation. Basis of creative ability. Pr., 1.
124. **Psychology of Learning.** S. (5) Esper.
How habits are formed. Efficiency in learning, transfer of training, recent experimental findings. Pr., 1 and 2.
125. **Space Perception.** W. (2) Hermans.
Coordination of senses in development of perceptual responses to objects and events in space. Pr., 1.
126. **Psychology of Maladjustment.** S. (3) Smith.
Origin and mechanism of behavior that interferes with proper adjustment. Physiological pathology. Psycho-therapy. Pr., 15 credits in psychology including 2.
131. **Child Psychology.** A. (5) Smith.
Individual and social development and their causes, from infancy to adult age. Pr., 1.
133. **Advanced Child Psychology.** S. (2) Smith.
Study of recent research in child development. Pr., 131.
140. **Conditioning.** W. (5) Loucks.
Experimental work on conditioning. Significance for the several fields of psychology. Emphasis on specific research techniques. Pr., 10 credits in psychology.
141. **Sensory Basis of Behavior.** S. (5) Gundlach, Horton.
Sensory and perceptual phenomena; sensory equipment, and theories of sense-organ function. Pr., 15 credits in psychology.
- 151, 152, 153. **Undergraduate Research.** A,W,S. (3, 3, 3) Staff.
Pr., 15 credits in psychology including 106 and permission of department.

Courses for Graduates Only

Before a student registers for graduate courses, his topic for research must be approved by the department.

- 201, 202, 203. **Graduate Research.** A,W,S. (†) Staff.
- 211, 212, 213. **Seminar.** A,W,S. (2, 2, 2) Staff.

ROMANIC LANGUAGES AND LITERATURE

Professors Nostrand, Frein, García-Prada, Goggio, Helmlingé, Umphrey; Associate Professors Chessex, W. Wilson; Assistant Professors David, Simpson, Whittlesey, C. Wilson; Instructors Creore, Hamilton.

Students with less than one high-school year of preparation will normally enter course 1; with one or one and one-half years of preparation, course 3R; with two years of preparation, course 4 (or 4 and 7 in French, if the preparation is inadequate); with three years, courses 101 and 104; with four years, course 104. After a lapse of two years or more since high school instruction in a language, a student may repeat one quarter with credit. Any exception involving credit must be determined by the executive officer of the department.

In instances where a foreign language must be taken to satisfy an entrance deficiency of two units, the requirement may be satisfied by taking French 5 (or 4 and 7); Spanish 5; or Italian 18 plus 4 or 6 hours of either 111, 112, 113 or 121, 122, 123.

† To be arranged.

French

1-2, 3. Elementary. A,W,S. (5-5, 5)

No credit for 1 until 2 has been completed. Pr. for 3 is 2 with a grade of not less than "C." Students receiving "D" in 2 are advised to proceed to 3R.

1-2, 3X. Elementary. A,W,S. (5-5,5)

Creore.

The first two years of college French in one year. For graduates and specially qualified undergraduates. No auditors.

3R. Grammar Review. A,W,S. (5)

Simpson.

Intensive review of grammar covered in 1, 2, and 3. Open to all students who for any reason are not qualified to meet the prerequisite for 4. Students having had 3, or having presented two years of high-school French (or equivalent) for entrance into the University, may not receive credit for 3R unless there has been at least a two-year lapse in their study of French.

4, 5, 6. Intermediate. A,W,S. (3, 3, 3)

Reading of modern texts, composition, functional grammar. Students in need of supplementary grammar may combine 4 and 7, making a five-hour course. The same is true of 5 and 8, 6 and 9. Pr., 3 or two high-school years, or equivalent.

7, 8, 9. Intermediate Grammar (Optional). A,W,S. (2, 2, 2)

Reading and composition with emphasis on functional grammar. Students not well enough prepared to elect 4 alone, but sufficiently advanced to dispense with 3R, should elect coordinated courses 4 and 7, which form a five-hour course in intermediate French.

34, 35, 36, and 134, 135, 136. Comparative Literature of France, Italy and Spain, in English. A,W,S. (3, 3, 3)

Goggio.

(Lower division students register for 34, 35, 36; upper division students, for 134, 135, 136.) The three principal Romanic literatures, with attention to their influence on one another. Lectures and collateral reading in English. The course may be counted in either French, Italian, or Spanish, or as elective credit in English major. No prerequisite. May be entered any quarter.

37, 38, 39. Lower Division Scientific French. A,W,S. (3, 3, 3)

Whittlesey.

Class reading of scientific texts, with emphasis on constructions and scientific terms. For upper division scientific French, see 137, 138, 139. Pr., 4 or equivalent.

41. Phonetics. A,W,S. (3)

Nostrand.

Analysis of sounds, intonation, rhythm; training in correct and natural pronunciation. Principles of such analysis and training, applicable in the development of skill and personality generally. Pr., 3 or equivalent. Upper division students may earn upper division credit.

101, 102, 103. Advanced Composition and Conversation. A,W,S. (2, 2, 2)

Helmlingé, Chessex, David.

Pr., 6 or equivalent.

104, 105, 106. Survey of French Literature. A,W,S. (3, 3, 3)

Chessex.

Detailed study of representative masterpieces from the seventeenth century to the present. Lectures, in French as soon as practicable, on the evolution of French literature and civilization from the beginning. Pr., 6 or equivalent.

107, 108. Themes. A,S. (2, 2)

Helmlingé, David.

Writing of original compositions upon assigned topics. Pr., 102 or equivalent.

118, 119, 120. Survey of French Literature and Culture in English. A,W,S. (3,3,3)

Chessex.

Course 118, from the Song of Rolland to the Renaissance; 119, Classicism and Enlightenment; 120, Romanticism to the present. Assigned reading in the principal authors, and a large proportion of individual reading, so that the student may emphasize any part of the subject (contemporary period, social aspects, etc.) throughout the year.

***121, 122, 123. French Prose Fiction.**

* Not offered in 1942-1943.

- 127, 128, 129. Advanced Conversation. A,W,S. (2,2,2) Helmlingé, David.
For majors and others admitted by the instructor. Careful preparation for each day's exercise will be required. Pr., 101 or equivalent.
- 131, 132, 133. Lyric Poetry. A,W,S. (3,3,3) Creore.
Course 131, Renaissance and classical period; 132, eighteenth century and romanticism; 133, the parnassians and symbolists; contemporary poetry. Pr., 6 or equivalent.
- 134, 135, 136. Comparative Literature of France, Italy, and Spain, in English.
See 34, 35, 36.
- 137, 138, 139. Upper Division Scientific French. A,W,S. (2, 2, 2) Whittlesey.
Conducted in individual conferences. Students read material in their own fields. Pr., 37 or 38 or 39 with grade "B," or consent of instructor.
- 141, 142, 143. The French Drama. A,W,S. (3, 3, 3) Chessex.
Course 141, the Middle Ages, Renaissance, and Classicism; 142, the eighteenth century, and Romanticism to 1850; 143, Realism, Symbolism, and the contemporary theater. Lectures in French. Pr., 6 or equivalent.
- 151, 152, 153. French Literature of the Nineteenth Century. A,W,S. (3, 3, 3) Simpson.
Course 151, the revolutionary spirit and the early romanticists; 152, Romanticism; 153, Realism. Lectures in French. Pr., 6 or equivalent.
- *154, 155, 156. Contemporary French Literature.
- 158, 159. Advanced Syntax. A,W.; W,S. (2,2) Chessex, David.
French syntax from the teacher's standpoint. Should precede the teachers' course. Pr., 103 or 107 or 108. 158, autumn, winter; 159, winter, spring.
- 161, 162, 163. Eighteenth Century Literature. A,W,S. (2,2,2) David.
Course 161, criticism of social and literary canons: Fénelon, Bayle, Fontenelle, Montesquieu; 162, the Encyclopedists and the rise of middle-class liberalism: Voltaire, Diderot; 163, the jacobin spirit and the idéologues: d'Holbach, Helvétius, de Tracy. Lectures in French and *explication de textes* in English. An essay each quarter. Pr., 6 or equivalent.
- 171, 172, 173. Seventeenth Century Literature. A,W,S. (3,3,3) C. Wilson.
Course 171, the pre-classical period; 172, the classic generation; 173, the late classic period up to 1715. Lectures in French and English. Pr., 6 or equivalent.
- 194, 195, 196. Naval and Military French. A,W,S. (3,3,3) Whittlesey.
Vocabulary study, reading, and conversation based on relevant business and social situations. Pr., 6 or permission of instructor.

Teachers' Course in French. See Educ. 75K.

Courses for Graduates Only

- *201, 202, 203. Renaissance Literature.
213. French Stylistics. S. (2) Nostrand.
Practice and criticism aiming to develop an effective and varied style in French. (Open to undergraduates who have had 159 or equivalent.)
- 221, 222, 223. Old French Reading. A,W,S. (3, 3, 3) Frein.
Open to all who have studied French at least four years. French majors will ordinarily translate into modern French. All who desire may, without prejudice, translate the old French into English. Helpful to teachers of French and Spanish, and for those studying the English language.

* Not offered in 1942-1943.

- 231, 232, 233. **History of Old French Literature.** A,W,S. (2,2,2) Frein.
Lectures in French. Assigned reading in French, or in English for those who do not easily read French. Pr., graduate standing and at least four years of French.
- 241, 242, 243. **French Historical Grammar.** A,W,S. (2,2,2) Frein.
Lectures in English upon the phonology and morphology of French words. Basic for English as well as French grammar. Pr., four years of French and graduate standing.
- 281, 282. **Seminar: Problems and Methods of French Literary History.**
A,W. (2,2) Nostrand.
Bibliographical resources; principles and objectives of literary research; criticism of students' essays (which may be preliminary portions of theses). Conducted in English.
- 291, 292, 293. **Conferences for Theses and Special Studies.** A,W,S. (3, 3, 3) Staff.

Portuguese

- 1-2, 3. **Elementary.** A,W,S. (5-5,5) _____.
- 4, 5, 6. **Intermediate.** A,W,S. (2,2,2) _____.
Reading of modern texts, composition, functional grammar. Pr., 3 or permission of instructor.

Provençal

224. **Old Provençal.** S. (3) Simpson.
The language, and representative reading.

Italian

- 1-2. **Elementary.** W,S. (5-5) Whittlesey.
No credit for 1 until 2 has been completed.
- 4-5-6. **Elementary.** A,W,S. (3-3-3) Goggio.
Equivalent to 1-2. No credit for 4 and 5 until 6 has been completed.
- 16, 17, 18. **Intermediate.** A,W,S. (2 or 3 each) Goggio.
Reading, composition, conversation. Pr., 2, or 6, or permission of instructor. U.D. credit for U.D. students.
- 34, 35, 36, and 134, 135, 136. **Comparative Literature of France, Italy and Spain, in English.**
See French 34, 35, 36.
- 111, 112, 113. **Modern Italian Literature.** A,W,S. (2 or 3 each) Goggio.
Masterpieces of the principal literary types, from the late eighteenth century to the present. Pr., 2 or 6 with grade of B; or 18.
- *121, 122, 123. **The Italian Novel.**
- 181, 182. **Dante in English.** A,W. (2, 2) Goggio.
The thought and expression of the *Divine Comedy*, against its background of medieval philosophy and art. May be counted as elective credit in English major.
184. **Renaissance Literature of Italy in English.** S. (2) Goggio.
Lectures and collateral reading. May be counted as elective credit in English major.

* Not offered in 1942-1943.

Courses for Graduates Only

*221, 222, 223. Italian Literature of the XIIth to the XVth Centuries.

*231, 232, 233. History of Old Italian Literature.

243. Italian Historical Grammar. S. (2 to 5)

Goggio.

251, 252, 253. Individual Conference. A,W,S. (2 to 5 each quarter)

Staff.

Pr., consent of the executive officer.

Spanish

1-2, 3. Elementary. A,W,S. (5-5, 5)

No credit for 1 until 2 has been completed. Each course repeated every quarter.

3R. Grammar Review. A,W,S. (5)

C. Wilson.

Intensive review of grammar covered by 1, 2, 3. Open to all students who for any reason are not qualified to meet the prerequisite for 4. Those having had 3, or having presented two years of high-school Spanish, or equivalent, for entrance into the University, may not receive credit for 3R unless there has been at least a two-year lapse in their study of Spanish.

4, 5, 6. Intermediate. A,W,S. (3, 3, 3)

Umphrey, García-Prada, W. Wilson.

Reading of modern texts, composition, functional grammar. Pr. to 4 is 3, or two high-school years with at least average standing, or equivalent.

6R. Review of Intermediate Spanish. W, S. (3)

W. Wilson.

For students in need of a review of grammar before entering those courses for which 6 or equivalent is prerequisite.

10. Spanish Conversation. A,W,S. (2)

W. Wilson.

Student discussion of items of current interest, systematic vocabulary building. Pr., Spanish 3.

34, 35, 36. Comparative Literature of France, Italy and Spain, in English.

See French 34, 35, 36.

101, 102. Advanced Composition and Conversation. 101: A,W; 102:W,S. (3,3)

García-Prada, W. Wilson.

Pr., 6 or equivalent.

103. Spanish Themes. S. (3)

García-Prada.

Practice in writing original compositions. Pr., 102, or equivalent.

104, 105, 106. Survey of Spanish Literature. A,W,S. (2, 2, 2)

Umphrey.

Historical outline of Spanish culture from early times to the present. Pr., 6 or equivalent.

115, 116, 117. Latin-American Literature and Culture in English.

A,W,S. (2,2,2)

García-Prada.

Survey of Latin-American history, literature, and culture from ancient to modern times. Lectures, readings and written reports. 115, the Pre-hispanic and Colonial periods; 116, the 19th century; 117, the contemporary period.

*118, 119, 120. Survey of Spanish Literature in English.

*121, 122. Spanish Prose Fiction.

*131. Lyric Poetry.

134, 135, 136. Comparative Literature of France, Italy and Spain, in English.

See French 34, 35, 36.

* Not offered in 1942-1943.

- 141, 142, 143. **Spanish Drama.** A,W,S. (3,3,3) **García-Prada, Umphrey.**
From its beginnings to the present day. Selected texts for intensive study. Collateral reading, lectures, and discussions. Pr., 6 or equivalent.
- 151, 152, 153. **Spanish Literature of the Nineteenth Century.** A,W,S. (2,2,2)
W. Wilson.
Course 151, the romantic movement; 152, the middle period; 153, recent and contemporary literature. Lectures, collateral reading. Pr., 6 or equivalent.
- 158, 159. **Advanced Syntax.** W,S. (2, 2) **Umphrey.**
Elementary principles of philology. Application to teaching of Spanish syntax, pronunciation, and orthography. Pr., 102 or equivalent.
- *171, 172, 173. **Seventeenth Century Literature.**
181. **Spanish-American Literature.** S. (3) **Umphrey.**
General survey of Spanish-American life and literature of the colonial period. Lectures, selected texts, collateral reading, reports. Pr., 6 or equivalent.
- *182, 183. **Spanish-American Literature. (General Survey, Nineteenth and Twentieth Centuries.)**
- *184. **Spanish-American Literature. (Mexico, Central America, Caribbean.)**
185. **Spanish-American Literature.** W. (3) **García-Prada.**
Social and cultural life of Colombia and Venezuela, with special attention to literature. Selected texts, collateral reading, lectures, discussions. Pr., 6 or equivalent.
- *186. **Spanish-American Literature. (Peru, Ecuador, Chile.)**
187. **Spanish-American Literature.** A. (3) **Umphrey.**
Literature of Argentina and Uruguay. Selected texts, collateral reading, lectures, discussions. Pr., 6 or equivalent.
- 194, 195, 196. **Naval and Military Spanish.** A,W,S. (3,3,3) **W. Wilson.**
Vocabulary study, reading, and conversation based on relevant business and social situations. Pr., 6 or permission of the instructor.

Teachers' Course in Spanish. (See Education 75Y.)

Courses for Graduates Only

201. **Spanish Renaissance.** W. (5) **Umphrey.**
Transition from medieval to modern literature.
221. **Old Spanish Literature.** A. (5) **Umphrey.**
Study of the origins and early development of various types of literature.
- *231. **Spanish Epic Poetry.**
- *241. **Spanish Philology.**
- 252, 253. **Graduate Spanish Studies.** W,S. (5,5)
Umphrey, García-Prada, W. Wilson.
Intensive study each quarter of one writer, one problem, or one aspect of literary history of Spain or Spanish America.
- 291, 292, 293. **Conferences for Theses and Special Studies.** A,W,S. **Staff.**

* Not offered in 1942-1943.

SCANDINAVIAN LANGUAGES AND LITERATURE

Professor Vickner; Instructor Arestad.

- 1-2, 3. Elementary Swedish. A,W,S. (3-3, 3) Vickner.
May be taken with 4-5, 6, making five-hour courses; 1, 2, 3 are hyphenated if 4-5 are not taken. Courses 1, 2 repeated winter and spring quarters respectively.
- 4-5, 6. Swedish Reading Course for Beginners. A,W,S. (2-2, 2) Vickner.
Supplementary to courses 1-2, 3, but may also be taken separately. No previous knowledge of Swedish necessary. Courses 4, 5 repeated winter and spring quarters, respectively.
- 10-11, 12. Elementary Norwegian or Danish. A,W,S. (3-3, 3) Arestad.
May be taken with 13-14, 15, making five-hour courses; 10, 11, 12 are hyphenated if 13-14 are not taken. Danish students will do their work in special conference. Courses 10, 11 repeated winter and spring quarters, respectively.
- 13-14, 15. Norwegian or Danish Reading Course for Beginners. A,W,S. (2-2, 2) Arestad.
Supplementary to 10-11, 12, but may also be taken separately. No previous knowledge of Norwegian or Danish necessary. Courses 13, 14 repeated winter and spring quarters, respectively.
- 20, 21, 22. Norwegian or Danish Literature. A,W,S. (2, 2, 2) Arestad.
Pr., ability to read easy Norwegian or Danish. Danish students will do their work in special conference.
- 23, 24, 25. Swedish Literature. A,W,S. (2, 2, 2) Vickner.
Pr., ability to read easy Swedish.
- 103, 104, 105. Recent Swedish Writers. A,W,S. (2 or 3 each quarter; 4 by perm.) Vickner.
Pr., relatively fluent reading knowledge of Swedish.
- 106, 107, 108. Recent Norwegian or Danish Writers. A,W,S. (2 or 3 each quarter; 4 by perm.) Vickner, Arestad.
Pr., relatively fluent reading knowledge of Norwegian or Danish. Danish students will do their work in special conference.

Courses in English

98. Early Scandinavian Literature. A,W,S. (1) Vickner.
A lecture survey of the early Scandinavian literature. Reading in English translation. No prerequisites. Upper division credit to upper division students.
99. Outline of Scandinavian Culture. A,W,S. (1) Vickner, Arestad.
Knowledge of the Scandinavian languages not required. Lectures. Upper division credit to upper division students.
- 109, 110, 111. Modern Scandinavian Authors in English Translation. A,W,S. (1) Arestad.
No knowledge of the Scandinavian languages necessary.
- 180, 181, 182. Recent Scandinavian Literature in English Translation. A,W,S. (2) Vickner.
No knowledge of the Scandinavian languages necessary.

Courses for Graduates Only

- *201-202. Old Icelandic.
- 205-206. Scandinavian Literature in the Nineteenth Century. W,S. (2 to 4 each quarter) Vickner.
- *208. Scandinavian Lyric Poetry.

* Not offered in 1941-1942.

Comparative Philology

- 190-191. **Introduction to the Science of Language.** A,W. (2-2) **Vickner.**
General principles of linguistic development with special reference to English. Pr., some knowledge of one of the classical languages or of one modern foreign language.
192. **Life of Words.** S. (2) **Vickner.**
Etymology and semasiology; growth of vocabulary; word values. Lectures, discussions, exercises. Pr., same as for 190-191.

SLAVIC STUDIES (Russian Language)—See Far Eastern.

SOCIOLOGY

Professors Steiner, Hayner, Schmid, Woolston; Assistant Professors Cohen, Guthrie, Riemer; Associate Cheng; Instructor O'Brien.

1. **Survey of Sociology.** A,W,S. (5) **Cheng in charge.**
Basic principles for understanding social relationships. Juniors and seniors may substitute 150.
27. **Survey of Contemporary Social Problems.** W. (5) **Schmid.**
Introduction to the scientific study of suicide, crime, population, unemployment, mental deficiency, mental diseases, family disorganization, etc. Pr., 1.
55. **Human Ecology.** A. (5) **Steiner.**
Factors and forces which determine the distribution of people and institutions. Pr., 1.
66. **Group Behavior.** W. (5) **Riemer.**
Analysis of conditioning factors and collective response in typical social groups—crowds, assemblies, parties, sects, etc. Pr., five credits sociology and five credits psychology. Upper division credit to upper division students with consent of instructor.
102. **Social Trends.** S. (3) **Cohen.**
Sociological analysis of current social changes. Pr., 1.
112. **The Family.** A,S. (5) **Hayner, Riemer.**
The changing home; family and marriage customs; family interaction and organization; analysis and treatment of domestic discord. Pr., 1.
116. **Housing the Family.** A. (2) **Riemer.**
Housing problems discussed from a sociological viewpoint. Special emphasis upon the adjustment of the family life to the architect's home design. Symptoms of maladjustment. Pr., 1, or instructor's permission.
128. **Field of Social Work.** A,S. (3) **Crounse.**
Historical background and development. Present scope, aims, methods. Typical problems and agencies; field trips. Pr., 1.
131. **Social Statistics.** W,S. (5) **Cohen.**
Quantitative analysis applied to sociological and related materials. Not open to students who have had 31. Pr., 1, and Math. 13.
132. **Methods of Social Research.** S. (5) **Schmid.**
Theory and practice of conducting investigation of communities, institutions, social conditions. Field and lab. work. Pr., 31, 131, or approved equivalent.
134. **Advanced Social Statistics.** W. (5) **Cohen.**
Application of methods of sampling and correlation to selected sociological materials. Pr., 31 or 131.

135. **Graphic Methods in Sociology.** A. (3) Schmid.
Theory and practice of constructing various types of maps and graphs used in sociological research and exhibits. Pr., 31 or 131, or approved equivalent.
140. **Population Problems.** A. (3) Schmid.
Major quantitative and qualitative problems of population in our contemporary society. Pr., 5 credits in sociology or economics.
141. **Human Migration.** W. (3) Steiner.
Human migrations, factors determining them, and problems arising therefrom. Pr., 5 credits in sociology or economics.
142. **Race Relations.** S. (3) Steiner.
General survey of race problems and conditions associated therewith. Special attention to race contacts on the Pacific Rim. Pr., 5 credits in sociology or economics.
- *146. **Cooperation.**
150. **General Sociology.** A,W,S. (5) Guthrie.
Major concepts of sociology and the scientific point of view in dealing with social phenomena. Introductory course for upper division students. Students who have taken 1 may not receive credit for 150.
152. **Social Control.** S. (5) Guthrie.
Analysis of the technique and process by which changes in individual and collective actions are effected. Pr., 1.
153. **Problems of Social Insecurity.** A. (3) Cohen.
Historical trends; standards by which poverty is measured; attitudes and social currents which it engenders; the responses of the community to problems of economic insufficiency. Pr., 1.
155. **Human Ecology.** A,W. (5) Steiner.
Same as 55, with additional work and readings. Pr., 1, junior standing.
156. **Criminology.** W. (5) Hayner, Cohen.
Individual and social factors in delinquency; history and methods of criminal justice. Field trips to local penal institutions. Pr., 1.
159. **Juvenile Delinquency.** S. (5) Hayner.
Family and community backgrounds; institutional treatment; juvenile court and probation; programs for prevention. Pr., 1, 156.
160. **Penology.** A. (3) Hayner.
Social treatment of juvenile and adult offenders. Pr., 156 or equivalent.
165. **The City.** A. (5) Woolston.
Organization and activities of urban groups. Comparative and analytic study. Pr., 20 credits in social sciences.
166. **Social Factors in Marriage.** W. (3) Hayner.
Study of marital problems and their adjustment. Pr., 1, 112.
168. **National Traits.** W. (5) Woolston.
Traditional differences between peoples. Historic backgrounds and prejudice. Problems of assimilation and amalgamation in America. Pr., 5 credits in psychology and 20 credits in other social sciences.
169. **Western Society.** S. (5) Woolston.
Description, comparison, analysis, evaluation of institutional and cultural patterns prevalent in Western Europe, America, and their dependencies. Pr., 20 credits in social science.
- *170. **Contemporary Social Theory.**

* Not offered in 1942-1943.

173. **Social Classes.** S. (3) Woolston.
Conditions and consequences of social stratification. Pr., 20 credits of social sciences.
176. **The Rural Community.** S. (3 to 5) Steiner.
Organization and activities of rural life. Review of investigations and means of amelioration. Pr., senior standing and 10 credits in sociology.
190. **Social Attitudes.** A. (3) Woolston.
How persons develop and manifest dispositions to act in certain ways toward their fellows. Prerequisites, 5 credits psychology and 20 credits in other social sciences. Upper division students may substitute for 66 with consent of instructor.
194. **Public Opinion.** W. (3) Woolston.
Character and operation of beliefs formed by general discussion. Problems of propaganda, criticism, education. Advanced students only. Pr., 5 credits in psychology and 20 credits in other social sciences.
See also Psych. 117, *Superstition and Belief*, and Journ. 201, *Propaganda*, which articulate with and complete the work of this course.

Courses for Graduates Only

202. **Schools of Sociological Theory.** W. (3) Guthrie.
Critical analysis of main approaches to sociological theory from its beginnings. Pr., 170 and 25 credits in social sciences.
- *203, 204, 205. **Social Reform.**
- 210, 211, 212. **Departmental Seminar.** A,W,S. (2, 2, 2) Staff.
Open to graduate students completing independent investigations and to instructors in the department.
- *220. **Population Redistribution.**
- *222. **Oriental Migration.**
- *223. **Social Change in Modern Japan.**
235. **Methodology: Quantitative Sociology.** W. (3) Cohen.
A critical analysis of the most important recent statistical research in sociology. Pr., Soc. 134 and 20 credits in social sciences.
236. **Methodology: Case Studies and Interviews.** S. (3) Riemer.
Case studies, documents and interviews as methods of sociological research. Pr., permission of instructor.
240. **Demography.** W. (3) Schmid.
Analysis of contributions in the fields of population and vital statistics. Pr., 25 credits in social sciences.
242. **World Survey of Race Relations.** S. (3) Steiner.
Study of race contacts and adjustments in South Africa, Australia, Eastern Asia, Netherlands Indies, South America. Pr., 25 credits in social sciences.
- 247, 248, 249. **Social Criticism.** A,W,S. (3,3,3) Woolston.
Examination of conservative and progressive positions regarding the treatment of modern social conditions. Pr., 25 credits of social sciences.
255. **Advanced Human Ecology.** A. (3) Steiner.
Critical appraisal of ecological conceptions and processes. Pr., 155 and 20 credits in social science.
256. **Probation and Parole.** W. (3) Hayner.
Sociological contributions to the treatment of juvenile and adult probationers and parolees. Pr., 156 or approved equivalent.

* Not offered in 1942-1943.

257. **Correctional Institutions.** A. (3) Hayner.
Prisons and juvenile reformatories as communities. Pr., 156 or approved equivalent.
258. **Basic Crime Prevention.** S. (3) Hayner.
Critical consideration of programs for delinquency prevention. Pr., 156 or approved equivalent.
- *260, 261, 262. **Marriage and the Family.**
- 281, 282, 283. **Reading in Selected Fields.** A,W,S. (2, 2, 2) Staff.
Intensive reading in any of the major fields of sociology. Open only to qualified graduate students by consent of instructor.
- 291, 292, 293. **Field Studies in Sociology.** A,W,S. (2 to 5 each) Staff.
Original field projects, carefully planned and adequately reported. Pr., permission.

GRADUATE SCHOOL OF SOCIAL WORK

Professors Witte, Steiner; Assistant Professors Crounse, Dorman, Ferguson, Kimble, Pentz; Instructor Pritchard; Lecturers Godwin, Hoedemaker, Orr; Field Work Supervisor Jonquet.

Visiting Summer Faculty: Assistant Professors Kasanin, Kraus; Lecturers Dobson, Gerry, L. Johnson, R. Newton, West.

Permission of School of Social Work Required Before Registration.

Non-professional Courses

(By members of the Graduate School of Social Work faculty.)

175. **Social Work and Health.** W, Su. (5) Crounse, Ferguson.
Point of view and method of social case work. Emphasis on social aspects of health needs of families, cooperative relationships between social and health agencies. Open to School of Nursing Education students. Four hours class and four hours laboratory. Pr., Soc. 1 and 128, or equivalents.
176. **Rural Community Organization.** A. (3 to 5) Steiner.
Fundamentals of community organization; emphasis on the special economic and social factors affecting the rural community. May be substituted for 276 upon approval. Pr., seniors with 10 credits in sociology.
178. **Problems of Inter-Personal Relationships.** S. (3) Pentz, Orr.
Basic human motivations, personality development, problems of infancy, childhood and adolescence; adult relationships; anti-social behavior. Counselling, guidance, and case work, as seen by the social worker and the psychiatrist. Pr., senior standing.

Field of Social Work. (See Sociol. 128.)

Professional Courses

1. *Social Treatment*

A. *Family Welfare.*

200. **Social Case Work I.** A,S, Su. (3) Kimble, Pritchard.
Discussion of case material to develop a social philosophy; application of basic case work principles, understanding of the individual, and an awareness of the case worker's relationship to the client. Case material for this and succeeding courses is drawn from a variety of sources including social agencies (public and private), schools, juvenile courts, correctional institutions, and behavior clinics. Professional students only. Sec. A. for students with one year or more of experience; sec. B. for students with less than one year of experience.

* Not offered in 1942-1943.

201. **Social Case Work II.** W. (3) Kimble.
Continuation of Social Case Work I, with special attention to the diagnostic and treatment processes. The case worker's role in the agency and community. Pr., 200, or equivalent. Sec. A. for students with one year or more of experience; sec. B. for students with less than one year of experience.
202. **Advanced Case Work.** S. (3) Kimble.
Critical analysis of causative factors in human behavior as a basis for understanding and treatment. Consideration of principles derived from psychiatry. Pr., 200 and 201, or equivalents, and permission.
- 205b. **Case Work in an Authoritative Setting.** Su. (2½) Jonquet.
A study and discussion of the application of case work principles in situations in which the client is not a voluntary applicant. Cases to be discussed are typified by much of the work of juvenile court officers, school attendance officers, and of family and children's agencies in "child protective" work. Pr., 200, 201, or equivalent.
- 206a,b. **Case Work Services in Time of War.** Su. (2½, 2½) R. Newton.
First Term: Services which may be needed by draftees selected or rejected, case work in and around military camps, the work of morale officers, Military and Naval Welfare Services of the American Red Cross, U. S. O., Travelers' Aid Services, and services for disabled veterans. *Second Term:* The civil population, Home Service for dependents of service men, Disaster Relief and rehabilitation, adaptations of case work in an emergency, fundamentals of case work which apply in any setting. Pr., 200, 201, 210I, 210II, or consent.
210. **Field Work: Family I.** A,W,S,Su. (4) Staff.
University field work centers are maintained in cooperation with several branch offices of the King County Welfare Department and the Family Society of Seattle. Minimum time requirement for all professional students. 16 hours a week under University supervision. Pr., professional students; 200 concurrently.
210. **Field Work: Family II.** A,W,S. (4) Staff.
Continuation of *Field Work: Family I*, to teach practice in generic case work. Minimum time requirement, 16 hours a week. Pr., 200 and 210 (I), or equivalents; 201 should be taken concurrently.
210. **Field Work: Family III.** A,W,S. (4 or 5) Staff.
Advanced field work practice in a family welfare case working agency; 16 or 20 hours a week. Pr., 200, 201, 210 (I and II), and 211, or equivalents; a case work course concurrently.
210. **Field Work: Family IV.** A,W,S,Su. (†) Staff.
Advanced field work practice in a family welfare case working agency; 16 or 20 hours a week. Pr., 200, 201, 210 (I, II, and III), or equivalents; a case work course concurrently.
210. **Field Work: Family V.** A,W,S,Su. (†) Staff.
Advanced field work practice in a family welfare case working agency; 16 or 20 hours a week. Pr., 200, 201, 210 (I, II, III, and IV), 212, 218, or equivalents; or permission.

Marriage and the Family. (See Sociology 260, 261, 262.)

Cost-of-Living Studies and Family Budgets. (See Home Econ. 109.)

B. Child Welfare.

211. **Introduction to Child Welfare.** W. (3) Crounse.
Discussion of provisions for health, education, recreation, and protection of children. Methods of caring for neglected, dependent, delinquent, and handicapped children. Care of child in his own home, in institution, and in foster homes. Pr., permission.
212. **Social Case Work with Children.** S. (3) Crounse.
Application of case work principles to children without normal parental care. Pr., 200, 201, and 211, or equivalents.

† To be arranged.

- 213a. **The Place of the Institution in the Treatment of Children with Behavior Problems.** Su. (2½) Johnson.
Use of the institution and the place of specialized institutions for the study, diagnosis, and treatment of children with behavior problems. Pr., 201, 202.
- *213b. **Social Aspects in the Treatment of the Behavior Disorders of Children.**
- *214. **Psychiatric Aspects in the Treatment of the Behavior Disorders of Children.**
215. **Field Work: Child Welfare I.** A,W,S,Su. (4 or 5) Staff.
Field work practice in a children's case working agency; 16 or 20 hours a week. Pr., 200, 201, 210 (I and II), and 211; and 212 concurrently; or equivalents, or permission.
215. **Field Work: Child Welfare II.** A,W,S,Su. (†) Staff.
Field work practice in a children's case working agency; hours to be arranged. Pr., 215 (I) or equivalent; a case work course concurrently.
215. **Field Work: Child Welfare III.** A,W,S,Su. (†) Staff.
Field work practice in a children's case working agency; hours to be arranged. Pr., 215 (I and II), or equivalents.
215. **Field Work: Child Welfare IV.** A,W,S,Su. (†) Staff.
Field work practice in a children's case working agency; hours to be arranged. Pr., 215 (I, II, and III), or equivalents.
- C. Psychiatric Case Work.**
217. **Introduction to Personality Development.** A. (2) Orr.
Designed to supplement beginning case work and to precede *Psychiatric Information for Social Workers*, this course considers the development of a dynamic point of view in psychology and its application to problems of adjustment and maladjustment in a complex society. Application of this point of view to typical social work problems will be made where time permits. Open only to full-time professional majors.
218. **Psychiatric Information for Social Workers I.** W. (2) Hoedemaker.
Factors affecting growth and development of personality from infancy to old age. Interrelationships of physical, emotional, intellectual, and environmental factors in human behavior and some of the social psychiatric principles involved. Pr., 10 credits in sociology and psychology, and consent.
219. **Psychiatric Information for Social Workers II.** S. (2) Hoedemaker.
Causes, diagnosis, and treatment of mental and nervous disorders and deficiencies with emphasis upon purposiveness of behavior and interaction of organic, emotional, and environmental factors. Pr., 216, or equivalent.
220. **Psychiatric Case Work.** A. (3) Kimble.
Discussion of case material illustrating the contribution of the case worker in the study, diagnosis, and treatment of abnormal behavior problems of children and adults in relation to the services of the psychiatrist. Pr., 200, 201, 211, and 216, or equivalents; and 217, or equivalent, past or concurrently.
- *221. **Clinical Analysis of Case Material.**
- 221b. **Clinical Analysis of Case Material.** Su. (5) Kasanin.
Clinical demonstration and discussion of problems presented by adults in psychiatric study centers. Pr., 210I, II, or equivalents.
- *222. **Psychiatry in Relation to Case Work.**
- 222b. **Psychiatry in Relation to Case Work.** Su. (2½) Kasanin.
The contributions of psychiatry to case work, as illustrated by case presentation. Pr., 200, 201, or equivalents and consent.

** Not offered in summer, 1942.

* Not offered in 1942-1943.

† To be arranged.

- 223a. Mental Health Aspects of War.** Su. (2½) **Orr.**
Designed to include some of the mental hygiene implications of the selective service system, military service, and civilian morale during war time. Pr., graduate standing, or consent.

D. Probation and Parole Case Work.

- 230. Field Work: Juvenile Probation and Parole I.** A,W,S,Su. (4 or 5) **Staff.**
Supervised field work practice in an agency dealing with problems of juvenile delinquency; 16 or 20 hours a week. Pr., 200, 201, 210 (I and II), and 211, or equivalents; and an advanced case work course concurrently.
- 230. Field Work: Juvenile Probation and Parole II.** A,W,S,Su. (3 to 5) **Staff.**
Supervised field work practice in an agency dealing with problems of juvenile delinquency; 12, 16, or 20 hours a week. Pr., 200, 201, 210 (I and II), 211, 230 (I), or equivalents.
- 230. Field Work: Juvenile Probation and Parole III.** A,W,S,Su. (3 to 5) **Staff.**
Supervised field work practice in an agency dealing with problems of juvenile delinquency; 12, 16, or 20 hours a week. Pr., 200, 201, 210 (I and II), 211, 230 (I and II), or equivalents.

Juvenile Delinquency. (See Sociol. 159.)

Probation and Parole. (See Sociol. 256.)

Correctional Institutions. (See Sociol. 257.)

E. Medical Social Work.

- 231. Medical Information for Social Workers I.** A. (3) **Dorman, Ferguson, medical lecturers.**
Physical growth and development of the individual, covering the prenatal period, infancy, childhood, adolescence, maturity, and old age, with stress on those physical deviations and major illnesses which have personal and social significance. The social implications of health content, and the use of medical concepts and resources by the social worker. Pr., 200 (may be taken concurrently).

- 232. Medical Information for Social Workers II.** W. (2) **Ferguson.**
Continuation of 231. Pr., 231.

- 233b. Health Aspects of Social Work.** Su. (2) **Ferguson.**
The role of the social worker in collaborating with physicians and health officials in the study, treatment, and prevention of illness. Emphasis will be given to health and medical needs heightened by the current situation.

- 234. Medical Social Work I.** A. (3) **Ferguson.**
Social case work with individual patients in the process of their medical care, in collaboration with clinicians and other professional personnel. The social and emotional components in illness and medical care. Pr., completion of basic curriculum.

- 235. Medical Social Work II.** W. (3) **Ferguson.**
Determination of eligibility of medical care. The medical setting for medical social work practice—institutional and non-institutional. Organization, administration, and functioning of a department or division of medical social work. Medical social work in public health and public welfare programs. Pr., 234.

***236. Advanced Medical Information.**

****238b. Growth Cycle of the Individual.**

- 239a. Seminar in Medical Social Work.** Su. (2) **Ferguson.**
History, evolving standards, interrelationships with allied fields, current problems and trends, etc. Pr., 235 (may be taken concurrently).

- 240. Field Work: Medical Social Work I.** A,W,S,Su. (3-5) **Staff.**
Field work practice in a social service department of a hospital, or a division of an agency offering medical care. Pr., 234 or concurrently.

* Not offered in 1942-1943.

** Not offered in Summer, 1942.

240. **Field Work: Medical Social Work II.** A,W,S,Su. (3-5) Staff.
Continuation of 240I. Pr., 240I.
240. **Field Work: Medical Social Work III.** A,W,S,Su. (3-5) Staff.
Continuation of 240II. Pr., 240II.
240. **Field Work: Medical Social Work IV.** A,W,S,Su. (3-5) Staff.
Continuation of 240III. Pr., 240I, 240II, and 240III.

Nutrition for Non-Majors. (See Home Econ. 104.)

F. Case Work in the Schools.

- 243a. **Social Adjustment of School Children.** Su. (2½) Dobson.
The responsibility of the school in helping children to achieve emotional maturity, with attention given to the development of cooperative relationships between the school and other community agencies. Pr., consent.

G. Supervision.

246. **Seminar: Supervision in Social Case Work.** S. (2 or 3) Kimble.
Discussion; consideration of role of supervision in developing worker's insight and skills in dealing with case situations, and in stimulating growth processes in the worker. Pr., 200, 201, 210 (I and II), 212 or 218, and 210 (III) or 215 (I), or equivalents, experience, and permission.
247. **Field Work: Supervision I.** A,W,S,Su. (2 to 5) Staff.
Training of student supervisors in methods and practices of supervising case workers. Pr., 210 V, or 215 IV, or equivalents, satisfactory case work experience, and permission; 8 to 20 hours a week.
247. **Field Work: Supervision II.** A,W,S,Su. (2 to 5) Staff.
Continuation of 247 (I). Pr., 247 (I).
- *249. **Dynamics of Personal Relationships.**

2. Social Welfare Administration.

251. **Introduction to Public Welfare.** A. (3) Witte.
Development of public responsibility for care of dependent, sick, physically and mentally handicapped, and delinquent in England, the Continent, and United States. Special attention to evolution of methods of state care for special groups. Pr., permission.
252. **Public Welfare Administration: Federal and State.** W. (2) Witte.
State and federal organization for public welfare, present day policies, division of authority and responsibility, methods of cooperation. Organization and methods of administration of public welfare services and Social Security Act and plans for reorganization. Pr., 251 or equivalent.
253. **Public Welfare Administration: Local.** S. (3) Witte.
Possible types of local public welfare organizations. Functions, internal organization, and policies of county welfare units. Relations to other local agencies of government. State-county relationships, and financing. Type and character of local rural organization in Washington and other selected states. Pr., 251 and 252, or special permission.
- *254. **Public Welfare Administration in Rural Areas.**
- *255. **The Child and the State.**
256. **Financing the Public Social Services.** A. (2 to 3) _____.
Analysis and research into the needs, distribution, and sources of funds for financing the public social services. Pr., permission.

* Not offered in 1942-1943.

- 257a. **Social Aspects of the Law.** Su. (5) West.
Discussion and study of case law and statutes relating to those fields of law which are of greatest concern to the social worker, such as familial relations, child dependency, delinquency, contractual relationships. Pr., consent.
- 259b. **Planning for the Public Social Services.** Su. (2½) Kraus.
Basic relationships of the public services, including general and public assistances, work relief, social insurance, and related services. Future trends and developments growing out of the present emergency will be considered. Pr., consent.
- *260. **Administration of Social Agencies.**
- 264b. **Housing Management.** Su. (2½) Kraus.
Housing conditions in the United States, social and economic importance of housing, history of attempts to provide low cost housing, emergency housing in defense areas, housing legislation and management. Pr., consent.
- *266. **Administration of the Social Insurances.**
- *269. **Field Work: Social Insurance Administration I.**
- *269. **Field Work: Social Insurance Administration II.**
270. **Field Work: Welfare Administration I.** A,W,S,Su. (3 to 5) Staff.
Supervised field work practice in an administrative capacity in a public or private welfare agency; 12, 16, or 20 hours a week. Pr., major in public welfare administration, 202, 210 II, and permission.
270. **Field Work: Welfare Administration II.** A,W,S,Su. (3 to 5) Staff.
Supervised field work practice in an administrative capacity in a public or private welfare agency; 12, 16, or 20 hours a week. Pr., major in public welfare administration, 270 (I), or equivalent, and permission.
- Seminar in Indian Administration.** (See Anthro. 206.)
- Government Accounting.** (See E.&B. 152.)
- Labor Legislation.** (See E.&B. 161.)
- Labor Relations.** (See E.&B. 164.)
- Social Insurance.** (See E.&B. 177.)
- Domestic Relations.** (See Law 113.)
- Administrative Law.** (See Law 121.)
- The Public Service.** (See Pol. Sci. 154.)
- State Government and Administration.** (See Pol. Sci. 163.)

3. *Group Work*

271. **Introduction to Social Group Work.** W. (3) _____.
Principles and procedures in group work as a basic approach and method in social work, and application of these methods to various types of groups with which the social worker has contact. Pr., permission.

* Not offered in 1942-1943.

4. Community Planning and Interpretation

276. **Community Planning.** S. (3) **Steiner.**
Community movement. Emphasis upon organization of community forces in interests of social welfare. Pr., permission.
278. **Seminar in Social Work Interpretation.** S. (2-3) **Godwin.**
Philosophy of publicity for social work; study of methods of publicizing work of social agencies; planning agency publicity programs; use of research and statistical material in agency publicity. Students will prepare sample publicity material for study and analysis. Pr., permission.
280. **Field Work: Community Planning and Interpretation I.** A,W,S,Su. (3 to 5) **Staff.**
Supervised field work practice in a public or private agency engaged in community organization and interpretation; 12, 16, or 20 hours a week. Pr., 200, 201, 210 (I and II), or equivalents.
280. **Field Work: Community Planning and Interpretation II.** A,W,S,Su. (3 to 5) **Staff.**
Supervised field work practice in a public or private agency engaged in community organization and interpretation; 12, 16, or 20 hours a week. Pr., 200, 201, 210 (I and II), and 280 (I), or equivalents.

Public Opinion. (See Sociol. 194.)

Propaganda. (See Journ. 201.)

5. Social Research

281. **Social Work Statistics.** W. (2) **Pritchard.**
Use of statistics in social work, including the meaning and application of statistical measurement, tables and graphs, and the interpretation of statistical material. Graduate School of Social Work students only.
283. **Field Work: Social Research I.** A,W,S,Su. (3-5) **Staff.**
Supervised field work practice in a social agency on research problems relating to the fundamental processes of the agency. Twelve, sixteen, or twenty hours per week. Pr., major in social research and permission.
283. **Field Work: Social Research II.** A,W,S,Su. (3-5) **Staff.**
Continuation of 283I. Pr., major in social research and 283I.
- 284, 285, 286. **Research in Public Welfare.** A,W,S,Su. (†,†,†) **Staff.**
A course for students competent to carry on research dealing with special administrative problems. Pr., permission. Hours to be arranged.
- 288, 289, 290. **Thesis Research.** A,W,S,Su. (†,†,†) **Staff.**
Supervised research for students writing theses for advanced degrees. Regular group discussions are held regarding common problems, in autumn and spring quarters. Pr., permission; 288 pr. to 289, and 289 pr. to 290.
- 291, 292, 293, 294. **Seminar.** A,W,S,Su. (†,†,†) **Staff.**
Open to graduate students capable of conducting independent investigations. Pr., permission. Hours to be arranged.

Social Statistics. (See Sociol. 131.)

Methods of Social Research. (See Sociol. 132.)

† To be arranged.

Advanced Social Statistics. (See Sociol. 134.)

Field Studies in Criminology. (See Sociol. 230, 231.)

Statistical Analysis. (See E.&B. 60.)

Advanced Statistical Analysis. (See E.&B. 170.)

6. History and Development of Social Work

295. Current Topics in Social Work. S. (0) Witte.
Consideration of current topics in field of social work, particularly as they are discussed in current literature. Pr., permission of the director.
296. Seminar: Historical Backgrounds of Social Work. W. (3) Witte, Dorman.
Philanthropy and social reform since sixteenth century, with special attention to nineteenth century movements and their influence upon present methods, purposes, and tendencies. Pr., permission.
- 297a. Seminar in Professional Ethics. Su. (2-3) Gerry, Witte.
Ethical principles and professional practices of related fields of medicine, law, nursing, teaching, the ministry, and business. Developments of interest in the professional nature of social work and its ethical concepts. Pr., permission.
298. Readings in Social Work. A,W,S. (+) Staff.
Readings in current social work literature in the student's field of major interest. Pr., permission.

*Social Reform. (See Sociology 203, 204, 205.)

SPEECH

Professor Orr; Associate Professors Rahskopf, Franzke, Carrell; Assistant Professor Bird; Instructors Pellegrini, Baisler; Associates Wenhe, Hill, Pence, Wagner; Acting Associates Stevenson, Enquist.

- A. Speech Clinic. A,W,S. (No credit) Carrell, Wagner.
Individual work for students having speech defects they wish to correct. Sec. A, Articulation Problems; Sec. B, Foreign Dialect; Sec. C, Stuttering; Sec. D, Voice Problems.
19. English Phonetics for Foreign Students. A. (2) Carrell.
38. Essentials of Argumentation. A,W,S. (5) Pellegrini.
Bibliographies, briefs, and oral arguments. Upper division credit for upper division students.
40. Essentials of Speaking. A,W,S. (5) Franzke in charge.
Elementary course in fundamentals of effective speaking.
41. Advanced Speaking. A,W,S. (5) Wenhe, Bird, Franzke.
Continuation of 40, with special emphasis on problems of delivery. Upper division credit for upper division students. Pr., 40.
43. The Speaking Voice. A,W,S. (4) Orr, Rahskopf, Wenhe, Hill, Pence.
Fundamental training course with emphasis on mental, emotional, and physical coordinations essential to good voice. Upper division credit for upper division students.
44. Voice and Articulation. W,S. (4) Rahskopf.
Continuation of 43; special attention to the sound system of English and to practice on problems of articulation and pronunciation. Upper division credit for upper division students. Pr., 43.

† To be arranged.

* Not offered in 1942-1943.

50. **Elementary Lip Reading. A. (2)** _____.
Fundamental principles of lip-reading; sense training for speed and accuracy; study of relationship of lip-reading to the speaking situation.
51. **Advanced Problems in Lip Reading. S. (2)** _____.
Continuation of 50, special emphasis on complex elements of lip-reading. Pr., 50 or consent of instructor.
79. **Oral Interpretation. A,W,S. (3)** Orr, Pellegrini, Wenhe.
Required of students seeking a normal diploma in English. Such students are examined for assignment to one of four groups: (a) exempted; (b) required to take 43 and 79; (c) to take 79 only; (d) to take 79 and 179. Upper division credit for upper division students. Pr., 43, unless a literature major.
101. **Varsity Debate. W,S. (3)** Orr, Bird, Franzke, Hill.
Only students chosen for the freshman and varsity debate squad may register for this course. Credits will be allowed upon the recommendation of the instructor in charge, provided that no more than three credits are earned in one year and that the total does not exceed twelve credits.
103. **Extempore Speaking. S. (3)** Franzke.
Recommended to students in engineering and law. Not open to College of Arts and Sciences students nor to students who have credit for 40.
138. **Methods in Debate and Public Discussion. W. (3)** Pellegrini.
Study and practice of various types of debating, including the old traditional method and new modifications, such as cross-examination, symposium and the problem-solving debates. Particularly designed for teachers and speech majors. Pr., 38 or consent of instructor.
139. **Forms of Public Address. S. (5)** Rahskopf.
Study of the structure and style of the various forms of public address based on modern speeches. Pr., Speech 40.
161. **Radio Speech. A. (3)** Bird.
Special projects in the technique of speech in radio, viz., announcer's copy, talks, dialogue, interviews, group discussions, etc.
162. **Radio Production Methods. W. (3)** Bird.
Manual and recorded sound effects, music in relation to broadcasts, microphone placement, studio set-up, timing, cutting of scripts are among the factors considered. Laboratory experience in the rehearsal studio of the Campus Radio Studios.
163. **Radio Program Building. S. (3)** Bird.
Planning of the radio program. Problems of adaptation of literary forms for radio production, presentation of expository, informational, and persuasive material by radio.
179. **Advanced Interpretation of Literature. S. (5)** Orr.
Advanced training in the mental and vocal technique essential to artistic oral interpretation of the various forms of literature. Pr., 79.
186. **Backgrounds in Speech. A. (5)** Rahskopf.
Speech as a fundamental human activity considered from biological, acoustic, psychological and social aspects. Some attention to the development of speech as a field of study and the correlation of its various phases.
187. **Voice Science. W. (5)** Carrell.
Anatomy, physiology, physics, psychology of voice production. Pr., 43 or consent of instructor.
188. **Advanced Problems in Speaking. W. (5)** Orr.
Advanced training in effective methods of preparation and delivery. Pr., 40.

190. **Speech Correction.** A, S. (5) Carrell.
Nature, etiology, diagnosis of disorders of speech.
191. **Methods of Speech Correction.** W. (3) Carrell.
Methods of correcting speech defects. Clinical practice for qualified students. Pr., 190.
- 193, 195, 196. **Clinical Training in Speech Correction.** A, W, S. Carrell.
(2 to 5 each quarter)
Training course in techniques and problems of speech correction. Involves observation in public schools and actual management of cases in the University Clinic, Traveling Clinic, and at cooperating hospitals. May be repeated for total not to exceed 15 credits. Pr., 190, 191, permission of instructor.
194. **Basic Methods of Teaching Lip-reading.** W. (5) _____.
Introduction to theory and methods of diagnosing hearing disabilities and teaching lip-reading. Laboratory practice. Pr., normal hearing.

Teachers' Course in Speech. (See Education 75X.)

Courses for Graduates Only

201. **Introduction to Graduate Study in Speech.** A. (2) Rahskopf.
Research methods and bibliographical materials. Required of all graduate students in speech.
211. **Historical Principles of Public Address.** W. (5) Rahskopf.
Critical evaluation of the principles of public address based on a study of their development from ancient to modern times. Students read in translation the rhetorical works of Aristotle, Cicero, Quintilian, Wilson, Campbell, Whately, and other modern critics.
212. **Research in Rhetoric and Public Address.** S. (5) Rahskopf.
214. **Research in Voice.** A. (5) Orr.
215. **Research in Theory of Interpretation.** W. (5) Orr.
216. **Research in Speech Pathology.** S. (5) Carrell.
220. **Thesis Research.** A, W, S. (†) Staff:

THE WORLD AT WAR

- W.W. **The World at War.** A, W, S. (5) Staff.
Factual information on the background of the present war, the ideological conflict, the fundamentals of military and naval strategy, economics and war, and the essentials of planning for peace. Elective credit in all colleges, schools, and departments of the University. Upper division credit to upper division students.

† To be arranged

ZOOLOGY AND PHYSIOLOGY

Professor Kincaid; Associate Professors Hatch, Svihla; Assistant Professors Martin, Rankin; Instructors Goodsell, Crescitelli.

Zoology

1. **Animal Biology.** A,W. (5) Kincaid, Hatch, assistants.
Survey of the more general aspects of animal life.
2. **General Zoology.** W,S. (5) Kincaid, Hatch, assistants.
Survey of the animal kingdom, stressing structure, classification, and economic relations. Pr., 1 or equivalent.
- 3-4. **Pre-Medical Zoology.** A,W. (5-5) Rankin, assistants.
For students entering a medical course.
5. **General Embryology.** S. (5) Rankin, assistants.
Comparative developmental history of animals, with emphasis on vertebrate forms. Pr., 1, 2 or 3-4.
8. **Survey of Zoology.** S. (5) Svihla.
Elementary facts and principles basic to the field of zoological science. Students who expect to continue with zoology should begin with 1, 2 or 3-4.
16. **Evolution.** A. (2) Kincaid.
Lectures on the more important biological problems related to the general theory of evolution.
17. **Eugenics.** W,S. (2) Kincaid.
Principles of evolution in their relation to human welfare.
101. **Cytology.** W. (5) Svihla.
Structure and activities of the animal cell with special reference to problems of development, sex-determination, and heredity. Pr., 1, 2, or 3-4.
- *102. **Experimental Zoology.**
106. **Plankton.** A. (5) Kincaid.
Classification, adaptations and interrelationships of the microscopic fauna of the sea. Field work in Puget Sound. Pr., 1, 2 or 3-4.
107. **Parasitology.** S. (5) Rankin.
Animal parasites. Pr., 1, 2 or 3-4.
108. **Limnology.** S. (5) Kincaid.
Classification and interrelationship of organisms found in lakes and streams. Field work in neighboring fresh-water bodies. Pr., 1, 2 or 3-4.
111. **Entomology.** S. (5) Hatch.
Structure, classification, and economic relations of insects. Pr., 1, 2 or 3-4 or equivalent.
121. **Microscopic Technique.** W. (3) Rankin.
Methods of imbedding, sectioning and staining animal tissues. Pr., 1, 2 or 3-4 or equivalent.
- 125, 126. **Invertebrate Zoology.** A,W. (5, 5) Hatch.
Structure, classification, and ecology of invertebrate animals. Pr., 1, 2 or 3-4.

* Not offered in 1942-1943.

- 127-128. **Comparative Anatomy.** A,W. (5-5) **Svihla.**
Comparative morphology of the vertebrate animals. Pr., 1, 2 or 3-4.
- 129, 130. **Vertebrate Zoology.** S, A. (5, 5) **Svihla.**
Taxonomy, morphology, and ecology of vertebrates. Pr., 1, 2 or 3-4.
131. **History of Zoology.** A. (2) **Hatch.**
History of zoology during ancient, medieval, and modern times. Pr., 20 credits of zoology.
- 135, 136, 137. **Museum Technique.** A,W,S. (3, 3, 3) **Flahaut, staff.**
Methods of preparing skins of birds and mammals, and other specimens for museum use. Pr., permission of instructor.
- 155, 156, 157. **Elementary Problems.** A,W,S. (3, 3, 3) **Staff.**
Students will be assigned minor problems under direction of an instructor. Pr., 30 credits in zoology and instructor's permission.
175. **Medical and Sanitary Zoology.** A, S. (3,3) **Rankin.**
Methods of diagnosis and control of parasites of medical and veterinary importance. Practical methods of use in the medical corps of the armed forces will be emphasized. Pr., 107, 121, Bact. 99, or permission.

Teachers' Course in Zoology. (See Educ. 75Z.)

Courses for Graduates Only

- 201, 202, 203. **Research.** A,W,S. (†) **Staff.**
Students capable of carrying on independent work will be assigned problems under direction of an instructor. Pr., 25 credits in zoology.
- 205, 206, 207. **Advanced Problems.** †. (†) **Staff.**
Especially for graduate students working for doctor's degree.
- 210, 211, 212. **Seminar.** A,W,S. (1, 1, 1) **Staff.**
Reports and discussions of current zoological literature and other special topics.
- 213, 214, 215. **Advanced Embryology.** A,W,S. (3,3,3) **Rankin.**
Consideration of the problem of differentiation in the early development of animals, with particular emphasis on the experimental approach. Pr., 5, 121, 127-128.

Physiology

6. **Elementary Physiology.** S. (5) **Goodsell.**
Human structure and function; designed to meet the needs of students in pharmacy.
7. **Elementary Physiology.** A,W. (5) **Goodsell.**
Introduction to the structure and functions of the human body.
11. **Survey of Physiology.** A, S. (5) **Martin.**
Broad outline of the functions of living organisms, with particular stress on the human. Four lectures and one quiz.
50. **Physiology.** W. (6) **Martin.**
Summary of physiological principles with emphasis on the mechanisms of adjustment in the human. Required of students majoring in physical education. Pr., Anat. 100.
- 53, 54. **Intermediate Physiology.** A,W,S. (5, 5) **Goodsell.**
Adapted for students expecting to teach the subject in high school. Required of nursing majors. Recommended for students in dietetics and sanitary science.

† To be arranged.

115. **General Physiology. A. (3 or 5)** Crescitelli.
Qualitative and quantitative study of fundamental principles. Pr., Chem. 2 or 22.
139. **Comparative Physiology. W. (3 to 5)** Crescitelli.
Physiological principles illustrated by the study of invertebrate material. Designed particularly to meet the needs of zoology majors. Pr., 7, or Zool. 126 and 128.
- 151, 152, 153. **Advanced Physiology. A,W,S. (5, 5, 5)** Martin.
Extensive study of human physiology for physiology majors and advanced students in related fields. Pr., Zool. 2 or 4, Chem. 2 or 22.
- 155, 156, 157. **Elementary Problems. A,W,S. (3, 3, 3)** Staff.
Students will be assigned minor problems under direction of an instructor in the department. Pr., 20 credits in physiology and instructor's permission.
163. **Physiology of Metabolism. S. (3 or 5)** Martin.
Advanced studies in digestion, absorption, and metabolism. Pr., 10 credits in human physiology; Chem. 2 or 22.
173. **Physiology of Endocrine Organs. A. (3 or 5)** Goodsell.
Functions and interrelationships of the endocrine glands. Pr., ten credits in human physiology and instructor's permission.

Courses for Graduates Only

- 201, 202, 203. **Research. A,W,S. (†)** Staff.
Students capable of carrying on independent work may be assigned problems under the direction of an instructor. Pr., 20 credits in physiology.
- 210, 211, 212. **Seminar. A,W,S. (1, 1, 1)** Staff.

† To be arranged.

SUMMARY OF DEGREES, DIPLOMAS AND CERTIFICATES GRANTED 1940-1941

BACHELOR'S DEGREES

| | |
|---|-------------|
| Bachelor of Arts (College of Arts and Sciences)..... | 611 |
| Bachelor of Arts (College of Education)..... | 61 |
| Bachelor of Arts in Economics and Business..... | 180 |
| Bachelor of Arts in Education..... | 26 |
| Bachelor of Arts in Home Economics..... | 1 |
| Bachelor of Arts in Law Librarianship..... | 1 |
| Bachelor of Arts in Librarianship..... | 24 |
| Bachelor of Arts in Mathematics..... | 1 |
| Bachelor of Arts in Music..... | 11 |
| Bachelor of Architecture..... | 21 |
| Bachelor of Laws..... | 16 |
| Bachelor of Science (College of Arts and Sciences)..... | 184 |
| Bachelor of Science (College of Education)..... | 1 |
| Bachelor of Science in Aeronautical Engineering..... | 26 |
| Bachelor of Science in Bacteriology..... | 1 |
| Bachelor of Science in Botany..... | 4 |
| Bachelor of Science in Ceramic Engineering..... | 2 |
| Bachelor of Science in Chemical Engineering..... | 31 |
| Bachelor of Science in Chemistry..... | 15 |
| Bachelor of Science in Civil Engineering..... | 26 |
| Bachelor of Science in Commercial Engineering..... | 9 |
| Bachelor of Science in Education..... | 10 |
| Bachelor of Science in Electrical Engineering..... | 32 |
| Bachelor of Science in Food Technology..... | 4 |
| Bachelor of Science in Fisheries..... | 114 |
| Bachelor of Science in Forestry..... | 67 |
| Bachelor of Science in Home Economics..... | 10 |
| Bachelor of Science in Mathematics..... | 3 |
| Bachelor of Science in Mechanical Engineering..... | 40 |
| Bachelor of Science in Metallurgical Engineering..... | 8 |
| Bachelor of Science in Mining Engineering..... | 9 |
| Bachelor of Science in Nursing..... | 56 |
| Bachelor of Science in Pharmacy..... | 52 |
| Bachelor of Science in Physics..... | 2 |
| Bachelor of Science in Zoology..... | 2 |
| TOTAL..... | 1561 |

ADVANCED AND PROFESSIONAL DEGREES

| | |
|---|------------|
| Master of Arts..... | 88 |
| Master of Arts in Music Education..... | 1 |
| Master of Business Administration..... | 3 |
| Master of Education..... | 4 |
| Master of Fine Arts..... | 1 |
| Master of Forestry..... | 1 |
| Master of Music..... | 1 |
| Master of Nursing..... | 3 |
| Master of Science..... | 22 |
| Master of Science in Ceramic Engineering..... | 2 |
| Master of Science in Chemical Engineering..... | 6 |
| Master of Science in Civil Engineering..... | 4 |
| Master of Science in Forestry..... | 1 |
| Master of Science in Metallurgical Engineering..... | 1 |
| Master of Science in Mining Engineering..... | 1 |
| Master of Science in Pharmacy..... | 7 |
| Master of Science in Physical Education..... | 5 |
| Professional Degree, Civil Engineer..... | 1 |
| Doctor of Philosophy..... | 30 |
| TOTAL..... | 182 |

DIPLOMAS AND CERTIFICATES

| | |
|--|------------|
| Certificate in Nursing Supervision..... | 11 |
| Certificate in Public Health Nursing..... | 26 |
| University Three-Year Normal Diplomas..... | 242 |
| University Six-Year Normal Diplomas..... | 33 |
| TOTAL..... | 312 |

SUMMARY OF ENROLLMENT, 1940-1941

I. BY SCHOOLS AND COLLEGES

| SCHOOLS AND COLLEGES | SUMMER QUARTER | | | AUTUMN QUARTER | WINTER QUARTER | SPRING QUARTER | TOTAL INDIVID. ACAD. YR. |
|----------------------------|----------------|----------|----------------------|-------------------|-------------------|-------------------|--------------------------------|
| | 1st Term | 2nd Term | Total Individuals | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Arts and Sciences... | 1298 | 1089 | 1424 | 6420 | 6112 | 5502 | 7206 |
| Men..... | 392 | 344 | 421 | 3031 | 2867 | 2435 | 3425 |
| Women..... | 906 | 745 | 1003 | 3389 | 3245 | 3067 | 3781 |
| Econ. & Business... | 131 | 111 | 134 | 1292 | 1218 | 1066 | 1425 |
| Men..... | 108 | 95 | 111 | 1134 | 1076 | 931 | 1249 |
| Women..... | 23 | 16 | 23 | 158 | 142 | 135 | 176 |
| Education..... | 434 | 267 | 487 | 100 | 92 | 89 | 109 |
| Men..... | 97 | 66 | 107 | 53 | 55 | 47 | 58 |
| Women..... | 337 | 201 | 380 | 47 | 37 | 42 | 51 |
| Engineering..... | 89 | 43 | 92 | 1320 | 1221 | 1059 | 1424 |
| Men..... | 89 | 43 | 92 | 1315 | 1218 | 1054 | 1419 |
| Women..... | .. | .. | .. | 5 | 3 | 5 | 5 |
| Forestry..... | 12 | 10 | 12 | 237 | 216 | 172 | 253 |
| Men..... | 12 | 10 | 12 | 237 | 216 | 172 | 253 |
| Women..... | .. | .. | .. | .. | .. | .. | .. |
| Graduates..... | 1334 | 978 | 1436 | 857 | 809 | 732 | 1031 |
| Men..... | 693 | 549 | 737 | 522 | 489 | 442 | 621 |
| Women..... | 641 | 429 | 699 | 335 | 320 | 290 | 410 |
| Law..... | 54 | 49 | 54 | 158 | 142 | 134 | 161 |
| Men..... | 54 | 49 | 54 | 151 | 135 | 127 | 154 |
| Women..... | .. | .. | .. | 7 | 7 | 7 | 7 |
| Mines..... | 2 | 3 | 3 | 84 | 88 | 84 | 92 |
| Men..... | 2 | 3 | 3 | 84 | 88 | 84 | 92 |
| Women..... | .. | .. | .. | .. | .. | .. | .. |
| Pharmacy..... | 16 | 13 | 16 | 201 | 198 | 193 | 212 |
| Men..... | 14 | 11 | 14 | 165 | 164 | 155 | 174 |
| Women..... | 2 | 2 | 2 | 36 | 34 | 38 | 38 |
| TOTALS..... | 3370 | 2563 | 3658 | 10,669 | 10,096 | 9031 | 11,913 |
| Men..... | 1461 | 1170 | 1551 | 6692 | 6308 | 5447 | 7445 |
| Women..... | 1909 | 1393 | 2107 | 3977 | 3788 | 3584 | 4468 |

NOTE: The number of individuals in Column 7 is based upon the classification of the Autumn Quarter to which is added the new students entering the same classification for the first time for the Winter and Spring Quarters. In this column, students who have changed their classification during the year are counted as of their first classification.

SUMMARY OF ENROLLMENT, 1940-1941

II. BY CLASSES

| CLASSES | SUMMER QUARTER | | | AUTUMN QUARTER | WINTER QUARTER | SPRING QUARTER | TOTAL INDIVID. ACAD. YR. |
|-----------------|----------------|----------|-------------------|----------------|----------------|----------------|--------------------------|
| | 1st Term | 2nd Term | Total Individuals | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Freshmen..... | 129 | 97 | 139 | 3325 | 2980 | 2441 | 3767 |
| Men..... | 62 | 38 | 66 | 2072 | 1852 | 1424 | 2333 |
| Women..... | 67 | 59 | 73 | 1253 | 1128 | 1017 | 1434 |
| Sophomores..... | 244 | 208 | 256 | 2330 | 2205 | 1953 | 2549 |
| Men..... | 106 | 84 | 112 | 1426 | 1354 | 1177 | 1576 |
| Women..... | 138 | 124 | 144 | 904 | 851 | 776 | 973 |
| Juniors..... | 386 | 301 | 399 | 2048 | 2013 | 1830 | 2232 |
| Men..... | 131 | 101 | 137 | 1274 | 1264 | 1090 | 1388 |
| Women..... | 255 | 200 | 262 | 774 | 749 | 740 | 844 |
| Seniors..... | 656 | 546 | 692 | 1947 | 1941 | 1836 | 2096 |
| Men..... | 296 | 262 | 303 | 1269 | 1240 | 1159 | 1371 |
| Women..... | 360 | 284 | 389 | 678 | 701 | 677 | 725 |
| Graduates..... | 1371 | 1013 | 1473 | 957 | 901 | 817 | 1132 |
| Men..... | 730 | 584 | 774 | 616 | 575 | 520 | 716 |
| Women..... | 641 | 429 | 699 | 341 | 326 | 297 | 416 |
| Specials..... | 10 | 8 | 10 | 62 | 56 | 154 | 137 |
| Men..... | 4 | 3 | 4 | 35 | 23 | 77 | 61 |
| Women..... | 6 | 5 | 6 | 27 | 33 | 77 | 76 |
| Transients..... | 574 | 390 | 689 | .. | .. | .. | .. |
| Men..... | 132 | 98 | 155 | .. | .. | .. | .. |
| Women..... | 442 | 292 | 534 | .. | .. | .. | .. |
| TOTALS..... | 3370 | 2563 | 3658 | 10,669 | 10,096 | 9031 | 11,913 |
| Men..... | 1461 | 1170 | 1551 | 6692 | 6308 | 5447 | 7445 |
| Women..... | 1909 | 1393 | 2107 | 3977 | 3788 | 3584 | 4468 |

NOTE: The number of individuals in Column 7 is based upon the classification of the Autumn Quarter to which is added the new students entering the same classification for the first time for the Winter and Spring Quarters. In this column, students who have changed their classification during the year are counted as of their first classification.

TOTAL STUDENTS IN RESIDENCE

| | |
|--|---------------|
| During regular academic year..... | 11,913 |
| During summer quarter..... | 3,658 |
| TOTAL..... | 15,571 |
| Deduct summer duplicates..... | 775 |
| Men..... | 441 |
| Women..... | 334 |
| Individuals (Academic year and summer)..... | 14,796 |

EXTENSION STUDENTS

| | |
|-------------------|--------------|
| Classes..... | 2,266 |
| Men..... | 566 |
| Women..... | 1,700 |
| Home Study..... | 1,101 |
| Men..... | 770 |
| Women..... | 331 |
| TOTAL..... | 3,367 |

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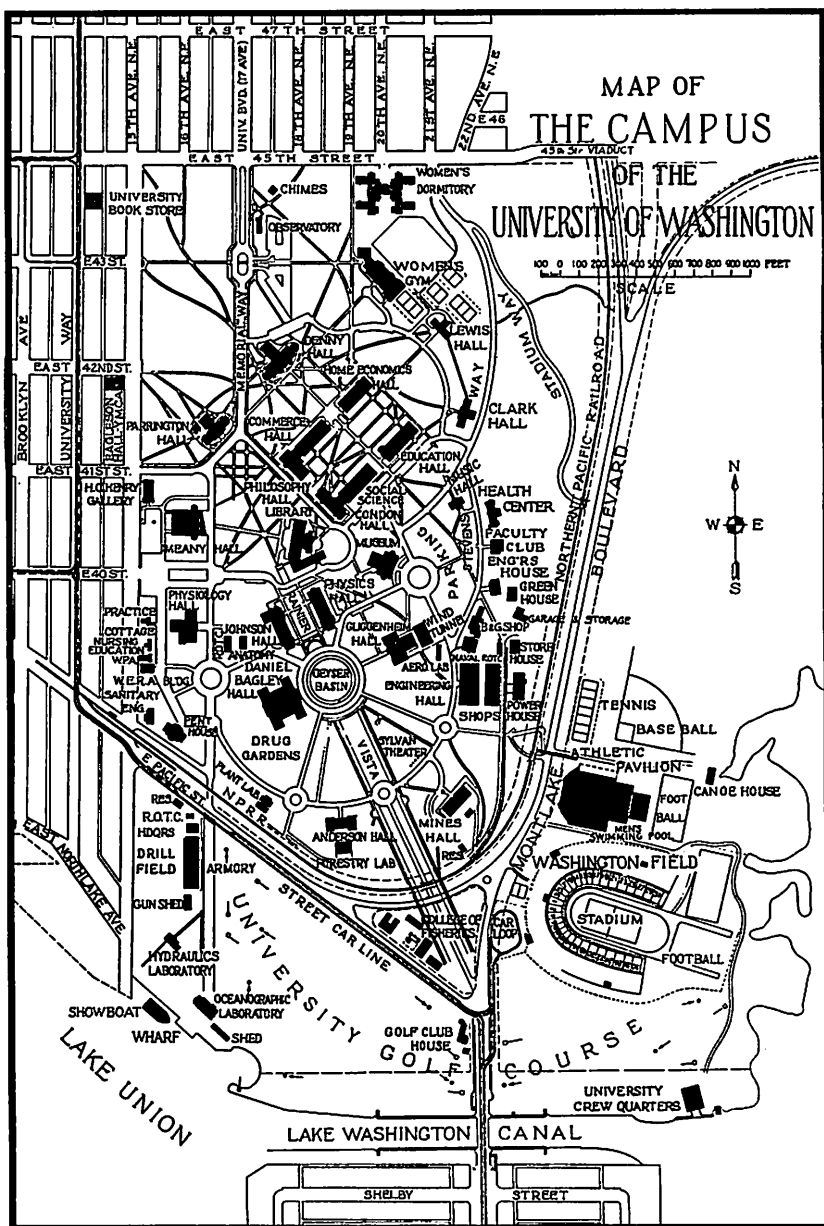
SCHOOL OF LAW

1942-1943



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The University campus, comprising 605 acres, lies between Fifteenth Avenue Northeast and Lake Washington, and East Forty-fifth Street and Lake Union. The 15th Ave. N.E.-East 65th St., Ravenna, and Montlake trolley coach lines run one block west of the campus; Ravenna trolley coach and Laurelhurst-Sand Point motor coach lines pass the campus on the north. The offices of administration are located in Education Hall and are best reached by leaving the car at East Forty-second Street and University Way.

SCHOOL OF LAW

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 O'Neal, Martena*Secretary of the Law School*

Organization and Equipment

General Statement. The School of Law was established in 1899. It is a member of the Association of American Law Schools organized in 1900 to set and maintain high standards of legal education, and comprised of the leading law schools of the country. The School of Law is approved by the Council on Legal Education and Admission to the Bar of the American Bar Association.

The object of the School of Law is to provide a thorough training in the law and to prepare students for practice in any state or jurisdiction where the Anglo-American legal system prevails. Particular attention is given to the statutes, the special doctrines of law, and the rules of practice that obtain in the State of Washington. The faculty is composed of thirteen resident professional law teachers, who devote their entire time and energy to teaching, two lecturers in law, who are active practitioners at the Seattle bar, and one lecturer in accounting, who is a practicing Certified Public Accountant, as well as an instructor in the College of Economics and Business. The courses in practice are taught by men experienced at the Washington bar.

The Law Building. The School of Law occupies a separate building designed exclusively for Law School use.

The Library. The University Law Library contains 92,298 (January, 1942) volumes, including the decisions of all English and American courts of last resort, and the reported decisions of all lower courts. Extensive runs of the English, American, and colonial statutes are available, and all legal periodicals published in the English language are received.

State and United States Courts. The School of Law is located within a few minutes' ride of both the federal and state courts sitting in Seattle. The United States District Court is in session and trying cases almost constantly, and the United States

Circuit Court of Appeals for the Ninth Circuit holds a session in Seattle each autumn. The superior court for King County with fifteen departments, the justice courts, the municipal police court, and the juvenile court are in session in Seattle throughout the school year, and enable the student to witness the trial of actual cases. The Supreme Court of the State of Washington is situated within comparatively easy reach at Olympia and affords the student casual opportunity of hearing the argument of state appeals.

General Information

Quarter System. The quarter system prevails in the Law School. Each quarter is approximately 12 weeks in length. Credit is given usually on the basis of one credit representing a recitation or lecture one hour a week per quarter. The total hour value of courses prevailing in the schools of the Association of American Law Schools has been generally retained—*e.g.*, courses formerly given two hours a week per semester are given three hours a week per quarter under the quarter system.

Admission to the Bar. The University of Washington School of Law is by law the standard of approved law schools for admission to the bar of this State. Admission to the Washington Bar, however, is conditioned upon passing a state bar examination.

Instruction in Other Departments. Law students may elect studies, for which they are prepared, in other departments of the University without charge, provided that such election does not interfere with their law studies. Before registering in other departments, the student must obtain written permission from the dean of the Law School.

Expenses

| | | |
|-------------------------------|----------------------------|---------|
| Resident Tuition Fee..... | each quarter | \$15.00 |
| Non-Resident Tuition Fee..... | each quarter | 50.00 |
| Incidental Fee | each quarter | 12.50 |
| A.S.U.W. Fee | autumn quarter | 5.00 |
| | winter and spring quarters | 2.50 |
| Law Library Fee..... | each quarter | 10.00 |

For graduate students, the payment of the A.S.U.W. fee is optional.

Admission

Students may not register until complete credentials from all schools formerly attended have been received and evaluated. It is recommended that admission credentials be submitted by July 15. The student who delays submission of his credentials handicaps himself unnecessarily. Owing to the congestion of correspondence during the weeks immediately preceding the opening of the quarter, it is often impossible to reply at once to letters and applications sent in during this period.

Regular Students. Admission to the School of Law is on a selective basis. In passing upon applications for admission, the following factors are taken into account: amount and character of pre-legal work, scholarship in pre-legal work, and special aptitude and fitness as evidenced by legal aptitude examination and personal interview with the dean of the Law School. Students contemplating entering the School of Law should fill in and submit application blanks, copies of which may be obtained from the dean's office.

Students transferring from other colleges and law schools should settle the question of their admission in advance. In all cases, complete transcripts of college and law work should be sent to the dean's office.

The following are the minimum requirements for admission:

(a) Candidates for the bachelor of laws degree must either (1) hold the degree of bachelor of arts or bachelor of science from the University of Washington, or an equivalent degree from a college or university of approved standing, or (2) have

completed three years of college work, 135 academic quarter credits, with a scholarship average of 2.50, together with the required work in military or naval science, and physical education, or (3) have completed two years of college work, 90 academic quarter credits, with a scholarship average of 2.50, together with the required work in military or naval science, and physical education, and including satisfactory completion of the following courses or their substantial equivalents:

| <i>Course</i> | <i>Quarter Credits</i> |
|---|------------------------|
| Composition 1, 2, 3..... | 15 |
| Philosophy 1 (Introduction) and 5 (Logic)..... | 10 |
| Economics 1, 2 (Principles)..... | 10 |
| History 5, 6 (English Political and Social) and 106 (English Constitutional) | 15 |
| Political Science 1 (Survey) and 52 (Introduction to Public Law) 10 | |
| Total..... | 60 |

(b) Candidates for the bachelor's degree in arts or science or the degree of bachelor of arts in economics and business and the bachelor of laws degree under the combined curricula must have completed three years of college work, 138 academic quarter credits, including the group requirements of the college concerned, with a scholarship average of 2.50, together with the required work in military or naval science, and physical education.

(c) Candidates for the degree of bachelor of science in law (a non-professional degree which does not qualify for admission to the bar) must either (1) have completed three years of college work, 135 academic quarter credits, with a scholarship average of 2.50, together with the required work in military or naval science, and physical education, or (2) have completed two years of college work, 90 academic quarter credits, with a scholarship average of 2.50, and including the courses described in (a) (3) above, or their substantial equivalents, together with the required work in military or naval science, and physical education.

Special Students. No person will be admitted as a special student in law unless he is 23 years of age and his general education is such as to entitle him to admission to the first-year class in the University of Washington. Special students are admitted only in exceptional cases upon vote of the faculty and the number shall not exceed ten per cent of the average number of students admitted by the school as beginning regular law students during the two preceding years.

Attention is called to the fact that in order to be eligible to take the Washington State Bar examination, the student must have completed two years of college work prior to beginning his professional law study. Students intending to qualify for the Washington State Bar examination are, therefore, advised not to petition for admission as special students.

Degrees and Requirements for Graduation

Bachelor of Laws Degree. Effective with the class which entered the Law School in the autumn quarter of 1938, the course leading to the bachelor of laws degree became a four-year course. The degree of bachelor of laws will thus be conferred on students who meet the requirements for admission to the school and who thereafter complete 168 quarter credits in professional law subjects, including the required courses, and who maintain over their entire law record a scholarship average of at least 2.00.

Honors. Those who maintain a uniformly distinguished record for excellence in their courses will receive the degree with honors.

Combined Curricula in Arts, Sciences, and Law. It is possible for students to obtain the bachelor's degree in arts or science or the degree of bachelor of arts in economics and business and the bachelor's degree in law in seven years.

To do this, the student must first complete, with a grade point average of 2.50, the three years' work in arts and sciences or in economics and business, a total of 138 academic credits, including the group requirements of the college. (For details of these requirements, see the College of Arts and Sciences or the College of Economics and Business sections in the University catalogue.) The student will then be admitted to the School of Law and upon completion of 42 credits in law will be granted the college degree. Upon completing the remaining three years of professional law work, with the required scholarship average, he will be granted the bachelor of laws degree.

Students from other institutions entering this University with advanced standing may take advantage of this combined seven-year course, provided they are registered in the College of Arts and Sciences or the College of Economics and Business for at least one full year of work, and earn at least 45 credits in the University before entering the School of Law. This privilege will not be extended to normal school graduates attempting to graduate in two years, nor to undergraduates of other colleges who enter this University with the rank of senior.

Residence Requirement. The candidate for the bachelor of laws degree must spend twelve quarters or their equivalent in residence at a law school which is a member of the Association of American Law Schools. The three quarters immediately preceding the conferring of the law degree must be spent in residence at the University of Washington Law School.

Advanced Standing. If, in addition to satisfying the entrance requirements for regular standing in the Law School, a student has earned credits by regular attendance for at least one academic year of not less than eight months in another law school which is a member of the Association of American Law Schools, he will ordinarily receive credit for such work, subject to the following restrictions: The work must equal in amount and character that required by this Law School and not more than three years' credit will be allowed for it. The right is reserved to refuse credit in law in whole or in part, save upon examination, and credit once given may be withdrawn for poor work in the school. Candidates for admission with advanced standing should forward a transcript of their record in both pre-legal and law work. No credit is given for time spent in private reading, correspondence work or study in a law office.

Degree of Bachelor of Science in Law. This is a non-professional degree which does not qualify for admission to the bar or to the bar examination. This degree will be conferred on any candidate (who has not theretofore received a bachelor of arts or bachelor of science degree) who is regularly admitted to the Law School, who completes the first two years of the law school curriculum, who has earned a total of at least 180 quarter credits in pre-law and law study, whose scholarship average for his pre-law and law work is at least 2.00, and who is eligible to continue in the Law School.

Summer School

General Statement. Courses are offered each summer as a part of the regular instruction of the Law School. This work carries the same credit and counts toward a degree the same as the work of any other quarter. For a detailed program, see the announcement of summer session. By taking advantage of the summer work, students may shorten the period required for the law degree.

Miscellaneous Information

Washington Law Review. The *Washington Law Review* (with which has been combined the *Washington State Bar Journal*) is a legal publication issued quarterly each year under the direction of the law faculty with the assistance of a student board of 15 to 20 members chosen from the ablest students in the Law School. *The Review* serves as a medium of expression for the legal scholars of *Washington* and elsewhere and is devoted particularly to the interpretation, advancement, and harmonious development of the law. *The Review* contains scholarly articles by judges and lawyers and discussions of important recent court decisions by students in the Law School, based on thorough research. A place on the student editorial board is one of the goals of every earnest law student and the experience is invaluable to him in his later professional life.

The Order of the Coif. The Order of the Coif is a national honorary legal society with a chapter at this Law School. The order has for its purpose the encouragement of scholarship and the advancement of the ethical standards of the legal profession. Membership in the order is dependent entirely upon the attainment of high scholastic standing. Each chapter annually elects from the senior law class a number of persons, not exceeding ten per cent of the class, ranking highest in scholarship.

The Carkeek Prize. The Vivian M. Carkeek prize of \$50 is awarded annually "for the best student contribution to *The Washington Law Review* on a point of Washington law, or any point of peculiar interest to Washington attorneys."

The Frank W. Baker Award. This annual award of \$250 is to be made "to the student in the Law School who shall prepare and submit to the Dean of the Law School the best thesis on a topic which will foster and promote an understanding of the duty of an American citizen to uphold and preserve the Constitution of the United States and the supremacy of the Supreme Court, and to counteract the tendency of students to succumb to the specious arguments of advocates of subversive doctrines."

Nathan Burkan Memorial Competition. The American Society of Composers, Authors and Publishers awards annually in each of the approved law schools of the country a prize of \$100 for the best paper by a graduating student on a subject within the field of Copyright Law.

The Western Printing Company Prize. An award made annually to that student rendering the most valuable service to *The Washington Law Review*.

COURSES OF STUDY

FIRST YEAR

All first-year subjects are required

- | | | |
|-------|---|------------|
| ‡101. | Contracts. A. (4); W, S. (3-3) Goble and Patterson, Cases on Contracts. | Shattuck. |
| ‡102. | Torts. A. (4); W, S. (3-3) Bohlen, Cases on Torts, 3rd ed. | Richards. |
| ‡104. | Property I. A, W, S. (3-3-3) Fraser, Cases on Property, Vols. 1, 2. | Luccock. |
| ‡105. | Criminal Law and Procedure. A, W. (3-3) Harno, Cases on Criminal Law, 2nd ed., and O'Bryan, Cases on Criminal Procedure. | O'Bryan. |
| 112. | Agency. S. (4) Steffen, Cases on Agency. | Ayer. |
| 130. | Legal Bibliography. W. (3) Beardsley, Legal Bibliography and the Use of Law Books. | Beardsley. |

SECOND YEAR

All second-year subjects are required

- | | | |
|-------|---|-------------|
| ‡110. | Sales. A, W. (3-3) Vold, Cases on Sales. | Ayer. |
| 111. | Wills. A. (3) Mechem and Atkinson, Cases on Wills and Administration, 2nd ed. | Richards. |
| 113. | Domestic Relations. S. (3) Shattuck, Washington Materials on Domestic Relations. | Richards. |
| ‡114. | Equity. A, W. (5-3) Walsh, Cases on Equity. | Nottelmann. |
| ‡115. | Evidence. W, S. (4-4) McCormick, Cases on Evidence. | Falknor. |
| ‡116. | Bills and Notes. W, S. (3-3) Britton, Cases on Bills and Notes, 3rd ed. | Taylor. |
| ‡119. | Constitutional Law. A, W, S. (3-2-3) Casebook to be announced. | Sholley. |

THIRD YEAR

All third-year subjects are required

- | | | |
|-------|---|-------------|
| 117. | Legal Administration and Ethics. W. (3) Cheatham, Cases and Materials on the Legal Profession. | Shefelman. |
| 120. | Constitutional Law II. A. (3) Casebook to be announced. | Sholley. |
| 121. | Administrative Law. S. (4) Gellhorn, Administrative Law, Cases and Comments. | Oberdorfer. |
| ‡123. | Property II. W, S. (3-3) Kirkwood, Cases on Conveyances. | Luccock. |

‡No examination for credit until completion of entire course.

- ‡126. **Trusts. A,W. (3-3)** Nottelmann.
 Scott, Cases on Trusts, 2nd ed.
- *127. **Code Pleading.**
142. **Practice and Procedure I. A. (3)** O'Bryan.
 McBaine, Cases on Trial Practice, supplemented by Washington Code of Procedure and Washington cases.
 In 142 and 144, Moot Court meets once each week. Each student is required to bring his case to issue, introduce the evidence, and try the case before the court or jury.
144. **Practice and Procedure III. S. (3)** O'Bryan.
 Mechem and Atkinson, Cases on Wills and Administration, 2nd ed., supplemented by the Washington Probate Code and Washington cases.
- ‡145. **Credit Transactions. A,W. (4-2)** Shattuck.
 Shattuck, Washington Materials on Security Transactions.
148. **Legal Writing. W. (No credit but required of third-year students)** Cornu.
- ‡149. **Business Associations. W,S. (4-4)** Ayer.
 Ballantine and Lattin, Cases and Materials on the Law of Corporations. Cases assigned on other business organizations.

FOURTH YEAR

Required Courses

118. **Conflict of Laws. S. (5)** Sholley.
 Cheatham, Dowling, Goodrich, Cases on Conflict of Laws.
124. **Community Property. A. (3)** Luccock.
 Mechem, Sholley, Luccock, Cases on Washington Law of Community Property.
135. **Legislation. A,W. (2-2)** Harsch.
 Horack, Cases on Legislation.
146. **Taxation. W. (4)** Harsch.
 Magill and Maguire, Cases on Taxation, 3rd ed.
199. **Seminars and Individual Research Courses**
 Ten hours required of the following one-quarter seminars, each carrying five hours of credit.
- 199A. **Trusts (Taxation Problems). S. (5)** Nottelmann.
- 199B. **Banking Law and Advanced Problems in Security. S. (5)**
Shattuck and Taylor.
- *199C. **Public Utility Regulation.**
- 199D. **Law of Income Taxation. S. (5)** Harsch.
- *199E. **Law of Corporation Finance, Regulation and Reorganization.**
- *199F. **Corporation Practice.**
- 199G. **Comparative Law. W. (5)** Levy.
- 199H. **Government Regulation of Business. A. (5)** Oberdorfer.
- 199I. **Civil and Criminal Procedure. A. (5)** Falknor.
- 199J. **Labor Law. W. (5)** Sholley.

‡No examination for credit until completion of entire course.

*Not offered in 1942-1943.

ELECTIVE FOURTH-YEAR COURSES

Sixteen hours of electives to be selected. Of this sixteen, an additional five hours of seminar or individual research may be undertaken with permission of the dean.

- | | | |
|-------|---|--------------|
| ‡122. | International Law. A,W. (3-3) | Stowell. |
| | Briggs, <i>The Law of Nations</i> . | |
| *125. | Trade Regulation. | |
| 128. | Damages. W. (3) | Richards. |
| | McCormick, <i>Cases on Damages</i> . | |
| *129. | Drafting of Legal Instruments. | |
| *131. | Quasi-Contracts. | |
| 132. | Legal Accounting. A. (3) | McConahey. |
| | Graham and Katz, <i>Accounting in Law Practice and Assigned Cases</i> . | |
| 133. | Public Utilities. A. (4) | Taylor. |
| | Welch, <i>Cases on Public Utility Regulation</i> , 2nd ed., with supplement. | |
| 134. | Federal Jurisdiction and Procedure. W. (3) | Oberdorfer. |
| | Dobie and Ladd, <i>Cases on Federal Procedure</i> . | |
| 136. | Insurance. W. (4) | Taylor. |
| | Vance, <i>Cases on Insurance</i> . | |
| *137. | Water Rights. | |
| *138. | Future Interests. | |
| 139. | Administration of Debtors' Estates. A. (4) | Oberdorfer. |
| | Casebook to be announced. | |
| *140. | Mining Law. | |
| 141. | Admiralty. S. (4) | Shefelman. |
| | Lord and Sprague, <i>Cases on Admiralty</i> , 2nd ed. | |
| 143. | Practice and Procedure II (Executions, Garnishments and Attachments). | |
| | S. (3) | O'Bryan. |
| 147. | Municipal Corporations. S. (4) | Thorgrimson. |
| | Tooke, <i>Cases on Municipal Corporations</i> , 2nd ed. | |
| 190. | Roman Law. A. (3) | Levy. |
| | Radin, <i>Handbook of Roman Law</i> . | |
| *191. | Comparative Law. | |
| 199K. | Research Problems in Law. A,W,S. (1 to 3) | Staff. |
| | Properly qualified third- and fourth-year students may, with the consent of a member of the law faculty and the dean of the school, receive from one to three credits for individual research in any of the major fields covered by the curriculum. | |

‡No examination for credit until completion of entire course.

*Not offered in 1942-1943.

NOTICE

The University and its various colleges and schools reserve the right to change the rules regulating admission to, instruction in and graduation from the University and its various divisions and any other regulations affecting the student body. Such regulations shall go into force whenever the proper authorities may determine, and shall apply not only to prospective students, but also to those who may at such time be matriculated in the University. The University also reserves the right to withdraw courses or change fees at any time.

BULLETIN

UNIVERSITY OF WASHINGTON

SCHOOL OF LIBRARIANSHIP

1942-1943

Administrative Officers

Lee Paul Sieg, Ph.D., LL.D.....*President of the University*
Frederick Morgan Padelford, Ph.D., LL.D.....*Dean of the Graduate School*
Ruth Worden, B.A., Cert. in L.S.....*Professor of Librarianship; Director*

The Faculty, 1942-1943

Smith, Charles Wesley, B.A., B.L.S.....*Librarian; Professor of Librarianship*
Beardsley, Arthur Sydney, B.S. in L.S., LL.B., Ph.D.....*Law Librarian; Professor of Law*
Alfonso, Marie Smart, B.A., B.S. in L.S.....*Associate Professor of Librarianship*
Andrews, Siri, Cert. in L.S., B.S. in L.S.....*Assistant Professor of Librarianship*
Turner, Mabel, B.A., B.S. in L.S.....*Instructor in Librarianship*
Richards, John Stewart, B.A. (L.S.), M.A.....*Lecturer in Librarianship and Associate Librarian*
Edwards, Gertrude, B.S. in L.S.....*Reviser*

GENERAL SERIES

JANUARY 24, 1942

No. 678

Published weekly at Seattle, Washington, by the University of Washington from October to July, inclusive. No issues in August and September. Entered as second-class matter at Seattle, Washington, under the Act of August 24, 1912.

Admission Requirements

Admission to the School of Librarianship is granted to graduate students who hold the baccalaureate degree from any college or university of good standing, and whose undergraduate work has included at least 20 college credits of one modern foreign language taken in college, and who have made an average grade of "B" in their undergraduate work. Students desiring to enter college or university library work or work in a large public library are required to have a reading knowledge of both French and German.

Admission to the course in law librarianship is granted to graduate students who have completed the law work at a school accredited by the Association of American Law Schools. Applications with full official transcripts of law courses must be sent to the Dean of the Law School. The number admitted will be limited.

Initial admission to classes is permitted only at the beginning of the autumn quarter. No one may be admitted to any course in librarianship, except those so marked, unless he is expecting to complete the entire curriculum.

Application for entrance must be made to the School of Librarianship before May 15, or September 15, of the year of entrance. Transcripts must be filed with the Registrar of the University as graduate standing is granted by the Registrar. *An admission slip from the Registrar's Office indicating classification as a graduate student does not entail admission to the School of Librarianship. The student must make sure that his acceptance is clear in both offices.*

Advisory Suggestions

Persons beyond 30 years of age will not be considered for admission to the school unless they have already had satisfactory experience in library service.

As no one with serious physical defects, personality difficulties, or ill health can readily secure a position in library service, such persons should not ask admission to the school.

The student entering the school should be a typist of accuracy and fair speed.

Students are advised not to plan for outside work as the courses are heavy.

Students desiring to prepare for children's librarianship are advised to take Psych. 131, *Child Psychology*.

The director is the adviser for all pre-library students. Students should consult the director in regard to their work once a quarter, preferably when registering, and should have their programs approved by her.

Graduates who have met the requirements for a teaching major and minor and wish to qualify for high school library work should consult the dean of the College of Education and the director of the School of Librarianship for qualifications in both fields.

An average class grade of "B" must be maintained by students of the School.

Degrees

On completion of the curriculum in librarianship, the degree of bachelor of arts in librarianship is granted; on completion of the curriculum in law librarianship, the degree of bachelor of arts in law librarianship is granted.

Upon completion of the advanced course in library work with children,¹ a certificate in library work with children is granted.

CURRICULA

I. GENERAL COURSE

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|----------------------------|----------------|----------------------------|----------------|----------------------------|----------------|
| 170. Children's Work..... | 3 | 178. History of the Book.. | 3 | 186. Practice | 5 |
| 172. Intro. to Library Wk. | 2 | 184. Classification and | | 196. Books for Libraries.. | 3 |
| 175. Classification and | | Cataloging | 3 | 191. Classification and | |
| Cataloging | 4 | 185. Bibliography and | | Cataloging | 3 |
| 177. Bibliography and | | Reference | 4 | 194. Bibliography and | |
| Reference | 3 | 188. Books for Libraries.. | 3 | Reference | 2 |
| 179. Books for Libraries.. | 4 | 189. Adm., Small Libraries | 2 | 192. Administration | 2 |

To specialize in cataloging, students take the general course except in the spring quarter when in place of 192, *Administration*, they take the five credits in 191, *Classification and Cataloging*; students specializing in reference take the general course

¹ Not offered in 1942-1943.

except in the spring quarter when in place of 192, *Administration*, they take the four-credit course in 194, *Bibliography and Reference*.

II. COURSES FOR LIBRARY WORK WITH CHILDREN

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|--|----------------|
| 170. Children's Work | 3 | 178. History of the Book. 3 | | 186. Practice | 5 |
| 172. Intro. to Library Wk. 2 | | 184. Classification and Cataloging | 3 | 196. Books for Libraries.. | 3 |
| 175. Classification and Cataloging | 4 | 185. Bibliography and Reference | 3 | 190. Selection of Books for Children | 3 |
| 177. Bibliography and Reference | 3 | 188. Books for Libraries.. | 2 | 180. Story Telling | 3 |
| 179. Books for Libraries.. | 4 | 181. Adv. Children's Work | 2 | | |
| | | 183. Selection of Books for Children | 3 | | |

III. COURSES FOR SCHOOL LIBRARY WORK

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|---|----------------|---------------------------------------|----------------|
| 170. Children's Work | 3 | 178. History of the Book. 3 | | 182. School Lib. Admin... | 3 |
| 172. Intro. to Library Wk. 2 | | 184. Classification and Cataloging | 3 | 186. Practice | 5 |
| 175. Classification and Cataloging | 4 | 185. Bibliography and Reference | 4 | 194. Bibliography and Reference | 2 |
| 177. Bibliography and Reference | 3 | 188. Books for Libraries.. | 3 | 196. Books for Libraries.. | 3 |
| 179. Books for Libraries.. | 4 | 195. Book Selection for High School Libraries 3 | | | |

For students preparing to meet the requirements asked by the State Department of Education for teacher-librarians in schools of five hundred or less or to meet the requirements for an eighteen-hour minor, the following courses have been opened: Lib. 171, 175, 176, 182, 184, 195.

Course 184 must follow 175. If such students plan to take less than 18 credits of librarianship, it is recommended that 175 and 195 be considered essential, and 182, 176, 171, and 184, desirable, ranked in order of importance.

If such students wish later to take the degree of bachelor of arts in librarianship, they will need to meet all requirements for entrance to the School and to complete the remainder of the curriculum.

IV. COURSES IN LAW LIBRARIANSHIP

| <i>Autumn Quarter</i> | <i>Credits</i> | <i>Winter Quarter</i> | <i>Credits</i> | <i>Spring Quarter</i> | <i>Credits</i> |
|--|----------------|--|----------------|--|----------------|
| 175. Classification and Cataloging | 4 | 178. History of the Book. 3 | | 186. Practice | 5 |
| 177. Bibliog. & Reference. 3 | | 184. Classification and Cataloging | 3 | 191. Classification and Cataloging | 5 |
| 240. Adv. Legal Bibliog... 4 | | 185. Bibliog. & Reference. 4 | | 243. Law Library Adminis. 5 | |
| 241. Order and Accessioning of Law Books.... 4 | | 242. Legal Reference and Research..... | 5 | | |

COURSES OF STUDY

- §170. Introduction to Children's Work. A. (3) Andrews.
A basic course.
- §171. Children's Books. W. (2) Andrews.
A survey of the history of children's books, standards of selection and methods of introducing books to children.
- §172. Introduction to Library Work. A. (2) Worden.
Library organization, problems of different types of libraries, and current library topics.
- §175. Classification, Cataloging, Subject Headings. A,W. (4) Alfonso, Turner.
- §176. Reference for High School Libraries. A,S. (3) Turner.
- §184. Classification, Cataloging, Subject Headings. W,S. (3) Alfonso, Turner.
Pr., 175.
- §191. Classification, Cataloging, Subject Headings. S. (3 or 5) Alfonso.
Pr. 184.
- §177. Bibliography and Reference. A. (3) Smith, Alfonso.
Includes trade and subject bibliography and government documents.

§ Open only to students registered in the school.

‡ Open to seniors and graduates who wish to qualify for teacher-librarian positions in high schools.

- §185. **Bibliography and Reference.** W. (3 or 4) Smith, Alfonso.
Continuation of 177.
- §194. **Bibliography and Reference.** S. (2 or 4) Alfonso.
Continuation of 185.
- §178. **History of the Book.** W. (3) Richards.
- §179, §188, §196. **Books for Libraries.** A,W,S. (4, 2 or 3, 3) Worden.
Study of the book field, and the problems of selecting books.
180. **Story Telling.** A, §S. (3) Andrews.
Study of folk and fairy tales, myths, epics, and short stories as source material for story telling. Open to juniors and seniors in autumn.
- §181. **Advanced Children's Work.** W. (2) Andrews.
Organization of a children's department; problems of book buying and administration. Pr., 170.
- †182. **School Library Administration.** A,W,S. (3) Turner.
- §183. **Selection of Books for Children.** W. (3) Andrews.
Pr., 170.
- §186. **Practice.** S. (5) Worden.
Four weeks (40 hours a week) of practice work under expert supervision in neighboring Northwest libraries.
- §189. **Organization and Administration of Small Libraries.** W. (2) Worden.
- §190. **Selection of Books for Children.** S. (3) Andrews.
Pr., 183.
- §192. **Administration.** S. (2) Worden.
Problems of library management, buildings, equipment, finance, publicity.
- †195. **Book Selection for High School Libraries.** A,W,S. (3) Andrews.
- §240. **Advanced Legal Bibliography.** A. (4) Beardsley.
Bibliographical data and use of federal and state law reports and statutes; quasi-legal and commissioners' reports of the states, for association records, legal periodicals, indexes and digests, legal regional bibliographies, cooperative bibliographies of law collections.
- §241. **Order and Accessioning of Law Books.** A. (4) Beardsley.
Study of aids to law book selection, ordering and accessioning of law books, processing, micro-photography of legal material, etc.
- §242. **Legal Reference and Research.** W. (5) Beardsley.
Study of bibliographical lists, law reference questions, briefing, annotations, local legal history.
- §243. **Law Library Administration.** S. (5) Beardsley.
Staff problems, patrons and public relations, circulation problems and procedure, law library architecture and planning, book arrangements, equipment, rules, publicity, publications, budgets, reports, professional societies, regional service, cooperative buying.

SECOND-YEAR LIBRARY WORK WITH CHILDREN

(Not offered in 1942-1943)

- *201, 202, 203. **Children's Literature.**
- *204, 205, 206. **Administration of Children's Libraries.**
- *207, 208, 209. **Traditional Literature.**
- *210, 211, 212. **School Work.**
- *213, 214, 215. **Field Work.** (Not required of students with library experience.)
‡ Open to seniors and graduates who wish to qualify for teacher-librarian positions in high schools.
* Not offered in 1942-1943.
§ Open only to students registered in the school.

Bulletin

University of Washington



OCEANOGRAPHIC LABORATORIES

Friday Harbor, Washington

Summer Session Registration

June 20, 1942

OCEANOGRAPHIC LABORATORIES

Officers of Administration

Lee Paul Sieg, Ph.D., LL.D.....*President of the University*
Frederick M. Padelford, Ph.D., LL.D.....*Dean of the Graduate School*
Thomas G. Thompson, Ph.D.....*Director of the Laboratories and Professor of Chemistry*

Staff

Kincaid, Trevor, M.A., D.Sc.....*Professor of Zoology*
Norris, Earl R., Ph.D.....*Professor of Chemistry*
Rigg, George B., Ph.D.....*Professor of Botany*
Utterback, Clinton L., Ph.D.....*Professor of Physics*
Phifer, Lyman D., Ph.D.....*Assistant Director and Associate Professor of Botany*
Robinson, Rex J., Ph.D.....*Associate Professor of Chemistry*
*Church, Phil E., Ph.D.....*Assistant Professor of Geography and Meteorology*
Ordal, Erling J., Ph.D.....*Assistant Professor of Bacteriology*
Crescitelli, Frederick, Ph.D.....*Instructor of Physiology*

Lecturer

Zeusler, F. A.....*Commander, United States Coast Guard*

Research Associates

Henry, Dora P., Ph.D.....*Zoology*
Norris, Anna C., Ph.D.....*Biochemistry*
Stevens, Belle A., Ph.D.....*Zoology*

Larsen, C. T.....*Captain, M.S. "Catalyst"*
Bardue, Mary.....*Secretary*
Grier, Mary, B.S.....*Librarian*
Warner, Berniece.....*Dining Hall Manager*
Dixon, John G.....*Buildings and Grounds*

University Fellows

Borg, A. F., B.S.....*Bacteriology*
Benoit, George, B.S.....*Biochemistry*
.....*Invertebrate Zoology*
Gilbert, William J., B.S.....*Marine Plants*
Anderson, Don H., B.S.....*Oceanography*
Jentoft, Ralph E., B.S.....*Oceanography*
Moser, Robin, B.S.....*Oceanography*
.....*Oceanography*
Johnson, Marvin G., B.S.....*Oceanographic Chemistry*
Wilson, Raymond E., B.S.....*Physics*

CALENDAR FOR SUMMER SESSION

NOTE: The Regular Session in Seattle coincides with the Autumn, Winter, and Spring quarters of the University Calendar.

Research accommodations for investigators available throughout the year.

Registration dateJune 20, 1942
Instruction begins.....June 22, 1942, 8 a.m.
Instruction ends.....August 22, 1942, noon

*Absent on leave 1941-1942.

General Series Number 674, December 27, 1941. Published weekly at Seattle, Washington, by the University of Washington from October to July, inclusive. No issues in August and September. Entered as second-class matter at Seattle, Washington, under the Act of August 24, 1912.

OCEANOGRAPHIC LABORATORIES UNIVERSITY of WASHINGTON

The main laboratory is on the University campus at Seattle. The building is fully equipped for biological, physical, and chemical research and has a circulating sea water system. Research space is available throughout the year. The *Catalyst* is based at the Seattle laboratory during the regular academic year.

Courses offered in oceanography on the Seattle campus are found on page 259 of the general catalogue. These include general oceanography and oceanographical bacteriology, botany, chemistry, physics, and zoology.



Laboratory Building at Friday Harbor

THE SUMMER SESSION AT FRIDAY HARBOR

Description of Laboratories

The field laboratories are on San Juan Island, one of the largest islands of the San Juan Archipelago. This archipelago, comprising about 175 islands, is in the Northwest section of the State of Washington, lying approximately in latitude 48° N. and longitude 123° W. The laboratory grounds occupy a tract of 484 acres, having about two miles of shore line.

The buildings consist of six one-story laboratories of concrete and hollow tile, a stockroom, a dining and social hall, and the residences of the director and the curator. They are about one and one-half miles from the town of Friday Harbor, the county seat of San Juan County, and may be reached by ferry from Anacortes and Bellingham, Washington, or Sydney, British Columbia.

Facilities for Scientific Work

The laboratories are admirably located for the study of various phases of oceanography. Within a relatively short distance are sea waters varying from oceanic to those highly diluted by streams, with depths to 300 meters, bottoms varying from mud to rock, and water movements ranging from those of quiet bays and lagoons to those of swift tide ways. The marine fauna and flora of the region are exceptionally abundant. The *Catalyst*, a 75-foot diesel-driven research boat, equipped with laboratories and apparatus for investigations at sea, operates from Friday Harbor during the summer, is available to those engaged in research, and may be used for general class work. Row boats are accessible at all times at the laboratory dock and floats. The floats are provided with a number of live boxes. A cantilever pier is equipped for making various types of observations.

A tidal station is maintained in cooperation with the United States Coast and Geodetic Survey. A meteorological station for continuous observations of direct and diffuse solar radiation is operated in cooperation with the United States Weather Bureau.

All laboratories are equipped with ample electric outlets, gas, fresh water, and sea water cooled to the approximate temperature of the adjacent sea. The zoological laboratories are equipped with aquaria. The stock room supplies the usual apparatus and glassware. Arrangements may be made for the loan of special apparatus from the several departments of the University. Compound and dissecting microscopes are furnished.

Private research laboratories are available as well as research tables.

The library contains 5,000 volumes and many United States Coast and Geodetic Survey charts. Books or journals may also be borrowed from the University of Washington Library through the librarian of the Laboratories. The library of the University further maintains an interlibrary loan service so that almost any volume is available.

Fauna and Flora. The San Juan Archipelago is noted for the abundance and variety of its marine fauna and flora. Particular mention may be made of the following animals yielding embryological material during the summer months: *Obelia*, *Strongylocentrotus*, *Echinarachnius*, *Stichopus*, *Argobuccinum*, *Melibe*, *Lacuna*, *Crepidula*, *Haminea*, *Nereis*, *Polynoidea*, *Amphitrite*, *Arenicola*, *Pentidotea*, *Caprella*, *Balanus*, various Tunicates, and *Cymatogaster*.

The zooplankton of the area is rich and varied, since an opportunity is afforded to secure both the neritic forms and the oceanic plankton over the continental shelf.

Among the algae available to workers at the laboratories are the following: Browns—*Nereocystis*, *Laminaria*, *Cymathaere*, *Agarum*, *Hedophyllum*, *Alaria*, *Pterygophora*, *Desmarestia*, *Ectocarpus*, *Fucus*; Greens—*Ulva*, *Monostroma*, *Enteromorpha*, *Cladophora*, *Codium*; Blue-Greens—*Lyngbya*, *Oscillatoria*; Reds—*Porphyra*, *Iridaea*, *Gigartina*, *Callophyllis*, *Turnerella*, *Anatheca*, *Rhodymenia*, *Halosaccion*, *Polysiphonia*, *Odonthalia*, *Dasyopsis*, *Antithamnion*, *Prionitis*, *Amphiroa*, *Corallina*, and *Lithothamnion*.

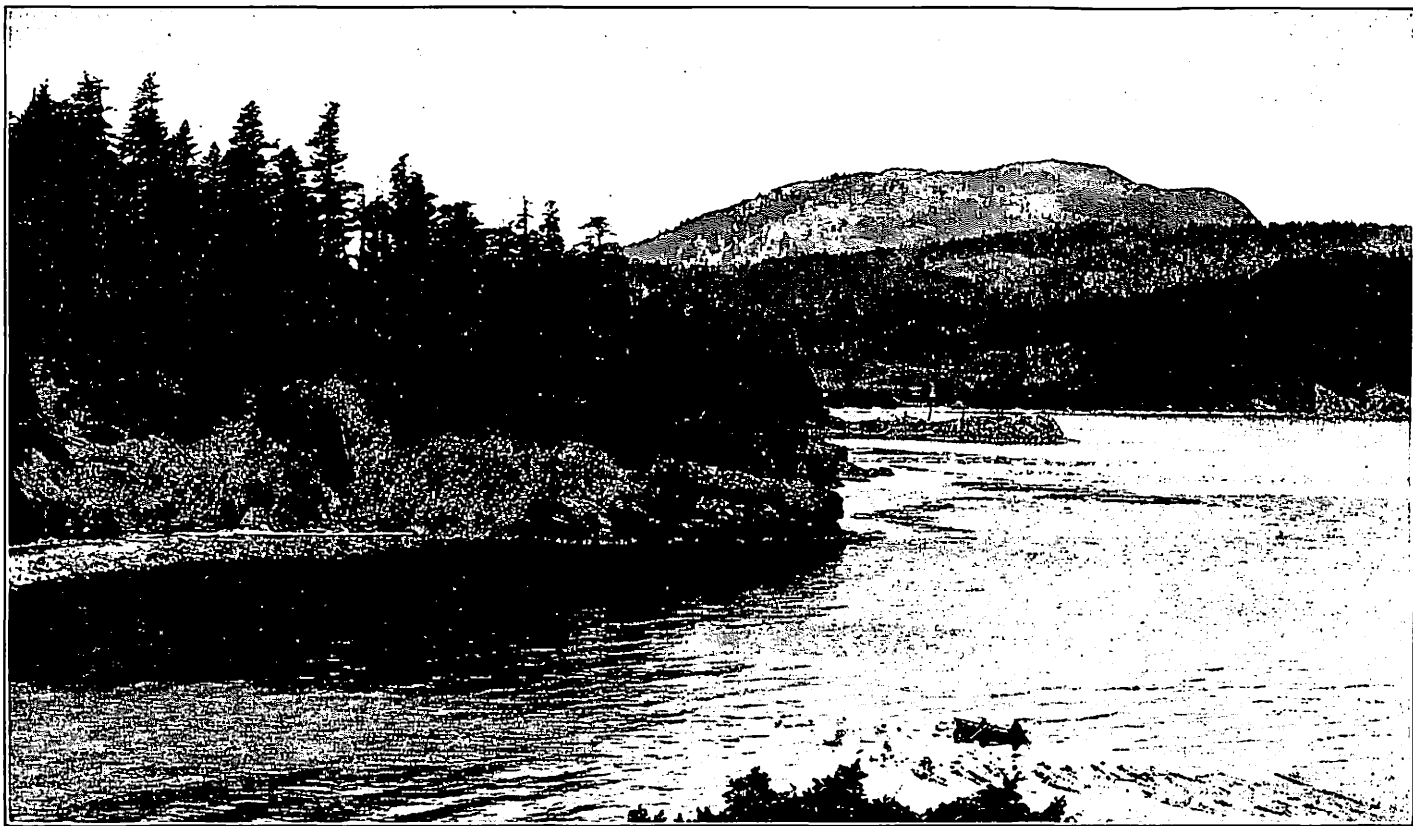
Most of these algae are abundant and are readily obtained near the laboratories either by shore collecting or dredging. Some other large brown algae are found in the vicinity of Cape Flattery. Among these are *Postelsia* and *Lessoniopsis*.

Marine Biological Preserve. In 1923, the State of Washington created a marine biological preserve which includes all marine waters of San Juan County and some contiguous territory. Collection of biological materials by persons not associated with the laboratories is thus prohibited by law.

Picking of flowers, digging of plants of any kind, mutilating of trees and shrubs, or collecting of specimens along the shore of the campus is not permitted.

The tract of land on which the laboratories are located is a state game preserve; therefore, firearms of any description and pets cannot be permitted on the grounds.

Research Accommodations at Friday Harbor Other Than During the Summer Sessions. Special arrangements may be made for a limited number of investigators who desire to avail themselves of the facilities of the laboratories throughout the year.



Looking northward from Obstruction Island; Mt. Constitution in the background

Admission

The summer session of the laboratories is for (a) independent research, (b) directed research, (c) seminar and formal courses. Application for admission should be made on the enclosed blank and sent to the Director of the Oceanographic Laboratories, University of Washington, Seattle, Washington. Applications will be acted upon within a week after receipt.

Independent Research. Investigators desiring to work during the summer session will inform the director of the nature of their proposed research together with a statement of special conditions and apparatus needed.

Those who desire to work independently and who have not received the doctorate, should submit the name and address of someone who can testify as to their ability to carry on original work. A brief outline of the proposed research should also be presented, stating material and apparatus necessary.

Directed Research, Seminars and Formal Courses. Requirements for admission are the same for the summer session as for any other session of the University. Students are required to register for twelve hours of course work or for one course and six hours of research and seminar. Credentials and all correspondence relating to admission should be addressed to the director and official credentials filed with him as soon as possible before the opening of the session.

Diplomas or certificates of graduation and personal records of credits that the applicant wishes to have returned to him cannot be accepted as credentials.

Admission to Graduate Standing. A bachelor's or higher degree from a college or university, whose standards are equal to those of the University of Washington, is required for admission to the Graduate School.

Admission of Undergraduate Students. The work of the laboratories is primarily for graduate students and advanced investigators. Exceptional upper division students may, however, be admitted to the work of the laboratories after complying with the above requirements and obtaining the consent of the director of the laboratories and the professors in charge of the courses in which they desire to register.

Official blanks for transfer of credits earned during the summer will be furnished by the Registrar of the University, on request to the Director of the Laboratories.

Registration

All persons desiring to work at the Laboratories are required to make formal application. Blanks for this purpose are included in this bulletin.

GENERAL INFORMATION

Lectures. General lectures are given each Thursday evening by members of the staff or by visiting scientists, and special seminars are conducted in various fields.

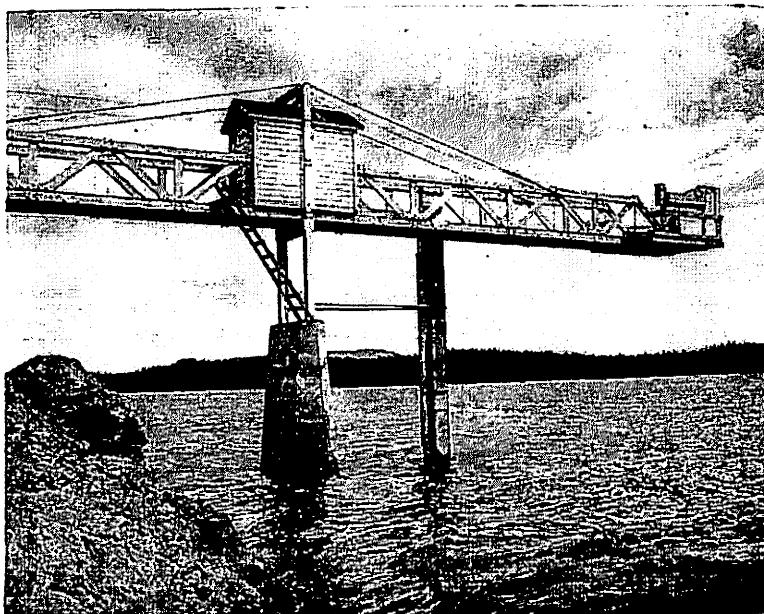
Expenses

(All fees must be paid in advance.)

| | |
|--|---------|
| Tuition Fee | \$31.00 |
| Tent, two or more in a tent, each..... | 6.50 |
| Individual tent | 13.00 |
| *Board, per week in advance..... | 6.50 |
| Stockroom ticket | 3.00 |

The tuition fee is for maintenance of the equipment, not for supplies, breakage, and the like.

Research Reservations. Private laboratories are obtainable for \$50 for the summer session, or \$65 if two investigators occupy the same laboratory. The fee for research space in the main research laboratory is \$31.00. Preference will be given to those investigators who arrive on the campus earliest and remain longest. Application for reservations should be made to the director.



Cantilever Observation Pier at Friday Harbor

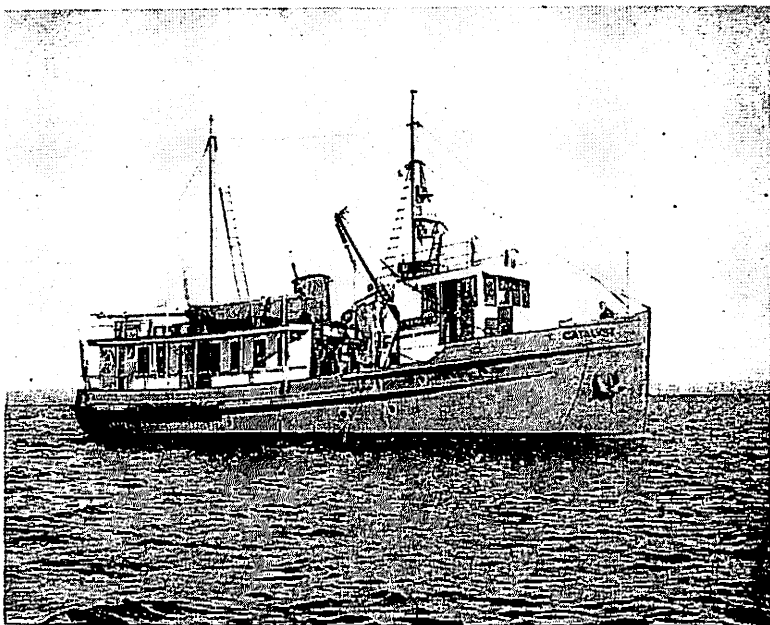
Living Conditions

Tents with board floors and half walls, accommodating two persons are available on the grounds. These tents are equipped with cots and mattresses; pillows and bedding are not provided. Shower rooms and lavatories are centrally grouped. A limited number of cottages and furnished rooms are available in the town of Friday Harbor.

*Subject to market conditions as of June 1, 1942.

Rain may be expected during the first weeks of the session. In June and early July, the weather may be cool and it is essential that sufficient blankets be brought. Plenty of warm clothing should also be provided.

Dining service is maintained from June 10 to August 30. There is a limited number of opportunities for students to wait table in return for their board. Those interested may apply to the director.



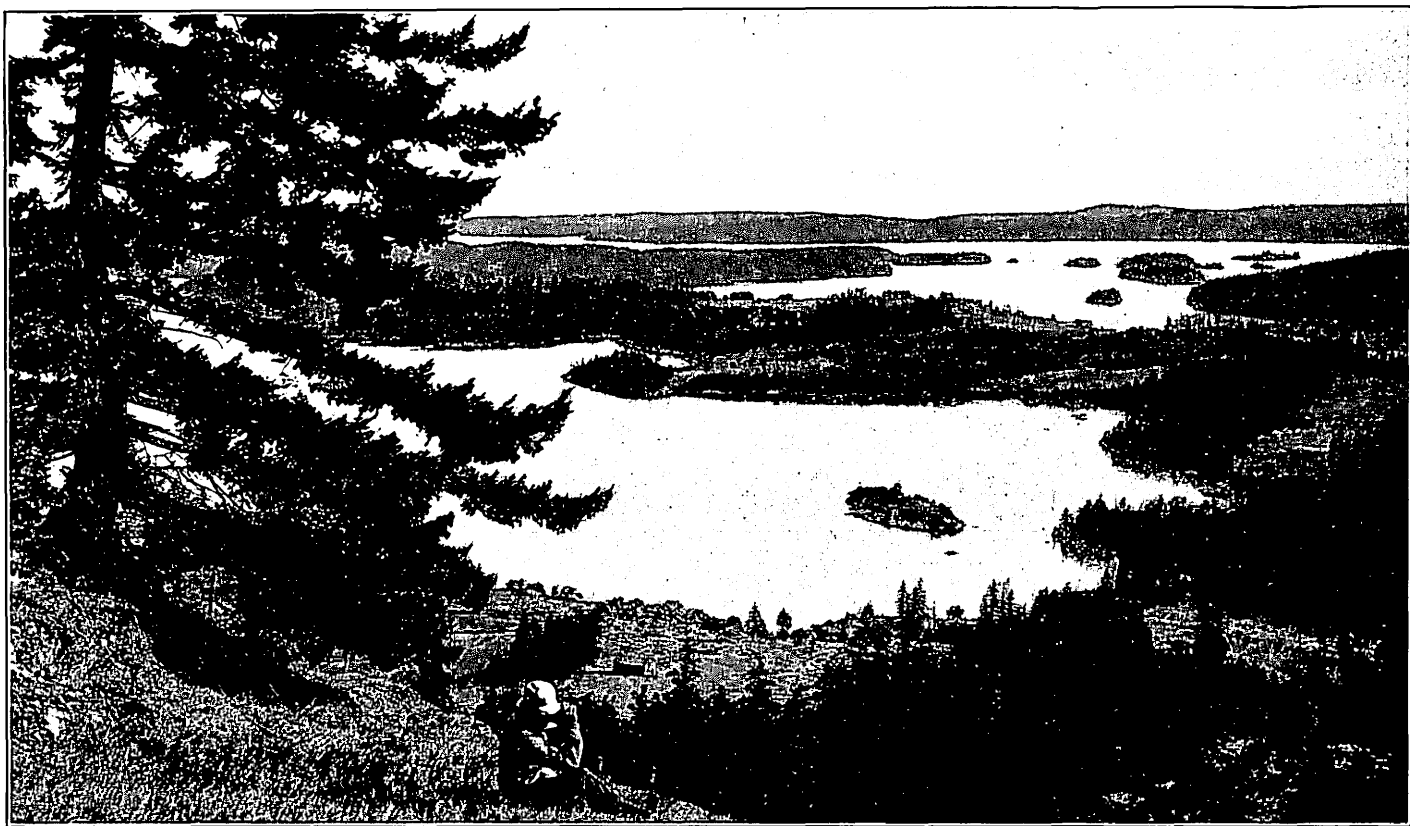
The M. S. "Catalyst"

Tent Reservations. Tent reservations must be made through the director of the Laboratories by depositing the regular tent fee. This fee will not be refunded after June 10.

Auto Parking. There are no garages on the grounds, but parking space is provided. No parking will be permitted in areas other than those designated. Garage facilities are obtainable in Friday Harbor.

Transportation to the Laboratories

The Friday Harbor laboratories may be reached by frequent ferry service from Anacortes or Bellingham (Chuckanut), on the mainland, and from Sydney, Vancouver Island. Phone Main 2222 (Seattle) for the latest schedule. Frequent stage service is provided between Seattle, Victoria or Vancouver and the ferry terminals. At present the ferry fare for car and driver from Anacortes to Friday Harbor is \$2.15; for passengers, 70 cents plus federal tax.



View from the southwest slope of the Turtleback Range

COURSES OF STUDY

(Numbers in parentheses indicate number of credits)

BACTERIOLOGY

207. **Marine Bacteriology.** (6) Th., F., S. Ordal.
Ecology and biochemistry of bacteria occurring in the sea. Open to qualified students after consultation.
212. **Research Problems in Oceanographic Bacteriology.** (†) Ordal.
Open to qualified students after consultation.
- For graduate seminar, see also Oceanography.

*The sandspit and lagoon at Argyle, San Juan Island*

BOTANY

151. **Marine Plants.** (6) M., T., W. Rigg.
Morphology and distribution of marine thallophytes and spermatophytes in the San Juan Archipelago. Material obtained with the dredge and on shore trips. An herbarium of the plants of the region is available. Pr., general botany.
- *205-206. **Physiology of Marine Plants.**
- 210-211. **Phytoplankton.** (6) Th., F., S. Phifer.
Morphology, physiology, and ecology of phytoplankton. Pr., two years of college biology, organic chemistry. Lectures, seminars and laboratory work.
233. **Research.** (†) Rigg, Phifer.
- For graduate seminar, see also Oceanography.

*Not offered in 1942.

†To be arranged.



Contents of Dredge Being Deposited on Deck of "Catalyst"

CHEMISTRY

- 155-156. Oceanographic Chemistry. (6) Th., F., S. Robinson, Thompson.
General physical and chemical properties of sea water. Pr., organic chemistry, qualitative and quantitative analysis, one year each of college physics and mathematics.
157. Biochemistry of Marine Life. (6) M., T., W. Norris.
Biochemistry applied to life in the sea. Pr., quantitative analysis, organic chemistry, 10 hours of biological science.
225. Problems in Analytical Chemistry. (3-6) (†) Robinson, Thompson.
As applied to the sea and sea products.
250. Research. (†) Thompson, Norris, Robinson.

For graduate seminar, see also Oceanography.

†To be arranged.

METEOROLOGY

*Geog. 162. Oceanographic Meteorology.

*Geog. 211. Research.

For graduate seminar, see also Oceanography.

OCEANOGRAPHY

249. Graduate Seminar. (†) Staff.
Students who are qualified may, after consultation with their major professor, select topics in which they are particularly interested. Assigned readings and reports.

250. Research. (†) Staff.
The work in research in the several departments is of three types: (1) special investigations by advanced students; (2) research leading to the master's degree; (3) research leading to the doctor's degree.

PHYSICS

166. Physical Oceanography. (6) M., T., W. Utterback.
Lectures, conferences and laboratory. A study is made of various types of tides with an introduction to tidal theory; ocean currents and methods of measurement; and dynamical, optical and electrical properties of sea water with methods of measuring these properties, and their relations to environmental conditions. Pr., one year college physics.

256. Research. (†) Utterback.
For graduate seminar, see also Oceanography.

ZOOLOGY AND PHYSIOLOGY

*213-214. Advanced Invertebrate Embryology.

*216. Zooplankton.

225. Advanced Invertebrate Zoology. (6) Th., F., S. Kincaid.
Marine invertebrate animals from the point of view of biological oceanography. Pr., two years of college zoology.

239. Physiology of Marine Animals. (6) Th., F., S. Crescitelli.
Lectures, discussions, readings, and experimental work in the physiology of marine animals. Open to qualified students after consultation with the instructor.

201. Research. (†) Kincaid, Crescitelli.

For graduate seminar, see also Oceanography.

*Not offered, 1942.

†To be arranged.

APPLICATION FOR ADMISSION
University of Washington, Oceanographic Laboratories
Summer Session, 1942

Name of applicant, in full-----
Last Name First Name Middle Name

Mailing Address-----

Have you credentials on file at the University of Washington?-----

What is your major academic interest?-----

Date of Birth-----

Institutions previously attended (with year of graduation) :

College or University-----

Degrees with dates-----

Are you, during the present school year, attending any college or

university?-----

If not, when did you last attend?-----

Are you a member of the instructional staff of an elementary, high school, junior col-

lege, normal school, college, or university?-----
(State which, with title)

In what courses, if any, do you plan to register?-----

Will your research be conducted independently?----- under supervision?-----

If under supervision, with whom will you work?-----

(If independently, write director, stating proposed work, the necessary apparatus and equipment required, and research room or table desired.)

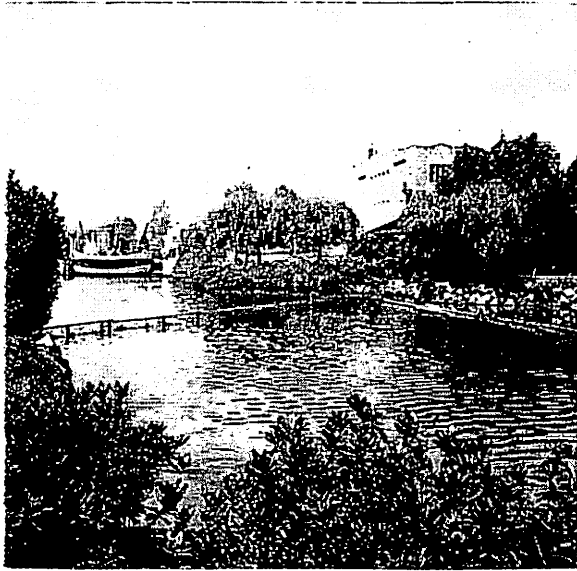
Tent specification: Whole tent-----; half tent----- If married, will you
be accompanied by wife, family?-----

State number and ages of children-----

Date of arrival----- Will you bring your car?-----



Looking eastward from Mount Entrance. The Rosario Strait and the south end of Lummi Island in the middle background; Mount Baker and the Cascade Range in the distant background.



Laboratories at Seattle